Products and Applications '17

Emülzer®

www.emulzer.com.tr

- Waterproofing materials for foundations, basements and elevator pits
- Waterproofing materials for bathrooms, toilets and kitchens
- Waterproofing materials for terraces, balconies and terrace gardens
- Waterproofing materials for pools, drinkable water tanks, sewerage refinement plants, etc.
- Sealants for chimney bottoms, dead facades and gutters
- Restorative and decorative transparent water repellents
- Repair and injection materials
- Products for specific applications:
  - Plugging pressurised water
  - Sealing seams on concrete panels, beside tram rails, etc.
  - Bonding thermal insulation plates
  - Protecting marine structures and constructions
  - Protection of Polyurethane heat insulation
  - Mastics for bituminous shingle applications
- Complementary Products
  - Geotextiles
  - Drainage sheets
  - Insulation filters
  - Joint Insulation Tape

Emülzer®

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BITUMINOUS WATERPROOFING LIQUIDS

SEALANTS AND JOINT FILLERS

CONCRETE ADDITIVES AND CURING MATERIALS

CEMENT BASED WATERPROOFING MATERIALS

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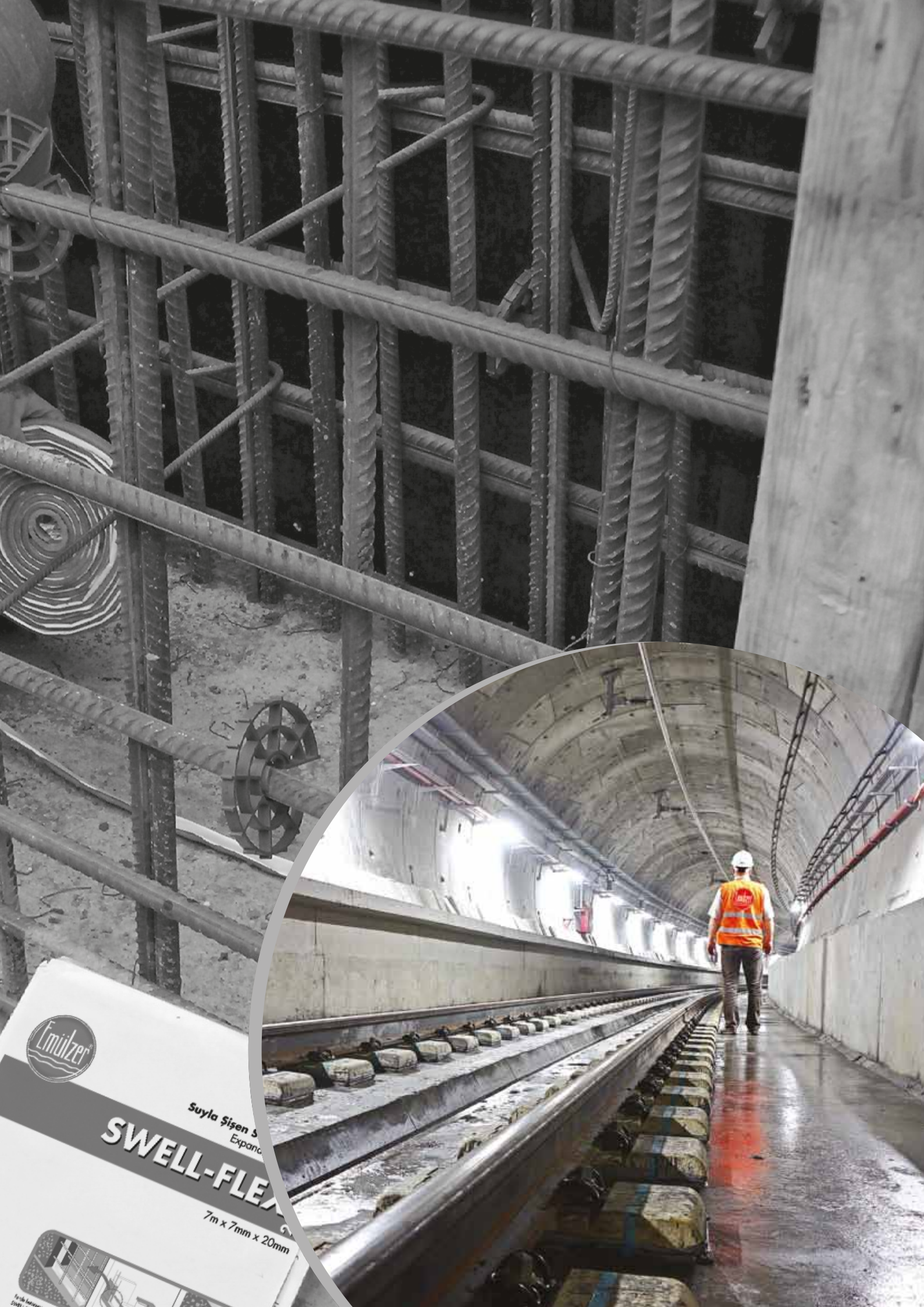

Emülzer
SWELL-FLEX
7m x 7mm x 20mm

The Emülzer® Approach...

Emülzer® started up as a manufacturer of waterproofing products in mid 30s when the young Turkish Republic was ambitiously laying the foundations of industry. It was the dream of this Turkish firm as well to become a part of this achievement by proving itself as a strong, reliable, professional business in future.
Today, heading for and reaching new milestones with its dedicated employees, satisfied customers, and honored suppliers, Emülzer® embraces its valued legacy as well as looking to a brilliant future.
Catering for its vision "to be the leader of liquid waterproofing technology" Emülzer® also delivers the promise of turning the satisfaction of its employees, suppliers, and customers into the well-being of the whole society.

Approach to Customers...

Emülzer® believes in a customer-centered and value-focused marketing notion. Always trying to understand the needs of its customers, it looks to develop products targeting to meet and exceed their expectations, and create value for them.

- It manufactures easy-to-apply products for the customers' convenience enabling them to save money, time and labor.
- It consistently follows improvement policies for its products and services.
- It is capable to develop a wide range of innovative, high quality products thanks to its R&D department.
- It is very selective about raw materials and strictly avoids using defective or low quality ingredients.
- Its quality is certified with TSE, ISO 9001 standards with CE certification.
- It offers continuous technical support to its customers.
- Product liability insurance covers any damage which may occur in spite of following instructions.
- On-time and complete delivery is one of the basic service principles of Emülzer®.
- It is always considerate in listening to recommendations, advices, or complaints of customers.
- It aids dealers, wholesalers, home improvement markets and other vendors in marketing its products and provides them with product literature as well as training programs and technical support.
- It contributes to the growth of the market and the improvement of the industry as a founder and member in trade associations.
- It looks to and encourages sound, frank, and effective communication and interaction.

Approach to Society...

Emülzer® believes in the key role each and every individual plays in the well-being of his or her country and community. And businesses are no exception. That's why Emülzer®:

- Consistently changes, improves, and grows.
- Respects and values society.
- Understands work ethics.
- Complies with the laws and regulations.
- Competes very fairly.
- Contributes to Turkish economy by exportation as a 100% local firm.
- Contributes to the investment and employment capability of Turkish economy, thanks to its solid equity capital.
- Represents both its industry and country in the best way by attending international trade shows.

Leading and Innovative

SERGİ SARAYI
31 / Ekim / 1949
BURO: Komiserlik
SAYI: 175

1949 İSTANBUL SERGİSİ

Sergi Sarayının ortasındaki havuzu , Galata Mahmudiye Caddesi 77 No da bulunan ASFALTEVİ firması EMÜLZER ile tecrit etmiştir .

Fotoğrafı yukarıya yapıştırılan bu havuz , çok kısa bir müddet içinde büyük bir maharetle tecrit edilmiş olup , bilhassa RENKLİ EMÜLZER le havuza tatlı bir [illegible] renk verilişi , dikkatimizi çekmiş ve bu firmanın , işlerinde [illegible] kadar zarafete de kıymet verdiğini göstermiştir .

1949 Sergisine güzellik veren eserlerden bi-ri olan bu havuzdaki [illegible] dolayı, Sergi Komiserliğimiz ASFALTEVİ ne teşekkür ve başarısını tebrik eder .

1949

As the first company of waterproofing industry in Turkey, Emülzer® has been producing and supplying the most reliable liquid waterproofing materials since its foundation in 1935. Its brand name and high quality got so identified with waterproofing that Emülzer® became, and still is, the generic name for some of the waterproofing materials widely used in the construction industry in Turkey. Relying on its well established corporate culture based on stability and sustainable growth, Emülzer® maintains its position as an innovator and leader in liquid waterproofing technology in Turkey.

Built on Research and Development

Developing innovative products to meet the rapidly changing needs of the construction industry, research and development department of Emülzer® looks to improve and perfect our existing products as well. Some products such as Bituminous Fillet and Swell-Flex have been developed in our own laboratories and Emülzer® is still the only manufacturer of these products in Turkey. Our research and development studies provide the construction industry with a wide range of products as well as great cost advantages.

Emülzer
Introduction Video

All around Turkey

Emülzer® products are easily available through a wide network of wholesalers and dealers all around Turkey, not to mention all those masters and workers who are qualified in the application. Please visit us at **www.emulzer.com.tr** to find your local Emülzer® dealer. Our sub dealers are able to sign up to benefit from our digital platform.

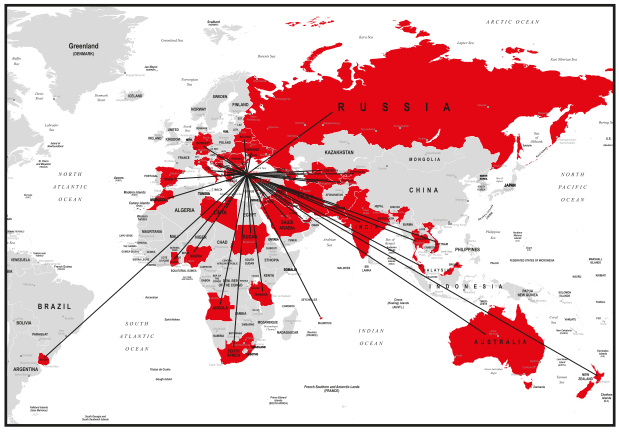
On-Time Delivery

Thanks to our high quality and efficiency standards in production as well as rich supplies of raw materials and improved stock management, we are always able to meet your needs on time.

A Wide Range of Certified Products

Based in İstanbul, Turkey, Emülzer® manufactures ISO-9001:2008 and CE certified waterproofing products, and it has the widest range of products in waterproofing industry in Turkey. Bitumen, acrylic, silicon, polyurethane and cement based products of Emülzer® are offered with clear technical specifications and instructions and they are guaranteed against production defects.

Exportation Through Four Continents



Emülzer® products are not only widely used in Turkey, but also exported to many countries such as Angola, Albania, Azerbaijan, Australia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Georgia, Germany, Ghana, Greece, Hungary, India, Iraq, Iran, Israel, Italy, Jordan, Kyrgyzstan, Kosovo, Kuwait, Libya, Lebanon, Macedonia, Malaysia, Mauritius, Morocco, New Zealand, Nigeria, Pakistan, Romania, Russia, Saudi Arabia, Spain, South Africa, Sudan, Tajikistan, Tanzania, Thailand, Turkmenistan, United Arab, Emirates, Uruguay, Ukraine, Uzbekistan, Vietnam. Increasing its market share both globally and nationally, and aiming to become also a regional leader, Emülzer® consistently improves its exportation and distribution network through international contacts, regular professional visits, and trade fairs.

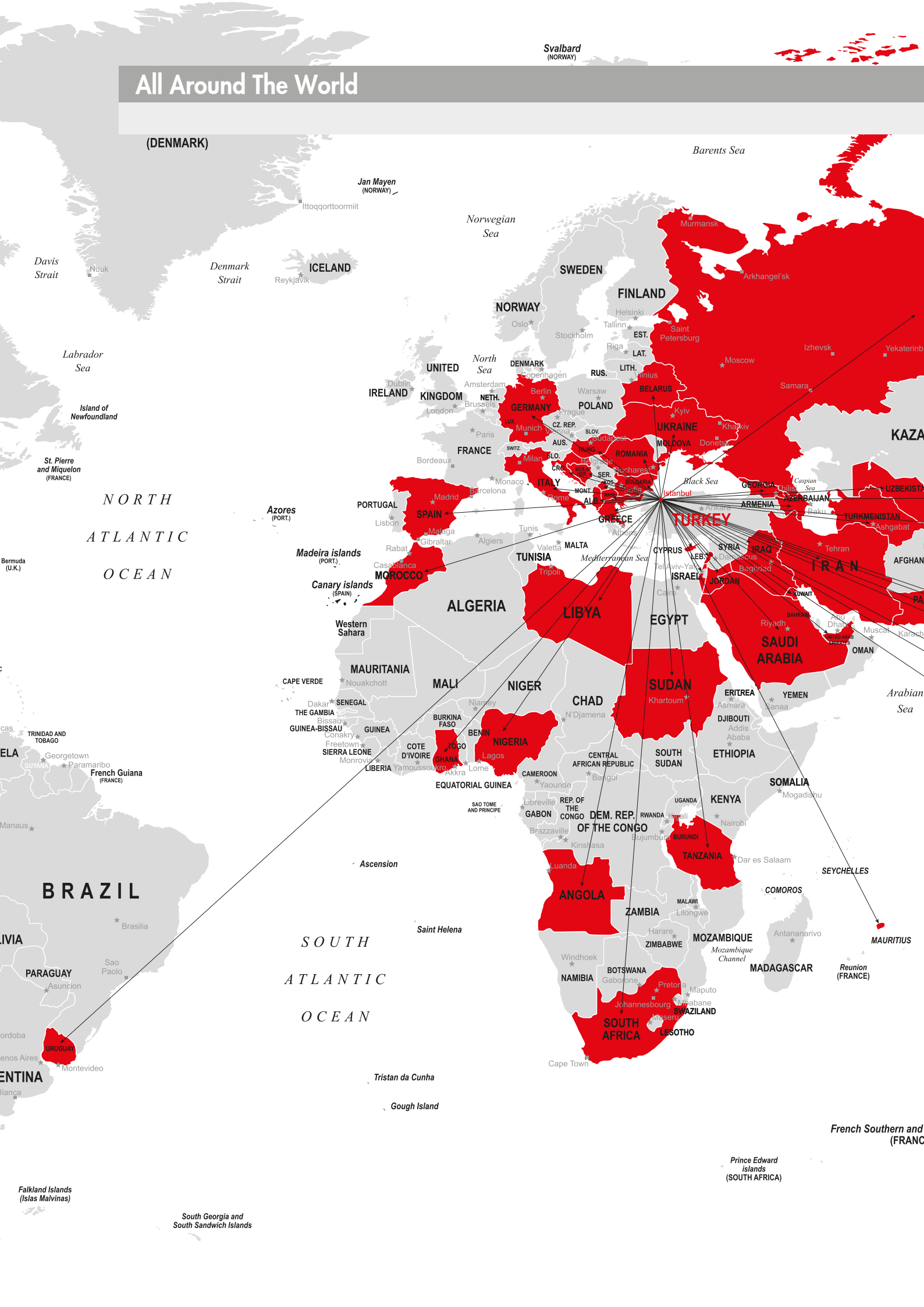
Best References for Each and Every Application

Since 1935 Emülzer® products have been used in all scales of projects from buttom to top, from the suspension bridges of Bosphorus to the largest irrigation projects of Southeast Anatolia, in motorways, inter-urban highway tunnels and at undersea metro tunnels. Architects, engineers, and technicians increasingly prefer our specialized waterproofing materials in construction sites, and in renovation, for all kinds of projects including housing, business centers, factories, hotels, swimming pools and various landscaping applications.

Training and Support

Emülzer® is able to share knowledge and information through its extensive product literature, newsletters and regularly updated Web site as well as trade fairs. Emülzer® organizes and contributes to training activities and workshops to increase awareness both among consumers and in the industry. Besides organizing technical seminars, it supports construction firms directly on-site.

All Around The World




ARCTIC OCEAN
East Siberian Sea
Chukchi Sea
Bering Sea
Sea of Okhotsk
Sea of Japan
Philippine Sea
Bay of Bengal
South China Sea
INDIAN OCEAN
RUSSIA
Yakutsk
Magadan
Novosibirsk
Krasnoyarsk
Irkutsk
Petropavlovsk-Kamchatskiy
Sakhalin
Kuril Islands
U.S.
Aleutian islands
Astana
KHSTAN
Ulaanbaatar
MONGOLIA
Bishkek
Urumqi
KYRGYZSTAN
TAJIKISTAN
Dushanbe
Kabul
Vladivostok
Beijing
NORTH KOREA
Pyongyang
SOUTH KOREA
Seoul
JAPAN
Tokyo
CHINA
Shanghai
Taipei
Ryukyu Islands (JAPAN)
NEPAL
BHUTAN
New Delhi
Kathmandu
Thimphu
BANGLADESH
Kolkata
Dhaka
BURMA
Guangzhou
Hong Kong
Macau
INDIA
Mumbai
LAOS
Hanoi
Vientiane
Rangoon
THAILAND
Bangkok
VIETNAM
CAMBODIA
Phnom Penh
Ho Chi Minh City
Manila
PHILIPPINES
Northern Mariana islands (U.S.)
Guam (U.S.)
Andaman islands (INDIA)
Nicobar islands (INDIA)
Colombo
SRI LANKA
MALDIVES
Medan
BRUNEI
MALAYSIA
Singapore
SINGAPORE
PALAU
FEDERATED STATES OF MICRONESIA
NAURU
INDONESIA
Jakarta
Makassar
Dili
TIMOR-LESTE
PAPUA NEW GUINEA
Port Moresby
Cocos (Keeling) islands (AUSTL.)
Coral Sea
Alice Springs
AUSTRALIA
Perth
Sydney
Canberra
Melbourne
Great Australian Bight
Tasmania
Lord Howe Island (AUSTL.)
Tasman Sea
NEW ZEALAND
Wellington
Kermadec islands (N.Z.)
Chatham islands (N.Z.)
Noumea
New Caledonia (FRANCE)
Takelau (N.Z.)
SAMOA
TONGA
Antarctic Lands
• Angola
• Albania
• Azerbaijan
• Australia
• Belarus
• Bosnia and Herzegovina
• Bulgaria
• Croatia
• Cyprus
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• Morocco
• New Zealand
• Nigeria
• Pakistan
• Romania
• Russia
• Saudi Arabia
• Spain
• South Africa
• Sudan
• Tajikistan
• Tanzania
• Thailand
• Turkmenistan
• United Arab Emirates
• Uruguay
• Ukraine
• Uzbekistan
• Vietnam


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panel
www. panelmakina .com
likit yalıtım teknolojisi
Emülzer
ELASTOKOTE 2K
1052
Su Bazlı Elyaflı Likit Membran
Fiber Reinforced Liquid Membrane

Bituminous Waterproofing Liquids

İzola Export (Anionic Bitumen Emulsion)

Emilkote® (Anionic Bitumen Emulsion)

Elastokote 1K (Bitumen-Rubber Based, Single Component Liquid Membrane)

Emülzer® ALC (Water Based Liquid Coating With Rubber Additive)

Elastokote 2K AR (Bitumen-Rubber Based, Cement Polymer Modified, Double-Component Liquid Membrane)

Elastokote 2K (Bitumen-Rubber Based, Cement and Fiber Modified Double-Component Liquid Membrane)

Elastorene (Water-Based, Super Elastic Liquid Membrane)

Styrokote (Liquid Membrane with Thermal Insulation)

Emüzer® C (Rubber Added Bituminous Solution)

Emülzer® Plus (Liquid Membrane)

Alütec® (Bitumen-Aluminum Based Reflective Paint)

Emülzer® Plus Antiroot (Root Inhibiting Liquid Membrane)

Emülzer® CSP (Rubber Added Bituminous Solution)

Membrane Primer (Bituminous Membrane Primer)

Epoxy Coal Tar 85/15

(Solvent-Free, Epoxy - Coal Tar Based Coating)

Epoxy Coal Tar 100/10

(Epoxy - Coal Tar Based Coating with Solvent)

CE MEMBER OF INSULATION ASSOCIATION İZODER SUDER WATERPROOFERS ASSOCIATION TÜRKAK MADE IN TURKEY

İzola Export 1030

Anionic Bitumen Emulsion

Description

It is a ready-to-use waterproofing material obtained by mixing water and bitumen by using special methods. It adheres firmly to the surface it is applied, forming a waterproof layer.

Usage Areas

- İzola can be used as an undercoat prior to all bituminous membrane applications. Thanks to its superior adherence characteristics, it allows the bituminous membranes under which it is applied to adhere firmly to the surface they are applied, leaving no gap in between.
- It is used to insulate water leakage on all horizontal and vertical surfaces in closed spaces such as foundations, underground storehouses and basements, and in damp environments such as bathrooms, kitchens and toilets, etc. For the applications requiring durability against higher water pressure, and on cracked surfaces, it must be reinforced with materials such as fiber glass, polyester felt, reinforcing fabric, etc.
- The alum material obtained by mixing İzola with sieved fine sand and cement is applied with a trowel to smooth out and level the surface, or to provide a protective coat over insulation.
- In parquet flooring applications with hot bituminous materials, it is applied over the alum as an undercoat.
- It is applied onto construction molds for easy demolding, and to provide a smooth surface. It prevents concrete curing water from damaging molds.

Advantages

- It is very economical.
- Due to its inflammable and non-toxic characteristics it can be safely used in closed spaces.
- Because it is thinned with water, it adheres perfectly to all kinds of surfaces, even when the surface is moist.
- By the evaporation of the water it contains, it forms a waterproof and water-insoluble layer.

Application

- İzola is a cold applied material.
- After having mixed with water with a ratio of approximately 20%, it is applied with a bitumen brush, roller, or pistol.
- Depending on weather conditions, it dries in approximately 4-5 hours.
- It should not be applied in rainy weather, or at temperatures below +5°C.
- Each coat must be applied only after the preceding one is completely dry.

Consumption

400 g/m^2 for each coat

Packaging

17 kg Metallic case - 45 Pieces / Pallet
200 kg Sheet iron barrel

Emilkote® 1020

Anionic Bitumen Emulsion

Description

It is a ready-to-use waterproofing material obtained by mixing water and bitumen by using special methods. By the evaporation of the water it contains, it forms a waterproof layer on the surface it is applied.

Usage Areas

- It is used on all horizontal and vertical surfaces in closed damp environments such as foundations, underground storehouses, and basements to insulate water leakage. For the applications requiring durability against higher water pressure, and on cracked surfaces, it must be reinforced with materials such as fiber glass, polyester felt, reinforcing fabric, etc.
- Emilkote® can be used as an undercoat prior to bituminous membrane applications of any brand. Thanks to its superior adherence characteristics, it allows the bituminous membranes under which it is applied to adhere firmly to the surface they are applied, leaving no gap in between.
- The alum material obtained by mixing Emilkote® with sieved fine sand and cement is applied with a trowel to smooth out and level the surface, or to provide a protective coat over insulation.
- In parquet flooring applications with hot bituminous materials, it is applied over the alum as an undercoat.
- It is applied onto construction molds for easy demolding, and to provide a smooth surface. It prevents concrete curing water from damaging molds.

Advantages

- It is very economical.
- Due to its inflammable and non-toxic characteristics it can be safely used in closed spaces.
- Because it contains water, it enables good adhesion even when the surface is moist.
- By the evaporation of the water it contains, it forms a waterproof and water-insoluble layer.
- Can be easily applied by anyone
- Creates a seamless insulation layer.
- Because it is water based, it is enviromentally friendy.
- Must be applied cold. Does not require heating or thinning.

Application

- Emilkote® is a cold applied material.
- After having mixed with water with a ratio of approximately 20%, it is applied with a bitumen brush, roller, or pistol.
- Depending on weather conditions, it dries in approximately 4-5 hours.
- It should not be applied in rainy weather, or at temperatures below +5°C.
- Each coat must be applied only after the preceding one is completely dry.

Consumption

400 g/m² for each coat

Packaging

4,5 kg Metallic case - 140 Pieces / Pallet
17 kg Metallic case - 45 Pieces / Pallet
200 kg Sheet iron barrel

Elastokote 1K 1050

Bitumen-Rubber Based, Single Component Liquid Membrane

Description

Elastokote is a bitumen-rubber based, ready to use, single component liquid membrane with elastomeric additives, and it is used for insulating water and humidity. By the evaporation of the water it contains, it adheres firmly to the surface it is applied, forming an elastic waterproof layer.

Usage Areas

- It can be used on all horizontal and vertical surfaces.
- It is used for the insulation of foundations, underground storehouses, and basements.
- It is used for insulating water leakages in closed damp environments such as bathrooms, kitchens, toilets, etc.
- For the applications requiring durability against higher water pressure, and on cracked surfaces, it must be reinforced with materials such as polyester felt, reinforcing fabric, etc.
- The alum material obtained by mixing Elastokote with sieved fine sand and cement is applied with a trowel to smooth out and level the surface, or to provide a protective coat over insulation.

Advantages

- It can be easily applied by anyone.
- It provides a seamless insulation layer.
- As a water-based material it is environment friendly.
- Due to its inflammable and non-toxic characteristics it can be safely used in closed spaces.
- Because it contains water, it enables good adhesion even when the surface is moist.
- It provides permanent elasticity.
- It is ready to use.
- It is applicable with trowel up to 20 m^2/hour.
- As a cold applied material, it does not require heating or thinning.
- It can cover capillary cracks.

Application

- The surface must be undercoated with Emilkote® or İzola.
- As a cold applied material, Elastokote should not be used with thinner.
- It can be applied with a bitumen brush, or trowel.
- Depending on weather conditions, it dries in approximately 4-5 hours.
- It should not be applied in rainy weather, and at temperatures below +5°C.
- Each coat must be applied only after the preceding one is completely dry.

Consumption

1 kg/m^2 for each coat (with trowel)

Packaging

23 kg Pail - 33 Pieces / Pallet

CE

Emülzer® ALC 1058

Water Based Liquid Coating With Rubber Additive



Description

Emülzer® ALC is single component, water based, ready-to-use liquid coating with rubber additives. It contains elastomeric polymer resin additives. By the evaporation of the water it contains, it adheres firmly to the surface it is applied, forming an elastic waterproof layer.

Usage Areas

- It can be used on all horizontal and vertical surfaces.
- It is used for the external insulation of foundations, underground constructions, basements. etc.
- It is used for insulating water leakages in closed damp environments such as bathrooms, kitchens, toilets, etc.
- For the applications requiring durability against higher water pressure, and on cracked surfaces, it must be reinforced with materials such as polyester felt, reinforcing fabric, fibermesh, etc.
- The alum material obtained by mixing Emülzer® ALC with sieved fine sand and cement is applied with a trowel to smooth out and level the surface, or to provide a protective coat over insulation.

Application

- As a cold applied material, Emülzer® ALC should not be used with thinner. After mixing, it can be applied with a bitumen brush, airless pump or trowel. Depending on weather conditions, it dries in approximately 5-6 hours.
- It should not be applied in rainy weather, and at temperatures below +5°C.
- Next layer should not be applied before preceding one completely dries.

Advantages

- It can be easily applied by anyone.
- It provides a seamless insulation layer.
- As a water-based material it is environment friendly.
- Due to its inflammable and non-toxic characteristics it can be safely used in closed spaces. Because it contains water, it enables good adhesion even when the surface is moist.
- It provides permanent elasticity.
- It is ready to use.
- As a cold applied material, it does not require heating or thinning.
- It can cover capillary cracks.
- It's resistance to chemicals and salt solution in the soil is excellent.
- As a water based material, it can be safely used indoors.

Surface Preparation

- The application surface should be without dust, rust, dirt, grease and oil and the loose parts should be scrapped out.
- Emilkote® bitumen emulsion on concrete surfaces and Emülzer C® on metal surfaces can be used as primer to ensure good adhesion.
- The sharp corners should be rounded and horizontal-vertical cants subject to cracking should be angled with Emülzer® Bituminous Fillet.
- The large pores and the cracks should be filled with Emülderz® bituminous elastic joint paste.

Cleaning of Tools

The cleaning of the tools is accomplished with soapy water just after the usage but with industrial type of solvents after curing.

Consumption

Depending on surface and workmanship 1-3 kg/m^2.

Ambalaj

Net: 16 kg Plastic Pail
27 Pieces / Pallet

Elastokote 2K AR 1054

Bitumen-Rubber Based, Cement Polymer Modified, Double-Component Liquid Membrane

Description

Elastokote 2K AR is a bitumen-rubber based, cement polymer modified, double-component liquid membrane. It dries fast. Its elasticity and tensile strength is highly improved with additives. By the evaporation of the water it contains, it adheres firmly to the surface it is applied, forming an elastic waterproof layer.

Usage Areas

Elastokote 2K AR is used on all horizontal and vertical surfaces for the exterior insulation of foundations, underground storehouses and basements, and for insulating water leakages in closed damp environments such as bathrooms, kitchens, toilets, etc. For the applications requiring durability against higher water pressure, and on cracked surfaces, it must be reinforced with materials such as polyester felt, reinforcing fabric, etc.

Advantages

- It provides a seamless insulation layer.
- As a water-based material, it is environment friendly.
- Due to its inflammable and non-toxic characteristics it can be safely used in closed spaces.
- Because it contains water, it enables good adhesion even when the surface is moist.
- It provides permanent elasticity.
- It covers capillary cracks.
- As a cold applied material, it does not require heating, and thinning.

Surface Preparation

- Pointed tips and corners must be bevelled.
- The surface to be treated must be free from dust, dirt, rust and grease; loose particles must be scraped off.
- The surface must be undercoated with Emilkote® before Elastokote 2K AR application.

Application

- Elastokote 2K AR is a cold applied material.
- Powder component in the bag is poured into liquid component and they are mixed by using a low speed mixer until no lump remains.
- The mixture is applied with a trowel and bitumen brush.
- Depending on weather conditions, it dries in approximately 1 -2 hours.
- It can be applied on moist surfaces, but not on wet surfaces.
- It should not be applied in rainy weather, or at temperatures below +5°C.
- Each coat must be applied only after the preceding one is completely dry.

Consumption

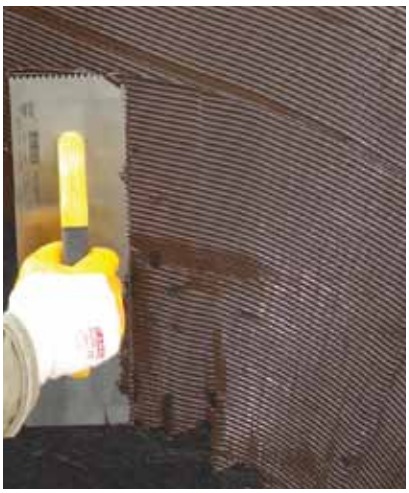
1,5 kg/m^2 for each coat (with trowel) min. 2 coats.

Packaging

22 kg bituminous emulsion + 8 kg powder component = 30 kg Set - 12 Sets / Pallet

Elastokote 2K 1052

Bitumen-Rubber Based, Cement and Fiber Modified Double-Component Liquid Membrane



Description
Elastokote 2K is a bitumen-rubber based, cement and fiber modified, double-component liquid membrane. It dries fast. Its elasticity and tensile strength is highly improved with fibre and other additives. By the evaporation of the water it contains, it adheres firmly to the surface it is applied, forming an elastic waterproof layer.

Usage Areas
Elastokote 2K is used on all horizontal and vertical surfaces for the exterior insulation of foundations, underground storehouses and basements, and for insulating water leakages in closed damp environments such as bathrooms, kitchens, toilets, etc. For the applications requiring durability against higher water pressure, and on cracked surfaces, it must be reinforced with materials such as polyester felt, reinforcing fabric, etc.

Advantages
- It provides a seamless insulation layer.
- As a water-based material, it is environment friendly.
- Due to its inflammable and non-toxic characteristics it can be safely used in closed spaces.
- Because it contains water, it enables good adhesion even when the surface is moist.
- It provides permanent elasticity.
- It covers capillary cracks.
- As a cold applied material, it does not require heating, and thinning.

Surface Preparation
- Pointed tips and corners must be bevelled.
- The surface to be treated must be free from dust, dirt, rust and grease; loose particles must be scraped off.
- The surface must be undercoated with Emilkote® before Elastokote 2K application.

Application
- Elastokote 2K is a cold applied material.
- Powder component in the bag is poured into liquid component and they are mixed by using a low speed mixer until no lump remains.
- The mixture is applied with a trowel and bitumen brush.
- Depending on weather conditions, it dries in approximately 1 -2 hours.
- It can be applied on moist surfaces, but not on wet surfaces.
- It should not be applied in rainy weather, or at temperatures below +5°C.
- Each coat must be applied only after the preceding one is completely dry.

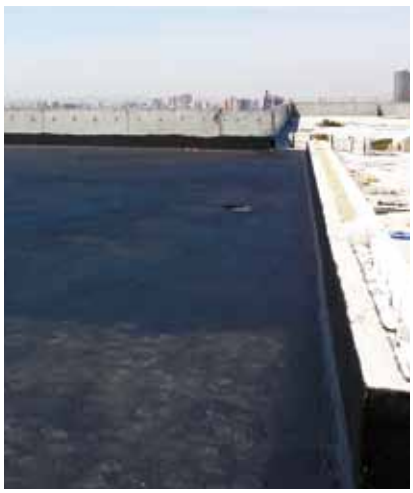
Consumption
1.5 kg/m^2 for each coat (with trowel) min. 2 coats.

Packaging
24 kg bituminous emulsion + 8 kg powder component
= 32 kg Set - 12 Sets / Pallet

CE

Elastorene 1056

Water-Based, Super Elastic Liquid Membrane



Description

Elastorene is a fast-setting waterproofing material, offering high performance and elasticity. In addition to its high elasticity properties, this material also has excellent adherence to metal and concrete surfaces.

Usage Areas

- Building foundations,
- Basement floor and walls,
- Sustaining walls,
- Tunnels and canals,
- Closed roof and porches

Advantages

- Easy to apply material.
- Provide a seamless insulation layer.
- As a water-based material, it is environment friendly.
- Due to its inflammable and non-toxic characteristics it can be safely used indoor areas.
- It provides permanent elasticity.
- Ready to use.
- As a cold applied material it does not require heating and thinning.
- It has ability to cover up capillary cracks.
- Instantly applicable, no need to wait for concrete curing.

Surface Preparation

- The application surface should be without dust, rust, dirt, grease and oil and the loose parts should be scrapped out.
- Emilkote® bitumen emulsion on concrete surfaces and Emülzer® C on metal surfaces can be used as primer.
- The sharp corners or horizontal-vertical joints subject to cracking should be rounded with Emülzer® Bituminous Fillet.
- The large pores and the cracks should be filled with Emülderz® bituminous elastic joint filler.

Application

- As a cold applied material, Elastorene should not be used with thinner.
- It can be applied with a bitumen brush, airless gun or trowel.
- Depending on weather conditions, it dries in approximately 5-6 hours.
- It should not be applied in rainy weather, and at temperatures below +5°C.
- Next layer should not be applied before preceding one completely dries.
- For the applications requiring durability against higher water pressure, and on cracked surfaces, it must be reinforced with materials such as polyester felt, reinforcing fabric, fibermesh, etc.

Consumption

1 kg/m^2 at each layer. Min. 2 coats.

Packaging

23 kg Metallic Pail - 33 Pails / Pallet

Styrokote 1090

Liquid Membrane with Thermal Isolation

Description

Styrokote is a modified bitumen-water based, ready to use, single- component waterproofing liquid membrane, providing also thermal insulation. By the evaporation of the water it contains, it adheres firmly to the surface it is applied, forming an elastic waterproof layer.

Usage Areas

- It is used on all horizontal and vertical surfaces.
- It is used for insulating the walls of foundations, underground storehouses, and basements from outside.
- It is used for insulating water leakage in closed damp environments such as bathrooms, kitchens, and toilets, etc.
- For the applications requiring durability against higher water pressure, and on cracked surfaces, it must be reinforced with polyester felt.
- It can be used for adhering thermal insulation boards.

Advantages

- If the application is thick enough, it also provides thermal insulation.
- It can cover cracks up to 7 mm. It can be also used on unplastered brick walls.
- It provides a seamless insulation layer.
- Due to its inflammable and non-toxic characteristics it can be safely used in closed spaces.
- Because it contains water, it enables good adhesion even when the surface is moist.
- It is elastic.
- It is ready to use.
- As a cold applied material, it does not require heating, or thinning.

Application

- Styrokote is a cold applied, prepared material.
- As ready to use material, it does not require thinning.
- After having mixed, it should be applied with a trowel.
- Each coat must be applied only after the preceding one is completely dry.
- Depending on weather conditions, it dries in approximately 4-5 hours.
- It should not be applied in rainy weather, or at temperatures below +5°C.

Consumption

2-4 kg/m^2 for each coat

Packaging

10 kg Metallic pail - 33 Pieces / Pallet

Emülzer® C 1002

Rubber Added Bituminous Solution

Description

Emülzer® C is a ready-to-use waterproofing bituminous solution with a rubber additive. It does not contain any filling material. By the evaporation of the solvent it contains, it adheres firmly to the surface it is applied, forming an elastic waterproof layer.

Usage Areas

- Emülzer® C is used against ground humidity and leakage in foundations, terrace roofs made of reinforced concrete, balconies, water ducts, secret gutters, and retaining and pitch walls, and for pool insulation from outside.
- To protect metallic surfaces (casting, sheet iron, etc.) against corrosion, it can be applied by dipping, brushing, or spraying.
- It is used as an undercoat in all kinds of bituminous membrane applications on metallic surfaces.

Advantages

- It is ready to use.
- It is a cold applied material.
- It does not require heating, or thinning.
- It dries very fast.
- It provides a seamless insulation layer.
- It has high sulfate resistance.

Application

- Emülzer® C is applied only onto the side exposed to water. (positive insulation) Ready to use, it does not require heating or thinning. It can be applied with a brush, roller, or pistol.
  To avoid dust and improve durability, non-metallic surfaces can be undercoated with Emilkote®.
- Although Emülzer® C dries fast (in as little as 2 hours) it is recommended to wait 24 hours before applying a second coat.
- To provide durability against higher pressure, it must be reinforced with materials such as fiber glass, geotextile felt, reinforcing fabric, etc.
- When it is used on the roofs which are continuously exposed to outdoor conditions (except walking), it is recommended to apply Alütec® over Emülzer® C to provide improved aesthetics as well as protection against sunlight.

Consumption

500 g/m^2 for each coat

Packaging

4,5 kg Metallic case - 140 Pieces / Pallet
17 kg Metallic case - 45 Pieces / Pallet
200 kg Sheet iron barrel

Emülzer® Plus 1040

Liquid Membrane

Description

Emülzer® Plus is a modified bitumen and solvent based, single-component, ready-to-use waterproofing liquid membrane. By the evaporation of the solvent it contains, it adheres firmly to the surface it is applied, forming an elastic waterproof layer.

Usage Areas

Emülzer® Plus is used in retaining and pitch walls, galleries, drainage and piles, terrace roofs made of reinforced concrete, balconies, water ducts, and secret gutters against ground moisture and leakage, and in pools it is used under coatings against water and damp.

Advantages

- It can be easily applied by anyone.
- It provides a seamless insulation layer.
- It is very elastic. (1000%)
- It is ready to use.
- As a cold applied material, it does not require heating, or thinning.
- It dries very fast.

Application

- Emülzer® Plus applied only onto the side exposed to water. (positive insulation) As a ready to use product, it does not require heating, or thinning.
- It can be applied with a brush, rake, or airless sprayer.
- To avoid dust, provide excellent adherence, and improve durability, non-metallic surfaces can be undercoated with Emilkote®, and metallic surfaces can be undercoated with Emülzer® CSP.
- Although Emülzer® Plus dries fast-in as little as 2 hours-it is recommended to wait 24 hours before applying a second coat.
- To provide durability against higher pressure, it must be reinforced with materials such as polyester felt, netting, reinforcing fabric, etc.
- When it is used on the roofs which are continuously exposed to outdoor conditions (except walking), it is recommended to apply Alütec® over Emülzer® Plus to provide improved aesthetics as well as protection against sunlight.

Consumption

600 g/m^2 for each coat, and min. 2 coats

Packaging

4,5 kg Metallic case - 140 Pieces / Pallet
16 kg Metallic case - 45 Pieces / Pallet
17 kg Metallic pail - 33 Pieces / Pallet
200 kg Sheet iron barrel

Alütec® 1060

Bitumen-Aluminum Based Reflective Paint

Description

As a single-component bituminous solution offering excellent adherence, it contains reflective aluminum to provide UV-protection.

Usage Areas

- It protects bituminous waterproofing materials against harmful effects of UV light. During daytime, it controls heat increase on the surfaces of metal and concrete tanks as well as other building elements.
- Applied on bituminous waterproofing materials in domes, vaults, north walls and prefabricated gutters it provides solar protection as well as an aesthetic look.
- As a topcoat preferably on Emülzer® CSP, Emülzer® Plus it protects metallic, iron or cast elements such as tanks, pipes, and channels against corrosion.

Advantages

- By reflecting UV rays it ensures the durability of bituminous insulation for years.
- Due to its reflective properties, it provides a cool and more comfortable atmosphere in the interior of the building.
- Covering the black color of bitumen completely, it improves the aesthetic look of the building.
- It is economical. 1 kg of Alütec® can cover 4-5 m^2.
- It helps you to detect cracks on the waterproofing layer earlier and prevents you from unexpected paint expenses.
- It is highly resistant to abrasion due to its excellent adhesion to bituminous surfaces.
- It dries very fast. It is resistant to pollution and atmospheric conditions.

Application

- The mixture should not be thinned, and it shoul be applied cold.
- After opening the can, the content must be stirred thoroughly before as well as during application.
- The surface to be treated must be bituminous, dry, clean, and free from dust and grease. It must be applied with a brush or pulverizer, and in one coat.
- If it is going to be applied on Bituminous Membranes, protective PE coating on membranes must be removed or burned with torch.

Consumption

Approximately 200 g/m^2 depending on the surface

Packaging

4,5 kg Metallic can - 140 Pieces / Pallet
17 kg Metallic can - 45 Pieces / Pallet

Emülzer® Plus Antiroot 1070

Root Inhibiting Liquid Membrane

Description

Emülzer® Plus Anti-Root is a single-component, modified bitumen and solvent-based, ready-to-use waterproofing liquid membrane containing root inhibiting additives. By the evaporation of the solvent it contains, it adheres firmly to the surface it is applied, forming a seamless, durable, waterproof, and anti-root film.

Usage Areas

- Against rainfall and roots in terrace gardens, roofs, and balconies,
- For waterproofing underground garages and other structures which are covered with soil,
- Against ground humidity and leakage in foundations, foundation piles, retaining walls and curtain walls,
- For waterproofing galleries, and drainage and water channels.

Advantages

- By inhibiting growth of plant roots, it protects the insulation system and the building from any damage which may be caused by root formation.
- It can be easily applied by anyone.
- It provides a seamless insulation coat.
- It is very elastic. (1000%)
- It is ready to use.
- As a cold application, it does not require heating, or thinning.
- It dries fast.
- To ensure perfect durability against higher pressure, it can be reinforced by glass fabric, geotextile felt, or fiber mesh.

Application

- It is applied only onto the side exposed to water.
- As a ready-to-use material it does not require heating, or thinning.
- It can be applied with a brush, roller, rake or airless pump.
- To ensure strong adherence, avoid dust, and improve durability, non-metallic surfaces must be undercoated with Emilkote®, and metallic surfaces must be undercoated with Emülzer® CSP.
- Although Emülzer® Plus Anti-Root dries fast-in as little as 2 hours- it is recommended to wait 24 hours before applying a second coat.
- To ensure perfect durability against higher pressure, it must be reinforced with materials such as fiber glass, geotextile felt, fiber mesh, etc.

Consumption

600 g/m^2 for each coat, and min. 3 coats.

Packaging

17 kg Metallic pail - 33 Pieces / Pallet

Emülzer® CSP 1001

Rubber Added Bituminous Solution

Description

Emülzer® CSP is a ready-to-use waterproofing bituminous solution with a rubber additive. It does not contain any filling material. By the evaporation of the solvent it contains, it adheres firmly to the surface it is applied, forming a waterproof layer.

Usage Areas

- It is used in grounds, piles, and retaining and pitch walls against ground moisture and water leakage.
- It is used in the terrace roofs made of reinforced concrete, in balconies, and in secret gutters against rainwater.
- It is used for the insulation of galleries, drainage and sewage channels, and collectors.
- It is used for the insulation of pools, and service water storage tanks with open top.
- To protect metallic surfaces (casting, sheet iron, etc.) against corrosion, it can be applied by dipping, brushing, or spraying.
- It is used as an undercoat in all kinds of bituminous membrane applications on metallic surfaces.

Advantages

- It is ready to use.
- As a cold applied material, it does not require heating, or thinning.
- It dries very fast.
- It provides a seamless insulation layer.
- It has high sulfate resistance.

Application

- Emülzer® CSP is applied only onto the side exposed to water (positive insulation). As a prepared material, it does not require heating, or thinning.
- It can be applied with a brush, roller, or pistol.
- To avoid dust and improve durability, non-metallic surfaces can be undercoated with Emilkote®.
- Although Emülzer® CSP dries fast-in as little as 1 hour-it is recommended to wait 24 hours before applying a second coat.
- To provide durability against higher pressure, it must be reinforced with materials such as glass fibre, felt, reinforcing fabric, etc.
- When it is used on the roofs which are continuously exposed to outdoor conditions (except walking), it is recommended to apply Alütec® over Emülzer® CSP to provide improved aesthetics as well as protection against sunlight.

Consumption

500 kg/m^2 for each coat

Packaging

4,5 kg Metallic case - 140 Pieces / Pallet
17 kg Metallic case - 45 Pieces / Pallet
200 kg Sheet iron barrel

Membrane Primer 1035

Bituminous Membrane Primer

Definition
It is a ready to use primer for bituminous membranes obtained by mixing water and bitumen by using special methods.

Usage Areas
It is only used as a priming coat before the application of all brands of bitumen membranes. Thanks to the superior sticking property, it provides a stronger and spaceless surface sticking for the bitumen membranes applied on it. It can be used on all horizontal and vertical surfaces and in closed areas like basement, cellar, etc.

Advantages
- It is very economical.
- Can be easily applied by anyone.
- It can be used in closed areas for not containing toxic and flammable substances
- Because it is water based, it is enviromentally friendy.
- Because it is thinned with water, it adheres perfectly to all kind of surfaces, even when the surface is moist.
- Ready to use.
- Must be applied cold. Does not require heating or thinning.

Surface Preparation
- The application surface should be without dust, rust, dirt, grease and oil and the loose parts should be scrapped out.
- The sharp points or horizontal-vertical joint places subject to cracking should be rounded.
- The large pores and the cracks should be filled with an appropriate repair mortar.

Application
It should be applied as cold. After mixing with the water with 20%, it is applied by grass brush, roller or airless gun. It dries within about 4-5 hours depending on the weather conditions. It should not apply in rainy days or with the temperatures lower than +5°C.

Consumption
0,250 kg/m^2

Packaging
16 kg Metal Can - 45 Pieces / Pallet

Epoxy Coal Tar 85/15 1080

Solvent-Free, Epoxy - Coal Tar Based Coating

Definition

Epoxy Coal Tar 85/15 is a two component, epoxy-coal tar based, solvent free, low viscosity coating material.

Usage Areas

Epoxy Coal Tar 85/15 has been specifically developed for coating and waterproofing on concrete, metal, wood and likely materials.

Advantages

- It fills the pores on concrete and metal surfaces.
- It is easy to use material. After it is cured, it becomes hard and firm paint.
- Excellent resistance against mechanical influences, oil and chemicals.
- Solvent free. Can be used in closed areas.
- Excellent adhesion to common surfaces like steel, concrete, stone, artificial stone, wood, etc. Adhesion does not deteriorate if product submersed in water, sea water, sewage and oils.

Surface Preparation

Surfaces must be clean and dry. Oil, grease, bitumen or sealant remains must be completely removed. Loose materials on the surface must be removed; broken surface must be repaired. Humidity must be max %5.

Application

Mixing : Mix the content of Part A thoroughly for 1 minute before adding Part B. Mix together until a smooth even consistency is achieved. It is important that the entire quantity of part B is added to part A.

Mixing Time : Mix thoroughly for a minimum of 3 minutes.

Mixing Tools : Use a low speed electric stirrer (300-500 rpm).

Application Method /Tools: Immediately after mixing, the coating material is applied on the prepared surface by roll, brush or spray. Applied surface must be protected from water for 4-5 hours.

Consumption

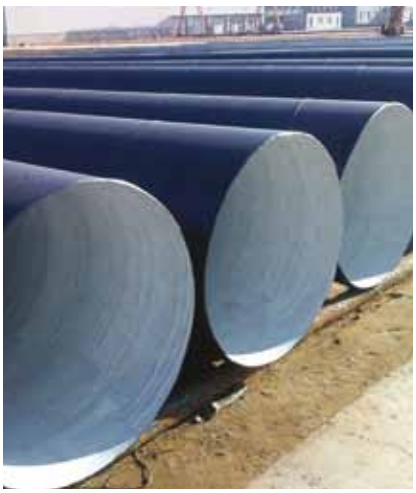
At each layer 0,300 - 0,450 kg/m^2

Packaging

8,5 kg Bitum + 1,5 kg Hardener = 10 kg Set
17 kg Bitum + 3 kg Hardener = 20 kg Set

Epoxy Coal Tar 100/10 1085

Epoxy - Coal Tar Based Coating with Solvent



Definition
Epoxy Coal Tar 100/10 is a two component, tar-epoxy based, low viscosity paint and waterproofing material with solvent.

Usage Areas
Epoxy Coal Tar 100/10 has been specifically developed for coating and waterproofing on concrete, metal, wood and likely materials.

Advantages
- It fills the pores on concrete and metal surfaces.
- It is easy to use material. After it is cured, it becomes hard and firm paint.
- Excellent resistance against mechanical influences, oil and chemicals.
- Excellent adhesion to common surfaces like steel, concrete, stone, artificial stone, wood, etc. Adhesion does not deteriorate if product submersed in water, sea water, sewage and oils.

Surface Preparation
Surfaces must be clean and dry. Oil, grease, bitumen or sealant remains must be completely removed. Loose materials on the surface must be removed; broken surface must be repaired. Humidity must be max %5.

Application
Mixing : Mix the content of Part A thoroughly for 1 minute before adding Part B. Mix together until a smooth even consistency is achieved. It is important that the entire quantity of part B is added to part A.
Mixing Time : Mix thoroughly for a minimum of 3 minutes.
Mixing Tools : Use a low speed electric stirrer (300-500 rpm).
Application Method /Tools: Immediately after mixing, the coating material is applied on the prepared surface by roll, brush or spray. Applied surface must be protected from water for 4-5 hours.

Consumption
At each layer 0,300 - 0,450 kg/m^2

Packaging
10 kg Bitum + 1 kg Hardener = 11 kg Set


FMULZER

Sealants and Joint Fillers

Bituminous Fillet (Bitumen Based, V Shaped Filleting Tape)

Bitumen Mastic SA / Shingle Mastic KZ (Bitumen Based Waterproofing and Adhesion Mastics)

Emulseal PU Mastic (Pu Based, Single Component, Elastometric Mastic)

BibaFlex (Elastic Bituminous Waterstop)

Em-Poxy 420 Epoxy Anchorage Paste
(A Triple Component Anchorage Fixing and Filling Mortar)

Em-Poxy 310 Fixing and Adhesive Mortar
(A Two Component Epoxy Based Fixing Paste)

DDM 2K B (Two component, Polyurethane Based Liquid Joint Filler for Wide Joint)

DDM 2K (Dilatation Filling Paste)

HDM PU 2K (Coal-Tar Modified, Two Component Polyurethane Sealant with Jet Fuel Resistance)

Soderz-5 (Cold Applied Joint Filler)

Swell-Flex Acrylic (Swelling Waterstop)

Swell-Flex (Swelling Waterstop)

Pur-Wet Hybrid Mastic (One Component Hybrid Mastic)

Thioseal (Polysulfide Based, Pourable Grade Joint Sealant)

Thioseal Thix (Polysulfide Based, Thixtropic Joint Sealant)

Emülderz Ray (Bituminous Joint Filler)

Emülderz® (Joint Filler)

Cable Insulation Putty

Asphalt 4010 - 75/100 Penetration Bitumen - 40/50 Blown Asphalt - 10/20 Blown Asphalt

Road Repair Asphalt (Cold Applied Asphalt for Road Repair)

MEMBER OF INSULATION ASSOCIATION İZODER

SUDER WATERPROOFERS ASSOCIATION

MADE IN TURKEY

Bituminous Fillet 2025

Bitumen Based, V Shaped Filleting Tape

Description
It is a bitumen-rubber based, V-shaped elastomeric filleting tape used for preparing internal edges at vertical and horizontal seams for insulation applications.

Usage Areas
- It is used at the internal edges of hot-applied or self-adhesive bituminous membranes.
- It is used at the edge intersections of building components with different expansion characteristics.
- It is used with water or solvent based bituminous liquid membranes.

Advantages
- Easy and fast application.
- Very elastic. Maintains its elasticity between -20°C and +95°C.
- It perfectly adjusts to different construction materials.
- Can be applied under all weather conditions.

Surface Preparation
- The surface to be treated must be dry and clean.
- For perfect adherence, the surface must be primed with a coat of Emilkote® or Emülzer® C prior to application.

Application
- After having cut the tape into desired length, protective polyethylene foil is melted by welding torch or burner.
- The tape is firmly pressed and applied onto the edge.
- You can start the insulation application immediately after.

Consumption
It depends on footage.

Dimension
25 x 25 x 35 mm
40 x 40 x 57 mm

Packaging
25 x 25 x 35 mm
- 1.20 meters x 44 Bars = 52,80 m/box
  27 Boxes (1425,6 m) / Pallet

40 x 40 x 57 mm
- 1.20 meters x 21 Bars = 25,2 meters
  27 Boxes (680,4 m) / Pallet

Bitum Mastic SA 2043 / Shingle Mastic KZ 2040

Bitumen Based Waterproofing and Adhesion Mastics

Description

Bitumen-based, elastic waterproofing and adhesion mastics used for different purposes.

Usage Areas

- Used at intersection joint gaps and chimney bottoms for waterproofing, filling and repair.
- Used for waterproofing roof windows as well as ventilation, antenna and pipe outlets.
- Used for adhering, installing, and repairing bituminous membranes.
- Used for adhering and repairing bituminous shingles.

Advantages

- Can be used on bituminous membranes, shingles, asphalt-based materials, concrete, bricks, wood and metals.
- As a cold applied material, it is ready to use.
- It is a highly economical adhesive.
- It does not creep in hot weather and it maintains its elasticity in cold weather.
- Shingle Mastic KZ is an economical adhesive used on dry grounds.
- Bitum Mastic SA can be applied even under rainy weather conditions thanks to its special formula, and it adheres perfectly to wet, and even underwater surfaces.

Application

- Please cut out the tip of the cartridge to the size of the joint.
- Squeeze the material into the joint spacing and in not more than 10-15 minutes, smooth out the surface by using a moist spatula.
- In any adhesion process it is best to apply the product onto one of the surfaces and then to wait for 10-15 minutes before adhering the two.

Consumption

Depends on the dimensions of the profile.

Packaging

310 ml Cartridge
25 Cartridges / Box
1200 Cartridge / Pallet

Emulseal PU Mastic 2080

Pu Based, Single Component, Elastometric Mastic

Description
Emulseal PU Mastic is a single component, humidity cured, polyurethane based elastic grouting mastic with high mechanic resistance. It is suitable for use in outdoor and indoor applications.

Usage Areas
- In vertical and horizontal indoor and outdoor expansion joints of buildings
- In flooring movement and hinge joints
- In Parapet corner joints of roofs and terraces
- In joint details of prefabricated elements
- In joints that can be maneuvered up to 25%
- In roof conduits and parapet joints
- On edges of windows and doors

Technical Specifications

Contents of the material	Single component,humidity cured polyurethane
Color	White, grey and special color
Density (mixture)	1,15 g/m^3
Elasticity	>500%
Shore A Rigidity	35-40 Shore A
Working Temperature	+5°C / +30°C
Max. Joint Interval	4 cm
Curing Speed	~1 mm / 24 hours (+23°C / 50% r.h.)
Service Temperature	-40°C / +70°C
Drying Time	60 minutes to the touch
Full dryness	24 hours

Advantages
- It is elastic and preserves its elasticity between -40°C to +70°C.
- It has single component composition. It is applied easily and quickly.
- It can be painted after it's curing period.
- It is ready for use and applied cold.
- It is cured by means of the humidity in the air.
- It has high elasticity.
- Achieves excellent adherence with concrete, metal, wood and other construction materials.
- It can be applied on many surfaces without a primer. Its adherence to the application surface is very high.
- It is cured without formation of bubbles.
- It has chemical resistance.
- It is suitable to contact with potable water. (ODTÜ Report No.: 2014.03.04.451 / Report Date: 16.07.2014)

Surface Preparation
The joints must be free of oil, dust, dirt and previously used materials. Emulseal PU Mastic is affected from water therefore the joints must be dry and contact with water must be avoided until the product is fully dry.

Application
- It can be applied without using a primer. By means of polyethylene cords the adhesion of Emulseal PU Mastic on the joint bottoms is prevented. This provides two directional movement capability.
- The diameter of the polyethylene cord must be 20 to 25% wider than the width of the joint.
- The width and depth of the joint must not be less than 5 mm. Up to 15 mm the width of the joint must be equal to its depth. For wider joints, the depth must be arranged to be between 20-25 mm.
- In manual applications, the material is places in an application gun and injected into the joint without causing the formation of any air bubbles.
- The joints on the edges of the windows must at least be 10 mm wide.

Cleaning of Tools
The tools can be cleaned with cellulosic thinner immediately after application. Dried product can only be removed mechanically.

Consumption
1,150 kg/dm^3

Packaging
- 600 ml Sausage - 24 Sausages / Box
  45 Boxes (1080 Sausages) / Pallet
- 280 ml Cartridge - 25 Cartridges / Box
  60 Boxes (1500 Cartridges) / Pallet

CE

BibaFlex 2024

Elastic Bituminous Waterstop

Description

It is a bitumen-based waterstop specially produced for cold joints. As an easy-to-apply alternative to usual waterproofing tapes, it does require additional materials. BibaFlex is not an expanding tape.

Usage Areas

It is used in dams, ponds, irrigation ditches, water tanks, water purification facilities, swimming pools, docks, water supply tunnels, hydroelectric and thermoelectric power plants, bridges, refineries, subway constructions, retaining walls, and industrial buildings. Besides typical usage areas, it can be used as a waterstop sealant in mounting prefabricated concrete plates.

Advantages

- It does not expand upon contact with water.
- Because its waterstop characteristics are durable against rain and water it is more convenient than traditional systems.
- It can be applied under all weather conditions, including rain.
- There is no need to utilize special tools at joints.
- Because it not expand it can be used in thin concrete structures as well.
- It can be easily applied even in case of close rebar spacing.
- BibaFlex binds to concrete during hydratation.
- It is very light, and because it can be transported and applied very easily and quickly it is very economical.
- It is resistant to acids and bases.
- No visible damage observed in 30 day tests with %5 potassium hydroxide solution, hydrochloric acid, and saturated hydrogen sulphide solution.

Application on Fresh Concrete

The simplest method is to place Bibaflex directly over concrete. In this method BibaFlex binds to concrete during setting. The protective foil should be on top and it should not be pressed and sunk into concrete. At the connection points, 2-3 cm of both tape ends are brought together, pressed and adhered airtight. Protective foil is separated just before second concreting.

Application on Cured Concrete

The surface to be treated must be dry and clean, and free from dust, dirt, rust, grease, and loose particles. BibaFlex is fixed by pressing firmly into the concrete. No other equipment is required to fix it. Tapes are placed by bringing them together side by side and overlapping 2-3 cm and then pressed and adhered airtight. Prior to concrete placement it should be checked whether BibaFlex is properly adhered. BibaFlex can be removed from the surface about 30 minutes after concreting only by pulling strongly. Otherwise, the adhesion process have to be repeated. Separator foil must be removed prior to the placement of the new concrete.

Packaging

6 rolls (35 mm x 20 mm) x 4 meters = 24 meters / package
24 Boxes (576 m) / Pallet

Em-Poxy 420 Epoxy Anchorage Paste 2073

A Triple Component Anchorage Fixing and Filling Mortar

Description

A triple component anchorage, fixing and filling mortar, containing epoxy resin, hardener, and filler. First type is for horizontal applications with fluid form and other one is for vertical applications with thixotropic properties.

Usage Areas

- To fix iron stones and bolts into concrete and rocks.
- To fill quilting seam holes.
- To repair columns, shear walls, and joists.
- To fill and fillet mortar in joint insulation.
- Thanks to its high resistance and superior adherence characteristics, it offers excellent results in patching and repairing landing fields and field concrete.

Advantages

- Extremely resistant to corrosion and chemicals.
- Resistant to vibration.
- Does not contract.
- Waterproof and gasproof.
- Allows rapid loading thanks to rapid curing.
- Has high resistance and adherence.
- Very easy to apply.
- Used in overhead and horizontal applications.

Application

- The concrete must be highly durable and resistant. The dimesions of the holes must be 15 times bigger then anchorage irons.
- Holes must be cleaned up by air pressure, and they must be free from grease, dust, dirt, plastic particles and water.
- Anchorage irons must be ribbed, dry, and free from grease and rust. Product components are dosed according to the amount required.
- The hardener is poured into epoxy, and to avoid air bubbles, it is mixed by using a low speed mixer (400 rpm) until it reaches a homogenous gray color.
- The mixture is poured into cartridge and pressed into holes. Pot life must be considered in order to prepare just the required amount of mixture. Because it does not contain any solvent, it cannot be diluted with thinner.
- During application the temperature must be +5°C minimum.

Consumption

1,8 kg/dm^3.
For example, to ore Ø16 mm iron (into Ø20 mm hole), approximately 50 g of Em-Poxy 420 is required.

Packaging

1,550 kg Resin (Component A)
0,350 kg Hardener (Component B)
3,100 kg Filler (Component C) = 5 kg Set - 60 Sets/Pallet

Em-Poxy 310 Fixing and Adhesive Mortar 2072

A Two Component Epoxy Based Fixing Paste

Description
It is a double-component, epoxy resin-based, non-solvent, thixotropic repair and mounting mortar.

Usage Areas
- It is used; for mounting expansion tapes,
- For filling tie rod holes,
- For repairing columns, curtains and girders,
- As a mounting, filling and bevelling mortar for waterproofing joints,
- For repairing and waterproofing concrete cracks,
- For repairing all types of structural concrete,
- For mounting and adhering all types of metal elements onto concrete or steel elements.

Technical Properties

Colour	: Grey
Density	: 1,6 kg/dm^3
Pressure strength	: 75 MPa
Adhesion to concrete	: >4 MPa (Breaking from concrete)
Pot life	: 30 minutes (+30°C)
Initial setting	: 8 hours (+30°C)
Loading	: 24 hours (+30°C)
Actual strength	: 7 days

Advantages
- Highly resistant to corrosion, abrasion and chemicals.
- Resistant to vibration.
- Does not shrink.
- Waterproof and gas-proof.
- Due to fast curing, allows loading in a very short period of time.
- Has high adherence.
- Non-solvent.
- Easy-to-mix and easy-to-apply.
- Has perfect adhesion to concrete, steel and many other building materials.
- Thixotropic; does not creep in horizontal and overhead applications.

Surface Preparation
The concrete should be firm and strong. Holes must be cleared with pressured air, leaving behind no grease, dust, plastic particles or water. Cement based surfaces must be cleared from all dirt and dust prior to application. Metal surfaces must also be cleared from rust and dirt. The material must be mixed to a homogenous consistency with a low speed mixer for at least 2-3 minutes; it should not at all be mixed manually or with a trowel. It must be applied with a trowel or spatula. During application surface, ambient and material temperatures must be between +5°C and +30°C.

Application
- The dosage of the components are designed according to application requirements.
- The hardener is poured into the epoxy and mixed to a homogenous consistency and gray colour; to prevent air bubbles a low speed mixer must be used.
- Pot life must be considered in the preparation of the material and only required amount of it must be mixed. Because it is non-solvent, it cannot be thinned with a thinner.
- During application the air temperature must be +5°C minimum.

Cleaning the Equipment
The equipment used should be cleaned with a detergent and warm water if possible, otherwise with a cellulosic thinner.

Consumption
1,6 kg/dm^3
Approximately 2 kg for 1 meter of expansion tape.

Packaging
Epoxy resin + Hardener = Net 5 kg as a set
60 Sets / Pallet

DDM 2K B 2063

Two component, Polyurethane Based Liquid Joint Filler for Wide Joint

Description

It is a two component, polyurethane based, high performance joint filler material which is developed for wide horizontal joints.

Usage Areas

- Wide dilatation joints (Joints with a width of at least 2 cm)
- Joints of water tank
- Joints of irrigation canals
- Joints of airport runways

Advantages

- It is cold applicable.
- Resistant to abrasion.
- It is self leveling, easy and fast applicable
- Its adherence to the application surface is very high. It is resistant to aging.
- It has great resistance to different climate and heat conditions.
- In addition to its effective waterproofing properties, it also exhibits very good resistance to chemical and other destructive factors.
- Excellent performance against abrasion.
- It has excellent resistance against microorganisms, fungus and various chemicals.
- Resistant to cold.
- It is resistant to sweet and salt water.
- It has effective mechanical properties.
- It's elastic.

Surface Preparation

Joint surfaces must be clean and dry. Joint edges should be cleaned by wire brush, spiral motor or sandblasting. If it is possible, joint should be cleaned with compressed air. If Emülzer DDM 2K B is applied on wet or damp surfaces it will make foaming. Surface humidity should be measured by suitable humidity meter. If the joint substructure is exposed, backer rod should be used and should be placed at a depth of about half of the joint width.

Application

PU ASTAR should be used according to the surface condition and the climatic conditions in the application process. After pouring Component B into the Component A, it is mixed with low-rotation drill after until providing homogeny mixture and the mixture is poured into the joint. A spatula or a suitable crotch gun may also be used. The mixture should be used approximately in 30 minutes; otherwise it turns to be gelatin and can not be improved again. The application surface should be kept away the water minimum 6-8 hours.

Consumption

DEPTH \ WIDTH	2 cm	4 cm	8 cm
1 cm	0,280 kg/m^2	0,560 kg/m^2	1,12 kg/m^2
2 cm	0,560 kg/m^2	1,12 kg/m^2	2,24 kg/m^2

Packaging

- 5 kg + 1 kg (Component A + Component B)
  60 Sets / Pallet

DDM 2K 2062

Dilatation Filling Paste

Description

If is a double-component, polyurethane-bitumen based, cold-applied, self-levelling dilatation and joint filler with high mechanical and chemical strength.

Usage Areas

- It is used for waterproofing and filling horizontal dynamic dilatations and joints.

Advantages

- It is elastic. It maintains its elasticity between -20°C and +120°C.
- It is a cold-applied material.
- It is resistant to abrasion.
- As a self-levelling material, it is applied easily and quickly.
- It has very high adherence to the surface if is applied.
- It is very durable.

Application

- The surface to be treated must be clean and dry.
- The joints must be cleaned with a wire brush, spiral engine or sandblasting.
- If possible joint spacing must be treated with compressed air.
- PU ASTAR should be used as a primer to achieve better adhesion.
- DDM 2K applied onto damp surfaces results in foaming.
- It is used only on horizontal joints.
- All the hardener contained in the small pail is mixed with all the main material contained in the big pail by using a low speed mixer until it becomes homogenous.
- The mixture has to be consumed within 30 minutes.
- Otherwise gelling occurs and it cannot be recovered.
- After the application the surface must be protected from water exposure for at least 6-8 hours.

Consumption

1,3 kg/dm^3.
Example: For joints with 20 meters lenght 5 cm width and 3 cm depth 20 m x 0,05 m x 0,03 m x 1,3 kg/dm^3 x 1000 = 39 kg of product used.

Packaging

4 kg + 1 kg = 5 kg Set
60 Sets / Pallet

HDM PU 2K 2052

Coal-Tar Modified, Two Component Polyurethane Sealant with Jet Fuel Resistance

Description
Emülzer® HDM PU 2K is a two component, cold applied, chemically curing, self leveling type, polyurethane based, coal tar modified, elastomeric mastic. It has resistance to jet fuels, oils, diluted acids/bases and various chemicals.

Usage Areas
Emülzer® HDM PU 2K has been specifically developed for sealing joints in concrete pavements where fuel and chemical spillages are likely, i.e. the airfield aprons, runways, taxiways, cargo handling areas, parking areas, petrol stations and service roads.

Advantages
- It remains flexible between -35°C and +85°C
- Impermeable to water
- Easy to mix and apply - pours easily and self-levels
- Excellent resistance against mechanical influences, oils, jet fuels, petrol base solvents, acids, alcalies, organic and inorganic chemicals
- Emülzer® HDM PU 2K is suitable for joints of expressways and roads with heavy traffic conditions in all seasons as well as for joints of airfield runways, taxiways, aprons, bridges, etc.
- With it's the super elastic structure, it completely adapts to the work of the joints.
- Excellent adhesion - Emülzer® HDM PU 2K has excellent adhesion to common surfaces, for example concrete, stone, artificial stone, epoxies, steel, wood, etc.
- Cold applicable.
- Resistance to abrasion.
- Maintains its properties shock temperature up to 120°C.
- Forms smooth surface.
- It has UV resistance.

Preparation Of Joints
The width of expansion joints must be at least 4 times of concrete work value. If this value less than 6 mm, the joint's width should be at least 6 mm. In case the joint width is up to 5 mm, the joint depth and joint width should be equal. If the joint width is between 15-30 mm, the joint thickness should be 80% of the joint width. For wider joints, the joint sealant depth must be determined according to special conditions. We recommend that joint sealant depth is the half of the joint width. Substrate material should be used to obtain suitable joint thickness. The substrate material's thickness must be more than 10-25% of the joint's width and the material should be replaced by pressing. To paste a tape to the edge of the joint avoids the staining due to sealant and primer overflow.

Surface Preparation
Joint surfaces must be clean and dry. Oil, grease, bitumen or sealant remains must be completely removed. Loose materials on the joint walls must be removed; broken joint walls must be repaired. The joint should be cleaned with compressed air, if it is possible. Emülzer® HDM PU 2K can be applied on new cement joints without primer. If Emülzer® HDM PU 2K is applied on wet surfaces, it may cause foaming. The cement joint to be filled must has 80% of its whole resistance (min. 14 days). In case dust and dirt can not be removed, special Emülzer® PU ASTAR should be used. Emülzer® HDM PU 2K adheres perfectly clean and dry joints. If primer is used, the primer must be waited to dry. Emülzer® HDM PU 2K is affected from water before curing like all other polyurethane materials. Therefore the joints must be dry and the sealant must not contact water until chemical curing occurs.

Application
Mixing: Each set includes proper amount of component A and B. Entire quantity of component B is added to component A and mixed. Component B is a viscous liquid so it flows hardly in cool weather. The mixture is prepared by stirring for 3-5 min. and using a low speed electric stirrer (200-400 rpm). The stirrer is adducted to sides of the can to achieve a homogenous mixture. The stirrer must be at a sufficient depth in the packaging to prevent air admission. In case the stirrer is brought very closer to the surface, air bubbles may occur and waterproofing properties of Emülzer® HDM PU 2K may be reduced. The pot life is between 30-45 min. at 20°C temperature. However, it is recommended to work with applicable amount in $^1/_2$ hour. The mixture must be used in 30 minutes, otherwise irreversible gelation will begin. Reduction of viscosity and elongation show the end of the pot life. The material that is in this situation should not be used.
Filling The Joints: The joint must be filled from the bottom to the top with a suitable tool, also the material should be completely in contact with side surfaces. The joints which are filled should be checked in 10-20 min. Excess of the material must be scraped with a spatula and the empty places must be filled immediately. If the slope of the joint is greater than 2%, the horizontal barrier bars should be placed at regular intervals. When the material that is applied between the bars is tolerably cure, the bars are taken off and the resulting gaps are filled. Emülzer® HDM PU 2K has resistance to traffic after it has been cured (approximately 48 hours later), also it has resistance to chemicals 7 days later (at 20°C). The area which is applied with Emülzer® HDM PU 2K must be prevented from water for 6-8 hours.

Consumption
1,250 kg/dm^3

Packaging
A + B = 5 kg Set - 60 Sets / Pallet

CE

Soderz-5 2030

Cold Applied Joint Filler

Description
It is a bitumen-neoprene based, cold applied sealant used for horizontal and vertical joints.

Usage Areas
- It is used for waterproofing, filling, repairing and adherence in: The joints of walls made up of materials such as concrete, brick, gas concrete, briquette, etc.
- Vertical and horizontal building dilatations up to 5 cm.
- Dilatations of prefabricated building precasts.
- Building cracks.
- The joints of water drain pipes of building terraces.
- It is used for repairing bituminous membrane applications.

Advantages
- It can be easily applied by anyone.
- It is ready to use.
- As a cold applied material it does not require heating or thinning.

Surface Preparation
The surface to be treated must be dry and clean. Do not apply onto wet, icy, greasy or dusty surfaces.

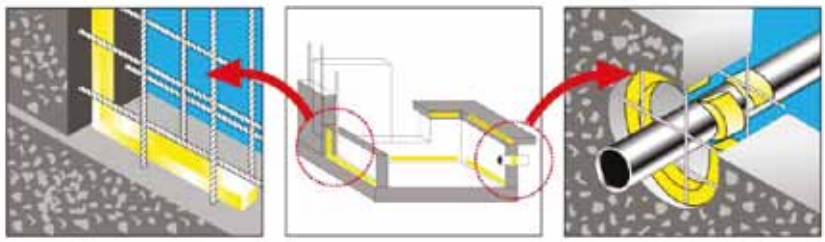
Application
- Soderz-5 is applied only onto the side exposed to water (positive insulation).
- It can be applied with a trowel or spatula.
- Under normal weather conditions, it starts rubberizing after 72 hours.

Consumption
0,900 kg/dm^3

Packaging
16 kg Metallic pail
33 Pieces / Pallet

Swell-Flex Acrylic 2008

Swelling Waterstop



Description

Swell-Flex Acrylic is a new generation high performance acrylic polymer based expanding tape. It is expands up to 300% when in contact with water.

Usage Areas

Swell-Flex Acrylic is used in concrete construction for sealing of construction joints including wall/base connections, pipe entry systems, sealing of openings and interface sections between existing and new concrete.

Advantages

- Conformable, can be used on a variety of irregular substrates.
- Forms an impermeable barrier against water in concrete.
- Excellent compliance with deformed surfaces and joints.
- Saves time and labour.
- Simple overlap jointing on site.

Application

Roll out required amount of Swell-Flex Acrylic and apply exposed face to concrete, noting that Swell-Flex must be given a minimum of 75 mm of concrete cover on all sides. Firmly press the entire length of it onto concrete. In vertical and overhead applications, press for at least 15 seconds for perfect adherence. Make sure waterstop covers all parts of the surface, especially for surfaces which are not perfect in shape. Use swell-fix primer when necessary. Put together coil ends side by side or end to end; do not overlap. When sufficient Swell-Flex has been positioned remove backing paper and pour concrete carefully and indirectly. When installing Swell-Flex vertically, work from the base up to prevent material deformation/ elongation. It is not suitable for use in joints prone to movement. In totally dry state it will shrink to original dimensions and re-expand in contact with water.

Packaging

5x20 mm - 15 m Box - 2700 m / Pallet
10x20 mm - 10 m Box - 1800 m / Pallet
20x25 mm - 5 m Box - 900 m / Pallet

Swell-Flex 2007

Swelling Waterstop

Description
Swell-Flex is an active sodium bentonite/butyl rubber-based waterstop. It fills all the cracks, pores and capilleries on the concrete by expanding upon contact with water, and waterproofs concrete joints.

Usage Areas
- Swimming pools,
- Foundations,
- Shear concrete,
- Tunnels,
- Manholes,
- Retaining walls,
- Garages,
- Water storage tanks,
- Old and new concrete joints,
- Sewage systems,
- Underground pipe and cable inlets,
- Water purification facilities.

Advantages
- Very easy installation.
- Offers easy application even with great amounts of rebar.
- To connect seams it is sufficient to bring them together side by side and press.
- One person can install up to 130 meters per hour.
- It is suitable to contact with potable water. (Middle East Technical University Report No: 2014.03.04.147/04 - Date: 24.03.2014)

Surface Preparation
The surface to be treated must be dry and clean. Do not apply onto wet, icy, greasy or dusty surfaces.

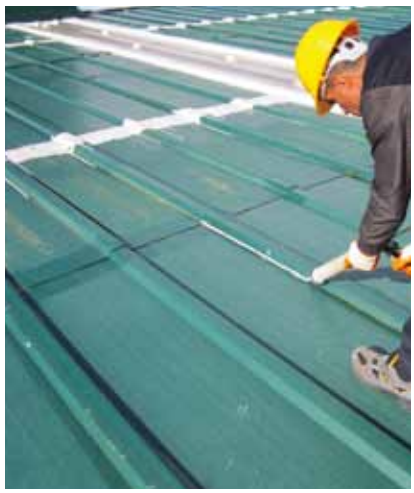
Application
- Roll out required amount of Swell-Flex.
- Press it onto concrete. For best adherence in vertical and overhead applications, press it firmly for at least 15 seconds.
- Apply primer when necessary.
- Place seams side by side or end to end; do not overlap.
- Make sure waterstop covers all parts of the surface, especially for surfaces which are not perfect in shape.
- Remove silicon paper and pour concrete carefully.

Caution
- The length between Swell-Flex and the outer surface of the concrete must be 5 cm minimum.
- It is not suitable for the joints of precast building elements. Use our unique BibaFlex for this type of applications.
- Swell-Flex should be protected from humidity and rain prior to application.
- Upon contact with excessively salty water Swell-Flex may not expand sufficiently.
- Swell-Flex can be used underwater up to a depth of 12 meters.

Packaging
5x20 mm	15 m Box	-	2700 m / Pallet
7x20 mm	15 m Box	-	2700 m / Pallet
10x20 mm	10 m Box	-	1800 m / Pallet
15x20 mm	5 m Box	-	900 m / Pallet
20x25 mm	5 m Box	-	900 m / Pallet

Pur-Wet Hybrid Mastic 2090

One Component Hybrid Mastic



Description
Emülzer PUR-WET Mastic is hybrid polyurethane based, single component, solvent free, ready to use sealing material.

Usage Areas
It is safely applicable on concrete, stone, fibre-cement sheets and metals, in rain gutters, canals and water ducts, terrace roofs, cold storage depots against water and moisture.

Technical Properties

COLOR	: Grey, White, Black
BASE	: Hybrid
SKIN FORMATION TIME	: 45 min. (23°C / %50 relative humidity)
CURING TIME	: 3 hours (for 3 mm thickness)
THERMAL RESISTANCE	: Between (-40°C) - (+85°C)
SHORE A HARDNESS	: 30
SOLID CONTENT	: %100
APPLICATION TEMPERATURE	: Between +5°C and 35°C
DENSITY	: 1,3 g/cm^3
PULL-OUT RESISTANCE	: 1.1 [N/mm^2]
TENSILE STRENGTH	: >1 MPa
ELONGATION AT BREAK	: 450 (%)

Advantages
- It can be applied to wet surfaces.
- It adheres perfectly to all kind of surfaces like concrete, wood, glass, aluminium, steel, zinc etc.
- It has a excellent workability and fast curing characteristic.
- It can be applied between +5°C and +35°C
- Highly adhesive. Does not require primer application. Provides perfect adherence for aged coatings as well.
- Highly resistant to aging, mold and weather conditions.
- Sustains its original properties for years.
- Single component, easy to use, an elastic material.
- It can fill the cracks perfectly.
- Resistant to sunlight because of producing from UV resistant resins.
- It protects its elasticity for permanent time. Cracks on the surfaces does not occur after application.

Surface Preparation
The surface to be treated must be dry, clean and free from all types of grease. Moist and wet surfaces do not cause application problems.

Application
Before the application, the tip of the cartridges is cut and a plastic cap is fixed. The tip of the cap is cut according to the width of the surface and fixed to the cartridge gun. The joints should be filled at one time and without gaps during the application.

Cleaning The Equipment
The equipment can be cleaned by industrial type solvents immediately after application.

Consumption
See page 179.

Packaging
Net 280 ml Cartridge
1200 Cartridges / Pallet

CE

Thioseal 2082 / Thioseal Thix 2083

Polysulfide Based, Two Component, Pourable Grade Joint Sealant

Polysulfide Based, Two Component, Thixotropic Joint Sealant

Description

Emülzer Thioseal is polysulfide-based, two component, pourable grade, elastic, cold applied sealant for horizontal joints.
Emülzer Thioseal Thix is polysulfide-based, two-component, thixotropic, cold applied elastic sealant for vertical joints.

Usage Areas

Airports, aprons and hangars, garage floors, fuel facilities, factory floors, terraces, in general flooring joints, expansion joints, aqueous acid and caustic tanks, prefabricated structure joints.

Advantages

- Cold applicable, heating is not required.
- Resistant to fuel oil and hydraulic fluid.
- Thioseal is used for horizontal joints and Thioseal Thix is used for vertical joints.
- Tough rubbery seal that is not affected by climatic variations.
- Resistant to dilute acids, dilute alkalis, petroleum, aviation fuel, diesel fuel, kerosene and white spirit.

Surface Preparation

Joint surfaces must be clean and dry. Oil, grease, bitumen or sealant remains must be completely removed. Loose materials on the joint walls must be removed; broken joint walls must be repaired. The joint should be cleaned with compressed air, if it is possible. After surface cleaning, Emülzer POLYSULFIDE PRIMER or PU PRIMER should be used as primer.

Application

Each set includes proper amount of component A and B. Firstly Component B must be stirred in its own package. Then entire quantity of component B is added to component A. The mixture is prepared by stirring Component A and B for 5 min. with a low speed electric stirrer (200-400 rpm). The mixture should be applied immediately.

Consumption

Thioseal : 1,45 kg/dm^3
Thioseal Thix : 1,60 kg/dm^3

Packaging

Thioseal : Net 4 kg Set
Thioseal Thix : Net 3,5 kg Set

Emülderz Ray 2011

Bituminous Joint Filler

Description
It is an elastomeric, bitumen-based, hot-applied filling paste especially used for filling joint gaps in rails.

Usage Areas
- At level crossings, it prevents water and other subtances from entering into the joint gaps in rails.
- It is used for reducing vibration caused by the traffic over the rails.

Advantages
- It considerably increases the durability of the rail bearing.
- It decreases the vibration of the rails as well as its negative impact on the buildings all around.
- It is very elastic. It maintains its elasticity between -20°C and +90°C.
- It is offered in a very practical cardboard packaging.

Application
- The surface to be treated must be clean and dry.
- The joints must be cleaned with a wire brush, spiral engine or sandblasting.
- If possible joint spacing must be treated with compressed air.
- To provide excellent adherence, and improve durability, non-metallic surfaces can be undercoated with Emilkote®, and metallic surfaces can be undercoated with Emülzer® C.
- If you use a boiler you should first fill the half of it, heat it up to approximately 160°C, and allow Emülderz Ray to melt, and then you can add the remaining amount.
- If you decrease the temperature, the product reaches an excessive consistency, loses its flowability and cannot fill the joint gaps properly.
- If the product is overheated, that is up to temperatures over 180°C or if it is heated up and cooled back for a few times it will be segregated and spoiled, and cannot be recovered.
- During heating up process the product is stirred occasionally and after having reached the appropriate consistency, it is poured into joint gaps.
- The surface treated will be ready to use after approximately 1 hour.

Consumption
1,300 kg/dm^3

Packaging
20 kg easy-to-separate Cardboard box
48 Boxes / Pallet

Emülderz® 2010

Joint Filler

Description
It is an elastomeric, hot-applied, bitumen-rubber based joint filler used at horizontal and vertical joints.

Usage Areas
- It is used for waterproofing, filling, repair and adherence in:
- Dilatations, joints,
- Intersections of cement coatings with wide surfaces,
- Dams, channels and ducts,
- And other locations where any dilatation may occur.
- It is used for installing reflective road buttons onto asphalt.

Advantages
- It is very elastic. It maintains its elasticity between -20°C and +80°C.
- It is heated up either in a special double walled boiler or directly on a furnace.
- It is suitable to contact with potable water. (Hacettepe University Report No.: 2003-381)

Surface Preparation
- The surface to be treated must be clean and dry.
- The joints must be cleaned with a wire brush, spiral engine or sandblasting.
- If possible joint spacing must be treated with compressed air.

Technical Properties

Essential Characteristics	Performance
Reaction to fire (EN 11925-2:2010)	E
Softening point (EN 1427)	88°C
Density (EN 13880-1)	1,16 kg/dm^3
Cone penetration (25°C) (ASTM D 5329)	33 dmm
Penetration and recovery (resilience) (EN 13880-3)	% 36,5
Change in Penetration Value (EN 13880-4)	16 dmm
Flow resistance (EN 13880-5)	1,75 mm
Compatibility with asphalt pavements (EN 13880-9)	Compatible
Fraas Brittle Point	- 25°C
Application Temperature	160-180°C

Application
- To provide excellent adherence, and improve durability, non-metallic surfaces can be undercoated with Emilkote®, and metallic surfaces can be undercoated with Emülzer® C.
- Emülderz® is heated up to approximately 160-180°C, mixed thoroughly and poured into joint gaps.
- The surface treated will be ready to use after approximately 1 hour.
- If the product is overheated, that is up to temperatures over 160-180°C or if it is heated up and cooled back for a few times it will be spoiled and cannot be recovered.

Consumption
1,17 kg/dm^3
Example: For joints with 1 meters lenght 5 cm width and 3 cm depth 1 m x 0,05 m x 0,03 m x 1,17 kg/dm^3 x 1000 = 1,755 kg of product used.

Packaging
17 kg Metallic case - 45 Pieces / Pallet
Bulk in easy-to-separate cardboard box

CE

Cable Insulation Putty 2020

Description
It is a bitumen-based, hot-applied insulation putty used for waterproofing underground junction boxes and electrical cables.

Usage Areas
- It is used as a hot-applied waterproofing material at connection points of electrical cables and junction boxes.
- It is used as a supplementary material in battery production.

Advantages
- It is the most economical material for this application.
- It has resisdance to acids.

Application
- The surface to be treated must be dry and clean, and free from dust, dirt, rust, and grease.
- The cable pitch is warmed up to approximately 180°C and poured onto the surfaces to be applied.

Consumption
1 kg/dm^3

Packaging
17 kg Metallic Case
45 Pieces / Pallet

Asphalt 4010 - 75/100 Penetration Bitumen - 40/50 Blown Asphalt - 10/20 Blown Asphalt



Description
Bituminous materials obtained as a result of distillation in petroleum refineries.

Usage Areas
- It is used as a hot-applied waterproofing material.
- It is used for adhering wooden parquets.
- It is used as a skidder in the machines operating at very high temperatures.
- It is used as a supplementary material in battery and rubber production.
- It is used for highway surfacing.

Advantages
- It is easily available.
- It is a most economical adhesive.

Surface Preparation
- The surface to be treated must be clean and dry.
- The loose particles, dust, excess water and ice, if any must be cleaned.
- To provide excellent adherence, and improve durability, surfaces can be primed with Emilkote®, or Emülzer® CSP.
- Cracks and pores must be filled with Emülderz Joint Filler.

Application
For insulation:
- It is heated up to approximately 180°C and applied to the surface with a brush.

For parquetry:
- The parquets are dipped into melted asphalt, and adhered to the surface one by one.
- It is heated up to approximately 180° C and applied to a small area with a brush or trowel, and then the parquets are adhered before it gets cold.

Consumption
1-1,5 kg/m^3 for each coat

Packaging
17 kg Metallic case
Bulk in sheet iron barrel
Bulk in truck

Technical Properties

ASPHALT TYPE	70/100	40/50	10/20		
TYPE	I	II	III		
PENETRATION AT 25°C, 100 g, 5 SEC	70/100	40/50	10/20	ASTM D 5	EN 1426
SOFTENING POINT (0°C)	43-51°C	60-70	80-100	ASTM D 36	EN 1427
MASS CHANGE (LOSS ON HEATING) (MAX.)	%0,8			ASTM D 6	
FLASH POINT (MIN.)	230	230	232	ASTM D 92	EN 22592
RETAINED PENETRATION (Penetration of residue after RTFOT as compared to penetration before heating)	%46 en az			ASTM D 5	EN 1426
DUCTILITY (25°C, 5 CM/MIN.) (MIN.)	10 cm	3 cm	1,3 cm	ASTM D 113	
SOFTENING POINT AFTER HARDENING	45°C			ASTM D 36	EN 1427
SOLUBILITY IN TRICHLOROETHYLENE	99	99	99	ASTM D 2042	EN 12592

Road Repair Asphalt 2015

Cold Applied Asphalt for Road Repair

Description
It is ready-made cold asphalt - aggregate mixture, which is used to repair the damaged sections of asphalt coatings.

Usage Areas
On highways, and surface treated roads, at airports, sports complexes, car parks, in short in any kind of repair work where hot asphalt was previously used.

Technical Specifications

Base	Asphalt / Aggregate
Color	Black
Briquette Volume Specific Weight	2,26 kg/dm^3
Viscosity (25°C)	2,8 mm
Stability (25°C)	1075 kg

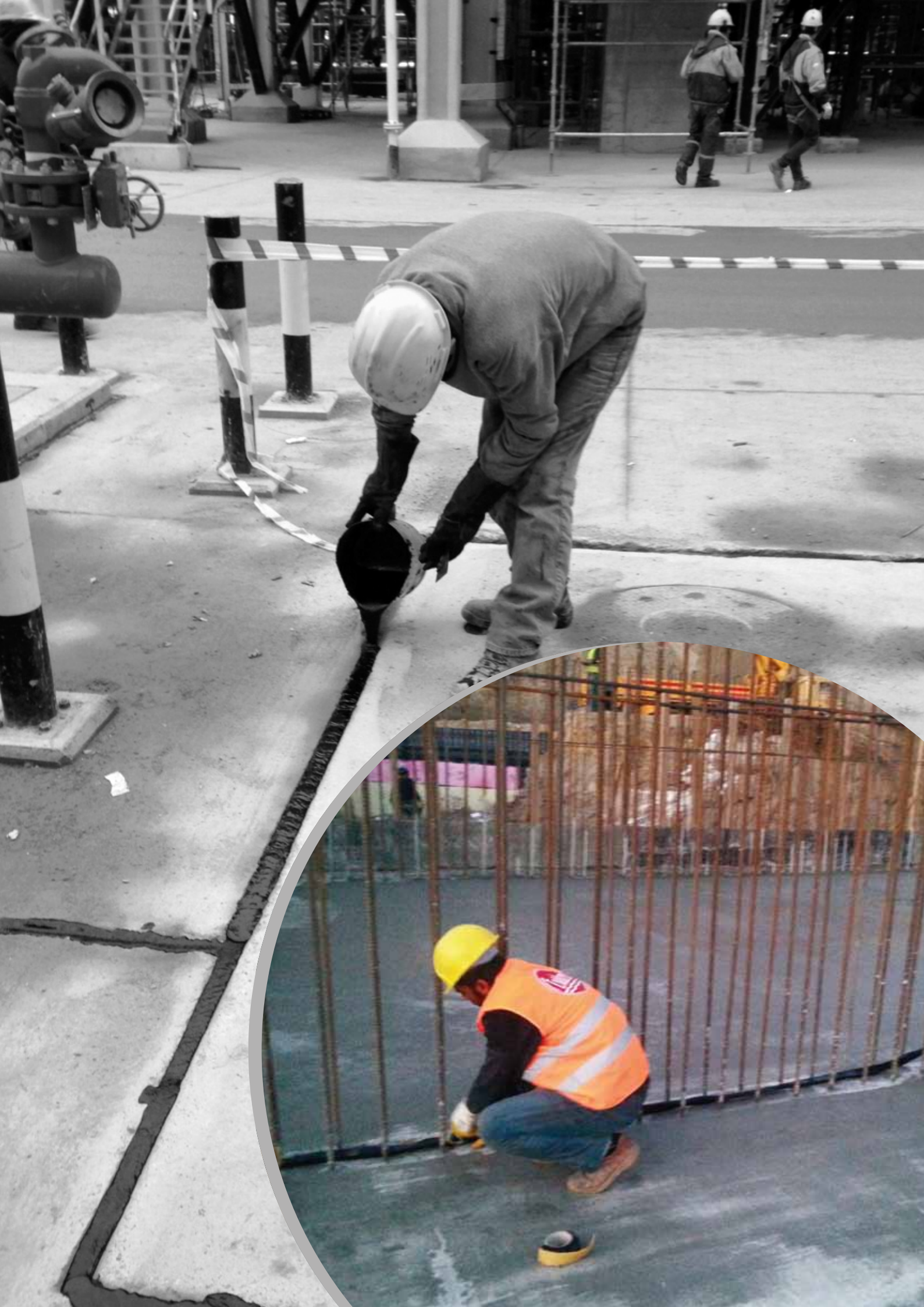
Advantages
- It is applied cold.
- Ensures the handling of small repairs conveniently even when the asphalt plant is not operational.
- Possible to make repairs regardless of the prevailing weather conditions.
- Easy to apply.
- Does not require an adhesive use.
- Not harmful on the environment as it does not include solvents.

Surface Preparation
The edges of the application area must be vertically raised to the extent possible. The loose particles, dust, excess water and ice, if any must be cleaned.

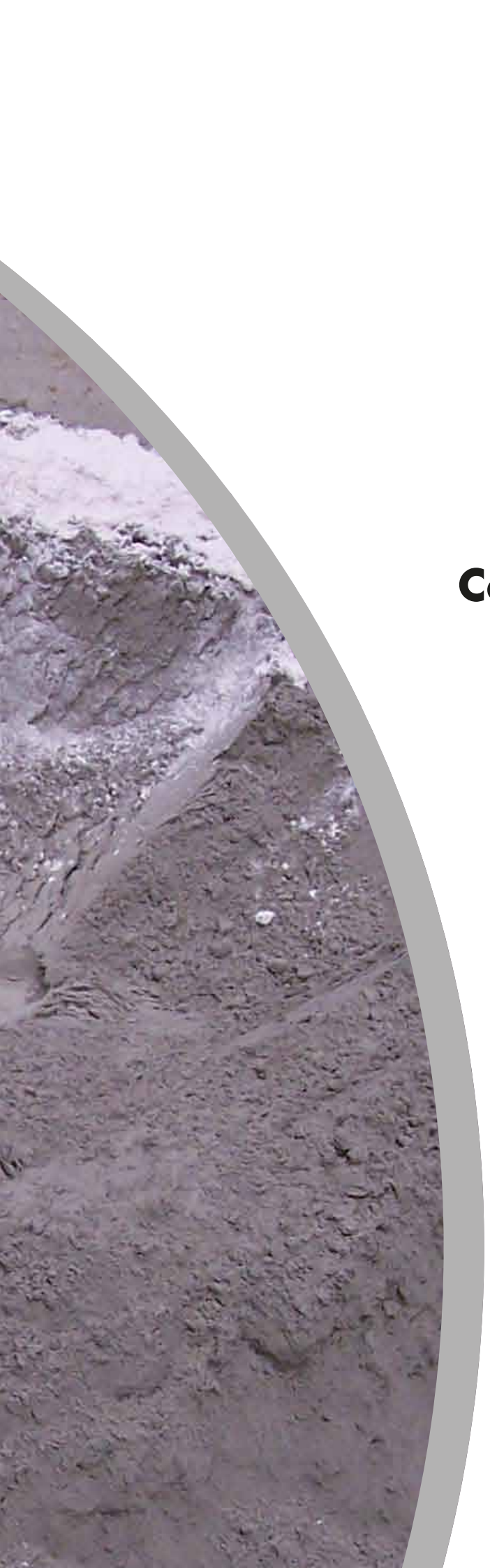
Application
- Poured and compacted onto the area requiring repair.
- The application depth must at least be 5 cm.
- Leave the surface a little raised by taking into account the compaction allowance. Compact the material by using a roller, compactor or hand hammer. After the compaction process is completed the road can be opened to traffic.
- In filling the concrete holes, Emilkote® must be used as a primer.

Consumption
Maximum 2,26 kg/dm^3 (compacted density)

Packaging
Net 25 Kg Plastic Bucket
30 Plastic Buckets / Pallet



PERMO STOP
Net: 330 gr ± %3



Concrete Additives and Curing Materials

Permo Stop (Powder Admixture)

Emülzer® F (Waterproof Additive for Plaster and Alum)

Permo Flow CW (Liquid Crystallizing Additive for Concrete)

Permo Flow Süper (Super Plasticizer for Concrete)

Permo Flow Hiper (Hyper Plasticizer for Concrete)

Latex (Admixture for Adherence Improvement)

Antifrost -10° C (Antifrost Admixture)

Speed-X Liquid (Admixture for Waterproofing and Accelerated Setting)

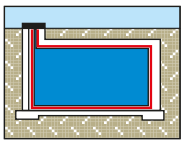
Permo Acryl (Acrylic Based Concrete Curing Material)

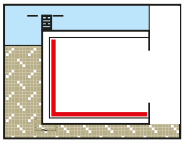
Permo Parafin (Paraffin Based Concrete Curing Material)

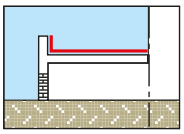
CE MEMBER OF INSULATION ASSOCIATION İZODER SUDER WATERPROOFERS ASSOCIATION TÜRKAK MADE IN TURKEY

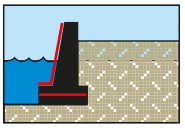
Permo Stop 3020

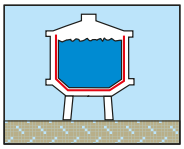
Powder Admixture

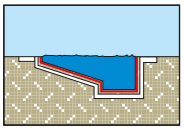

Underground Tanks


Basements


Roofs


Retaining Walls


Drinking Water Tanks


Swimming Pools

Description

It is a high-quality water-repellent powder admixture used for waterproofing and damp-proofing in plaster, alum, and concrete applications.

Usage Areas

It is used as a waterproofing concrete additive in plaster and alum for interior and exterior surfaces; in undercoat alum for the surfaces continuously exposed to water such as bathrooms, kitchens and balconies; in mass concrete in water tanks, swimming pools, basements, cesspit, galleries, foundations, shear walls, ponds, and dams; in prefabricated and precast building elements.

Advantages

- It is non-toxic and non-corrosive.
- It is very easy to apply. You prepare mortar with ordinary methods, but you just use Permo Stop added concrete instead of common concrete.
- The lime does not have any negative impact on Permo Stop.
- It is highly economical. The shipment cost is very low.
- It provides heat economy by protecting concrete from wetting. (5% humidity results in a loss of 30% in thermal insulation value of that material).
- It protects iron rebar found in the building structure from rust and decay caused by moisture. It is also chloride free.
- For ease of use, it is packed in proportion with a bag of cement.
- It does not affect the setting period of ordinary portland cement.

Application

To prepare mortar, fresh cement and Permo Stop must be batched first, and then sand aggregate, and finally water must be added. The result will be only as good as the batching. For mortar, minimum dosing must be 300 kg/m^2.

Technical Specifications

Shape	:	Powder
Color	:	White
Chloride	:	Not contains
Specific Weight	:	0,50 kg/dm^3

Consumption

1 bag (50 kg) of cement requires 1 pack (330 g) of Permo Stop.

Packaging

330 g Package - 1200 Bags / Pallet
8 kg Kraft Bag - 50 Bags / Pallet

Emülzer® F 3010

Waterproof Additive for Plaster and Alum

Description
It is a liquid waterproofing admixture for plaster and alum applied onto exterior facades.

Usage Areas
- It is used for waterproof plastering of terraces, roofs, secret gutters, and exterior facades exposed to atmospheric conditions.

Advantages
- It is highly economical.
- Lime can be used in mortar preparation.
- It does not lose its characteristics due to freeze, and can be normally used after thawing.

Application
- Emülzer® F is mixed with water thoroughly (with the amount of water = 17 x the weight of Emülzer® F).
- The dry cement batch is mixed to the consistency required.
- Emülzer® F should not be added to ready mixed mortar.
- To avoid cracks on plaster and alum, damping process is critical during setting.

Technical Specifications

Color	: Light Yellow
Consistency	: Liquid
Density	: 1,01 kg/dm^3 at +25°C
Application Temperature	: +5°C to +35°C

Consumption
0,150 kg of Emülzer® F is rquired for 1 m^2 of plaster at 1 cm thickness.
For example; 30 kg of Emülzer® F is used for 100 m^2 of plaster at 2 cm thickness.

Packaging
5,5 kg Plastic drum - 90 Drums / Pallet
21 kg Plastic drum - 33 Drums / Pallet

Permo Flow CW 3100

Liquid Crystallizing Additive for Concrete

Description

Emülzer® Permo Flow CW is a liquid crystallizing waterproofing additive for concrete. Its chemicals react with the moisture and free lime found in the concrete, thus permeating deep into its structure.

Usage Areas

- Concrete applications requiring crystallized capillary waterproof effect such as;
- Floor, foundation and field concrete
- Curtains, girders and columns
- Reinforced concrete elements with thin and thick reinforcement
- All types of engineering buildings, ready-mixed concrete production and/or production at site.

Advantages

- During curing period and whenever exposed to water, it provides a permanent waterproof effect by filling capillary pores.
- As a liquid product it is superior to powder alternatives in that it can be easily mixed without getting pelletized.
- Concrete insulated by Emülzer® Permo Flow CW is resistant to both negative and positive water pressure.
- As a non-toxic product it can be safely used to insulate water tanks.
- It can be very easily used for single side molding applications in concreting areas.
- Added to concrete up to 1/3 of foundation height in raft fondations, it ensures waterproof concrete.

Application

- First of all the product itself should be mixed in its own container prior to application.
- The amount of Permo Flow CW added to concrete should be 2-3% of the weight of concrete.
- It is applied in two ways depending on the usage area.

At Concrete-Mixing Plants:

In the production of ready-mixed concrete, it is added to concrete mixing water found in the mixer. For best results, it is preferably better to feed water simultaneously with the additive. Concrete mixer should run at high speed for 3 minutes.

At Construction Sites:

The additive dosed as required is poured into the concrete found in the mixer. Concrete mixer should run at high speed for 5 minutes.

Concrete prepared with mixing water should not be fed with extra water. Each 10 litres of extra water added leads to a decrease of 10 kgf/cm^2 in the the pressure strength of concrete.

At high temperatures and in cases where the distance between the concrete-mixing plant and the site takes more than half an hour Permo Flow CW may lead to instant slump losses, so it is recommended to carry out the application at site.

Consumption

- If Water/Cement ≤ 0,45; 2,0% of the weight of cement found in the mixture.
- If Water/Cement ≤ 0,50; 2,5% of the weight of cement found in the mixture.
- If Water/Cement ≤ 0,55; 3,0% of the weight of cement found in the mixture.
  (Water/Cement ratio should not be higher than 0,55.)

Packaging

Net: 30 kg Plastic drum
27 Drums / Pallet

CE

Permo Flow Süper 3200

Super Plasticizer for Concrete

Description

Permo Flow Super is a super plasticizer ensuring an effective fluidity in concrete production and retardation in setting in hot climate conditions. It also decreases the ratio of water to acquire a high final strength. Due to this decreased water/cement ratio, the waterproof characteristic of the concrete is improved.

Usage Areas

- Floor, foundation and field concrete
- Curtains, girders and columns
- Reinforced concrete elements with thin and thick reinforcement
- All types of engineering buildings
- Ready-mixed concrete production and/or production at site, in summer, to be able to transport for a longer period of time.

Advantages

Its super plasticizing characteristic;

- Improves fluidity significantly without increasing the ratio of water and with no risk of segregation.
- Decreases segregation in concrete.
- Ensures consistency protection for a long period of time.
- Increases the concrete strength at 7 days and concrete strength at 28 days.
- Improves the appearance of the surface .
- Simplifies the placement of the concrete, decreases vibration, and reduces labour.

By decreasing the ratio of water significantly;

- It also improves final strength greatly.
- It decreases shrinkage and creeping.
- With lower water/cement ratios, provides lower insulation.

Application

At Concrete-Mixing Plants:

In the production of ready-mixed concrete, it is added to concrete mixing water found in the mixer. For best results, it is preferably better to feed water simultaneously with the additive. Concrete mixer should run at high speed for 3 minutes.

At Construction Sites:

The additive dosed as required is poured into the concrete found in the mixer. Concrete mixer should run at high speed for 5 minutes. Concrete prepared with mixing water should not be fed with extra water. Each 10 litres of extra water added leads to a decrease of 10 kgf/cm² in the the pressure strength of concrete.

Consumption

The amount of the product to be used should be 0,8% to 1,5% of the weight of the cement. That is 0,800 to 1,500 kg for 100 kg of cement. Optimum dose depends on the quality of the binder and aggragate, the water/binder ratio and the ambient temperature. So it is recommended to determine the optimum dose by trying different mixtures and testing them beforehand.

Packaging

IBC 1200 kg

Permo Flow Hiper 3300

Hyper Plasticizer for Concrete



Description

Permo Flow Hiper is a hyper plasticizer ensuring a very effective fluidity in concrete production and retardation in setting in hot climate conditions. It also decreases the ratio of water significantly to acquire a high final strength. Due to this decreased water/cement ratio, the waterproof characteristic of the concrete is improved.

Usage Areas

- Allows the production of Self-Compacting Concrete (SCC).
- Floor, foundation and field concrete; curtains, girders and columns
- Reinforced concrete elements with thin and thick reinforcement
- All types of engineering buildings
- Ready-mixed concrete production and/or production at site, in summer, to be able to transport for a longer period of time.

Attention:

- The concrete obtained has a very high fluidity, so the mold system should be chosen accordingly.
- The speed of concreting should also be managed very carefully. Otherwise the mold may be destroyed.

Advantages

- Because it decreases the amount of mixing water significantly the concrete obtained is partly waterproof.
- Ensures high unit weight and resistance.
- Provides the concrete with a self-compacting characteristic.
- Protects the consistency of the concrete and allows the production of pumpable concrete which is consistent even in hot summer.
- Increases the frost resistance.
- Because it does not contain any chloride, there is no risk of damage for the reinforcement of the concrete.
- Decreases the carbonation rate of the concrete.
- Decreases concrete shrinkage significantly.
- Because it eliminates vibration, it also prevents noise pollution.

Application

At Concrete-Mixing Plants:

In the production of ready-mixed concrete, it is added to concrete mixing water found in the mixer. For best results, it is preferably better to feed water simultaneously with the additive. Concrete mixer should run at high speed for 3 minutes. Concrete prepared with mixing water should not be fed with extra water. Each 10 litres of extra water added leads to a decrease of 10 kgf/cm² in the the pressure strength of concrete.

For instance:

Quality Kontrol Tests	Unit	Result
Consistency Loss	ΔS	1
Slump 0'	cm	23
Slump 0'	cm	22
Spread Loss	ΔF	4
Spread 0'	cm	50
Spread 0'	cm	46

Consumption

Depending on the performance expected; the amount of the product to be used should be 0,4% to 1,0% of the weight of the binder for plastic and fluid concrete. That is 400 to 1000 g for 100 kg of binder. For self-compacting concrete, the amount of the product to be used should be 1,0% to 2,0% of the weight of the binder. That is 1000 to 2000 g for 100 kg of binder. In determining the consistency, it is critical to avoid adding extra water. The concrete contains slag and silica fume as well as cement. Optimum dose depends on the quality of the binder and aggragate, the water/binder ratio and the ambient temperature. So it is recommended to determine the optimum dose by trying different mixtures and testing them beforehand.

Packaging

IBC 1100 kg

Latex 5050

Admixture for Adherence Improvement

Description
It is a synthetic rubber emulsion added to cement mortars to provide waterproofing and improve adherence.

Usage Areas
It is used in thin layer repair mortars, floor alum, concrete repair mortars, plasters, coatings with abrasive strenght, ceramic adhesive mortars, and as an alum undercoat.

Advantages
- It is ready-to-use in liquid form.
- It provides superior adherence.
- It improves elasticity.
- It decreases shrinkage.
- It increases abrasive strenght.
- It increases chemical resistance.
- It is non-corrosive.

Application
- Emülzer® Latex is diluted with clean mixing water with a ratio of 1:1 to 1:4 (Water:Latex), and then mixed with fresh cement and sand.
- As an undercoat, it is applied to the surface with a brush, and if you are going to apply mortar onto Emülzer® Latex layer, it should not be dry.
- It definitely should not be used alone.

Consumption
Depends on the absorption characteristics of the surface.

Packaging
4,5 kg Plastic drum - 90 Drums / Pallet
19 kg Plastic drum - 33 Drums / Pallet

Antifrost -10°C 3050

Antifrost Admixture



Description

As an anti-gel universal concrete additive it prevents fresh concrete from freezing by increasing the heat of hydration.

Usage Areas

It is used for concreting at low temperatures up to -10°C, and when frost is expected at night.

Technical Specifications

Type	: Calcium Nitrate Based
Form	: Liquid
Color	: Dark Brown
Density	: 1,25 kg/lt
Baume	: 30
pH	: 8
Freeze Point	: -18°C

Advantages

- Because it does not contain any calcium chloride, it is not harmful for the rebar.
- It is non-corrosive. Anti Frost -10°C provides a plastic and more fluid concrete.
- Its workability increases, and water/cement ratio decreases.
- It provides early strength, and increases final strength and pull-out resistance.

Application

- Preferably Anti Frost -10°C is either added to mixing water or poured into concrete mixer simultaneously with the mixing water. It is not recommended to be added to dry concrete mix. Subsequently the usual process recommended for a good concrete production is carried on.
- Cement, aggregate and water must be protected from freeze, and no ice particles must be left between aggregate and water. Water must be heated up if necessary.
- The temperature of fresh concrete must not be under +5°C. To maintain hydration temperature, concrete must be covered, especially under windy weather conditions.
- It should not be used in thin or exterior concrete elements.
- It is recommended to keep water/cement ratio at minimum.
- Portland cement must be used in the production.
- Wooden mold must be preferred.

Consumption

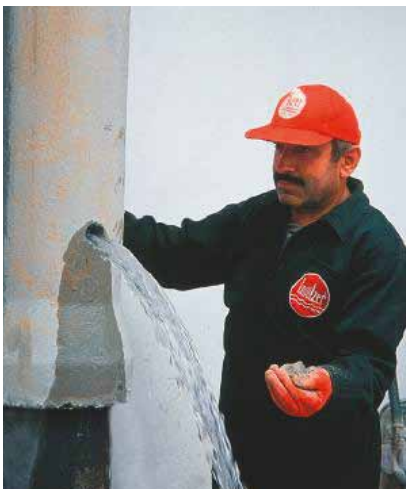
1% of cement between +5°C and -5°C.
2% of cement between -5°C and -10°C.
Adding a greater amount of antifreeze is not helpful in concreting at temperatures below -10°C.

Packaging

25 kg Plastic drum - 33 Drums / Pallet

Speed-X Liquid 3043

Admixture for Waterproofing and Accelerated Setting


Description
It is a ready-to-use liquid admixture for waterproofing and accelerated setting.

Usage Areas
- It is used for preventing humidity and water leakage in concrete, brick walls, and stones.
- It is an immediate solution to stop water leakage in foundation curtain walls, basements, water tanks, elevator shafts and damaged water pipes.
- It can be used on concrete, plaster, alum, and brick.

Advantages
- It is caustic. It does not cause any damage for the rebar.
- Due to its content, the leakage slows down, and it helps to detect the source of leakage, thus allowing repair.
- It is economical.
- Setting time can be adjusted between 30 seconds to 2 minutes.

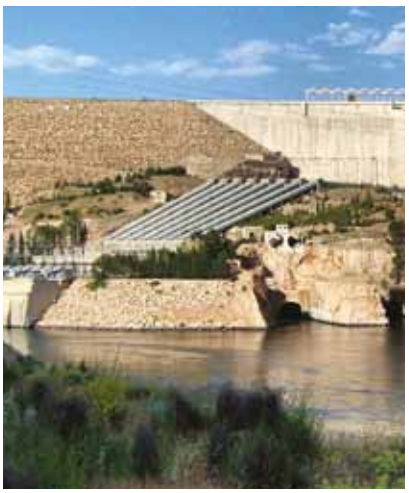
Application
- Speed-X Liquid must be used with fresh, non-coagulant portland cement.
- In the application plastic containers and rubber gloves must be used.
- It must be 1/1 to 1/3 diluted with water depending on the duration of setting.
- It must be mixed with cement in a plastic container and pressed immediately onto damp surface with a trowel or rubber gloves.
- Severe leakage problems require drainage with a rubber trunk by using a paste prepared with Speed-X Liquid.

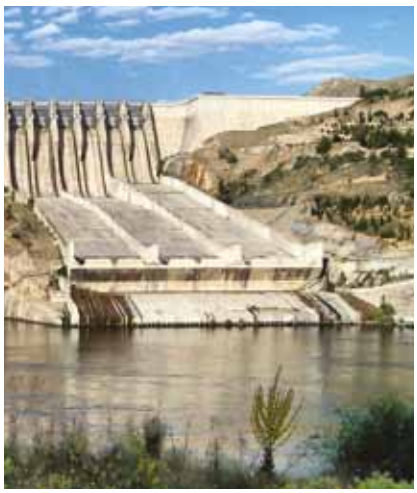
Consumption
Depends on requirement.

Packaging
5 kg Plastic drum - 90 Drums / Pallet

Permo Akril 3302

Acrylic Based Concrete Curing Material





Description
Permo Akril is ready to use, easy to apply, liquid acrylic based curing compound for preventing rapid water loss in concrete.

Usage Areas
Permo Akril is sprayed onto newly laid concrete surfaces to form a thin film barrier against premature water loss. Without disturbance to the normal setting action, the concrete is the allowed to cure and achieve maximum properties.
Permo Akril is particularly useful in large areas of exposed concrete, such as:

- Projects like residential and business complexes, shopping malls etc.
- General concrete applications that curing is necessary
- Roof decks
- Retaining walls
- Irrigation canals / channels

Advantages
- Reduces incidence of plastic cracking.
- Ensure achievement of desired strengths.
- Reduces dusting.
- Increases frost resistance.
- Alleviates other costly methods such as hessian-watering.
- It is used for surfaces to be coated with plaster, screed, paint, ceramic or epoxy coating.
- Suitable for exterior and interior application.
- It is solvent-free, so it does not harm human health.

Surface Preparation
Horizontal application should be proceed immediately after the desired concrete surface finish has been attained, ensuring all surface bleed water has disappeared before hand (between ½ to 2 hours depending on temperature etc). Vertical surface applications must be made right after demoulding.

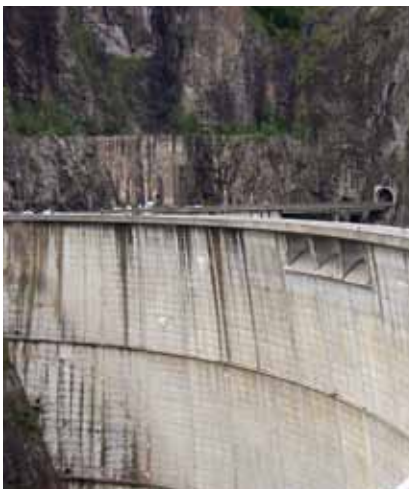
Application
Permo Akril is ready to use so it shouldn't be dilute with water. Stir the Permo Akril well before use! Permo Akril curing membrane has been designed that it can be applied to the whole surface as a thin film layer with hand or motor operated spray gun to the newly laid concrete. Apply with low pressure spray equipment preventing Permo Akril from being collected at the surface. Suitable spray equipment must be determined with trials. For large areas and concrete "trains", application can be carried out by power driven automatic equipment. Permo Akril should be protected from rain and traffic after application until the membrane has completely dried.

Consumption
The consumption depends on wind, humidity and temperature. As a general guide: 0,25 kg/m^2

Packaging
Net: 25 kg Plastic drum
200 kg Barrel

Permo Parafin 3301

Paraffin Based Concrete Curing Material


Description
As a paraffin-based, non-solvent, ready-to-use concrete curing material applied onto fresh concrete surface, Permo Parafin prevents instant water losses as well as the formation of cracks and retreats and ensures optimum strength in concrete.

Usage Areas
Permo Parafin is sprayed onto fresh concrete to form a film layer, thus preventing rapid water loss. It ensures concrete curing with no effect on normal setting reactions and helps it reach maximum performance.

Permo Parafin is especially suitable for large and open concrete surfaces such as:

- Motorways,
- Common concrete production which requires curing,
- Industrial floors,
- Terraces,
- Battered walls,
- Prestressed girders and piles,
- Irrigation channels,
- Locations with low humidity and high vaporization and air circulation.

Advantages
- Decreases cracks caused by plastic retreat.
- With the formation of the film layer, contributes to the hydration of concrete.
- Minimizes shrinkage.
- Decreases dust formation on the surface.
- Increases the frost resistance.
- It is a more effective and economic alternative compared to other curing methods such as geo-textiles or irrigation.
- Suitable to indoor applications.
- It is easy to apply and decreases labour costs.
- Because it does not contain any solvent, it is not harmful for human health.

Application
Surface Conditions
On horizontal surfaces, it should be applied after the disappearance of sweating water and completion of surface repairments (0,5 to 2 hours later depeding on the temperature). On vertical surfaces, it should be applied after the removal of the molds. For best results, it may be tested on a small area.

Application
Permo Parafin is ready to use, so it should not be diluted with water. Shake well before use. Permo Parafin is designed to be sprayed with a pistol or a spraying machine with an air compressor as a continuous thin film layer. It should be applied with a low pressured spraying equipment and it is critical to avoid puddling. The most suitable spraying equipment should be determined by testing. If it will be applied onto a large area or onto a set of concrete elements serially, it can be applied with an automatic system. The area treated with Permo Parafin should be protected from rain and foot traffic for at least 3 hours or until it is completely dry.

Cleaning the Equipment
The equipment used should be cleaned with warm water as soon as the application is over. Hard and dry residues can be cleaned out with warm water or by mechanical ways.

Consumption
Consumption depends on wind, humidity and temperature. It is commonly 0,15 to 0,25 kg/m^2.

Packaging
Net: 25 kg Plastic drum

Cement Based Insulation Materials

Permo-Chim Duo NP

(Two Component, Super Elastic Waterproofing Coating Mortar With Crystallization Ability)

Permo-Chim Duo SDH

(Two Component, Super Elastic, Waterproofing Mortar)

Permo-Chim Duo BMT

(Two Component, Fully Elastic, Waterproofing Mortar)

Permo-Chim Duo BK

(Two Component, Semi-Elastic, Waterproofing Mortar)

Permo-Chim Crystal

(Single-Component Crystallizing Waterproof Mortar)

CE MEMBER OF INSULATION ASSOCIATION İZODER SUDER WATERPROOFERS ASSOCIATION TÜRKAK MADE IN TURKEY

Permo-Chim Duo NP 6036

Two Component, Super Elastic Waterproofing Coating Mortar With Crystallization Ability

Description
It is a cement and acrylic based two component super flexible waterproofing coating with crystallization ability used on concrete surfaces for negative-positive applications.

Usage Areas
- Interior and exterior areas for vertical and horizontal applications.
- Terraces (coating which is grey color should be protected).
- Soft water (pH 3 to 7) tanks used in textile industry.
- Water tanks and swimming pools.
- Elevator pits.
- Wetrooms like WC, bathroom, kitchen, and balcony.
- To protect concrete from water, carbonation and salts.
- Facilities like spa and hamams.

Advantages
- Easy to prepare and apply.
- Applied by brush or spraying machine.
- Long working time.
- Resistant to negative and positive water pressure (1 bar negative-1,5 bar positive)
- Water vapor permeable.
- Forms a perfect water impermeable, nondeformable coating under screeds and ceramic tiles with high adhesion performance and flexible structure.
- High durability.
- It forms a moisture barrier and provides waterproofing against the water and humidity that comes from opposite side. It fills the capillary gaps of concrete with its insoluble crystallized structure.
- Permo Chim DUO NP covers cracks up to 0,50 mm when applied as 2 mm thick and up to 1,20 mm when reinforced with waterproofing net.
- Suitable for pedestrian traffic.
- Highly resistant to carbon dioxide ions. Does not crack.
- Resistant to freeze-thaw cycle.

Surface Preparation
Before the application, concrete surface must be fully cured. Cement based surfaces of the structures contacting with water have to be strong, dry, dustless, clean, and also on scale. Surface must be cleaned off all kinds of oil, grease, rust, and paraffin residue that can weaken adherence and no loose particles must be present. Static cracks on the building must be repaired with suitable Emülzer Repair Mortars or Emülzer Grout Mortars. The surface must be saturated with water and must be kept moist during the application.

If there is water accumulation or ponding, it should be removed from the surface. Iron and wooden wedges on the surface have to be removed, and if there is an active water leakages and cracks; they must be repaired. Corners and edges must be beveled with minimum 4 cm bevels, a joint tape and Permo Chim DUO NP should be applied on this bevel. Application surface has to be wetted well and then waited until it becomes wet/dry. If the coating surface appearance seems matte, this means that material loses its water rapidly and surface is not saturated well or dried quickly. In the instances like hot weather conditions or coatings which are exposed to wind; water can be added with a ratio of 10% of the component B to the mixture just for the first layer of application.

Application
Liquid component of Permo Chim DUO NP is poured into a clean container. The powder component is slowly added to the container and mixed with a 400-600 RPM mixer at least for 3-5 minutes until a homogenous and lumpless mixture is obtained. Mixture should be rest for 3-5 minutes and again mixed for approximately 30 seconds, then it becomes ready to use. Water must not be added to Permo Chim DUO NP. The powder component must always be added to the liquid component, not vice versa. Permo Chim DUO NP is applied on the surface at least in 2 layers. Each layer should be applied when the previous layer starts to harden and is not completely cured. In case the first layer is dry, the surface must be moisturized again before the application of the second layer. Consecutive layers must be perpendicular to each other. Fiber Mesh, Joint Tape etc. must be used between 2 coats as reinforcement. Joint Insulation Tape 120/70 should be applied to the corners and horizontal / vertical joints where the application is made. Extra attention should be given when Permo Chim DUO NP is planned to be applied on perlite (pearl-stone) concrete, gas concrete or high porosity concrete. In such surfaces Permo Chim DUO NP should be applied after plaster or alum laid. It has to be protected against any impact and puncture until and during over-coating. The mixture in the pot must be used within 30 minutes. Floor covering products such as tile, ceramic, granite are a building material, not a waterproofing material. Ceramics cracks in itself, even though if you preffered to use flexible joint fillers, the joint filler also crack as a result of the structure being seated. Waterproofing must be done under the floor covering materials. If Permo Chim DUO NP planned to used on the terrace which will be opened to human traffic; it must be covered and protected with flooring materials such as ceramics, tiles and so on.

Watch Points
If surface temperature is below +5°C or over +25°C in Permo Chim DUO NP application, then suitable temperatures must be waited for. Also application should not be made in very hot, rainy or windy weathers. In outer surface applications, the surface has to be protected from sun, wind, frost or rain during the first 24 hours. For example if Permo Chim DUO NP applied in +23°C gains mechanic strength after 3 days, becomes impermeable to water after 7 days, and gains final strength after 14 days. Higher temperatures decrease the time, lower temperatures increase the time. Working and reaction time of cement and acrylic based systems are affected by environment and ground temperature, and relative humidity in the air. Low temperatures slow down the chemical reaction, and increase working period, coating time, and work time. Also coverage decreases because viscosity increases. High temperatures accelerate the chemical reaction and times stated above are reduced depending on this. Environment and ground temperatures must not fall down below the minimum allowed value in order Permo Chim DUO NP to complete its curing period. Wet film thickness must not pass 2 mm in single layer. The application has to be at least two layers. Places to be walked on must be covered with alum or ceramic.

Consumption
Depending on the surface condition, a minimum of two layers is applied, 1-1,5 kg/m2 per layer. It is recommended to apply a minimum of 3 coats in areas which needs high protection such as water tank, swimming pool.

Packaging
25 kg Kraft Bag + 10 lt Plastic Drum = 35 kg Set
20 Sets / Pallet

Permo-Chim Duo SDH 6035

Two Component, Super Elastic, Waterproofing Mortar



Description
It is cement based, polymer modified, super elastic, two component waterproofing and concrete protection mortar. The liquid component is pure elastomeric resin emulsion. The powder component is hydraulic connective that is a composition of additive and filling materials.

Usage Areas
- Used in inner and outer areas for vertical and horizontal applications on the direction which water comes from.
- In insulation of foundations.
- On retaining walls.
- Grounds which are planned to make sagging.
- As an undercoat in the insulation of terrace roofs and balconies.
- In wet areas like WC, bathroom, kitchen, and balcony.
- In swimming pools.
- In water tanks.
- In facilities like spa and hamams.
- Used for waterproofing the inside of planter boxes.

Advantages
- Easy to prepare and apply.
- Applied by brush or spraying machine.
- Long working time.
- Permo Chim DUO SDH covers up to 0,92 mm crack when it is applied with a thickness of 2 mm, according to TS EN 14891.
- Ability to bridge shrinkage cracks with its highly flexible structure.
- Forms a seamless, permanent, moisture and water proof coating.
- Resistant to chemicals and salt solutions in soil.
- Water vapor permeable.
- High durability.
- Resistant to freezing - thawing cycle.
- Can be used in areas affected by movement and vibration.
- Forms a perfect water impermeable, nondeformable layer under grouts and ceramics with high adhesion performance and flexible structure.
- It is non toxic material which can be applied on potable water tanks. (Middle East Technical University Report No: 2014.03.04.147/02 - Report Date: 24.03.2014)

Surface Preparation
Before the application, concrete surface must be fully cured. Cement based surfaces of the structures contacting with water have to be strong, dry, dustless, clean, and also on scale. Surface must be cleaned off all kinds of oil, grease, rust, and paraffin residue that can weaken adherence and no loose particles must be present. Static cracks on the building must be repaired with suitable Emülzer Repair Mortars or Emülzer Grout Mortars.

The surface must be saturated with water and must be kept moist during the application. If there is water accumulation or ponding, it should be removed from the surface. Iron and wooden wedges on the surface have to be removed, and if there is an active water leakages and cracks; they must be repaired. Corners and edges must be beveled with minimum 4 cm bevels, a joint tape and Permo Chim DUO SDH should be applied on this bevel. Application surface has to be wetted well and then waited until it becomes wet/dry. If the coating surface appearance seems matte , this means that material loses its water rapidly and surface is not saturated well or dried quickly. In the instances like hot weather conditions or coatings which are exposed to wind ; water can be added with a ratio of 10% of the component B to the mixture just for the first layer of application.

Application
Liquid component of Permo Chim DUO SDH is poured into a clean container. The powder component is slowly added to the container and mixed with a 400 -600 RPM mixer at least for 3-5 minutes until a homogenous and lumpless mixture is obtained. Mixture should be rest for 3-5 minutes and again mixed for approximately 30 seconds, then it becomes ready to use. Water must not be added to Permo Chim DUO SDH. The powder component must always be added to the liquid component, not vice versa. Permo Chim DUO SDH is applied on the surface at least in 2 layers. Each layer should be applied when the previous layer starts to harden and is not completely cured. In case the first layer is dry, the surface must be moisturized again before the application of the second layer. Consecutive layers must be perpendicular to each other. Fiber Mesh, Joint Tape etc. must be used between 2 coats as reinforcement. Joint Insulation Tape 120/70 should be applied to the corners and horizontal / vertical joints where the application is made. Extra attention should be given when Permo Chim DUO SDH is planned to be applied on perlite (pearl-stone) concrete, gas concrete or high porosity concrete. In such surfaces Permo Chim DUO SDH should be applied after plaster or alum laid. It has to be protected against any impact and puncture until and during over-coating. The mixture in the pot must be used within 30 minutes. Floor covering products such as tile, ceramic, granite are a building material, not a waterproofing material. Ceramics cracks in itself, even though if you preffered to use flexible joint fillers, the joint filler also crack as a result of the structure being seated. Waterproofing must be done under the floor covering materials. If Permo Chim DUO SDH planned to used on the terrace which will be opened to human traffic; it must be covered and protected with flooring materials such as ceramics, tiles and so on.

Watch Points
If surface temperature is below +5°C or over +25°C in Permo Chim DUO SDH application, then suitable temperatures must be waited for. Also application should not be made in very hot, rainy or windy weathers. In outer surface applications, the surface has to be protected from sun, wind, frost or rain during the first 24 hours. For example if Permo Chim DUO SDH applied in +23°C gains mechanic strength after 2 days, becomes impermeable to water after 7 days, and gains final strength after 14 days. Higher temperatures decrease the time, lower temperatures increase the time. Working and reaction time of cement and acrylic based systems are affected by environment and ground temperature, and relative humidity in the air. Low temperatures slow down the chemical reaction, and increase working period, coating time, and work time. Also coverage decreases because viscosity increases. High temperatures accelerate the chemical reaction and times stated above are reduced depending on this. Environment and ground temperatures must not fall down below the minimum allowed value in order Permo Chim DUO SDH to complete its curing period.Wet film thickness must not pass 2 mm in single layer. The application has to be at least two layers. Places to be walked on must be covered with alum or ceramic.

Consumption
Depends on surface condition, for each layer 1-1.5 kg/m^2; minimum two layers. It is recommended to apply minimum 3 layers in areas where high protection is necessary such as water tanks and swimming pool.

Packaging
20 kg Kraft Bag + 10 kg Plastic Drum = 30 kg Set
20 Sets / Pallet

CE

Permo-Chim Duo BMT 6031

Two Component, Fully Elastic, Waterproofing Mortar

Description
It is cement based, polymer modified, fully elastic, two component waterproofing and concrete protection mortar. The liquid component is pure elastomeric resin emulsion. The powder component is hydraulic connective that is a composition of additive and filling materials.

Usage Areas
- It is especially used for preventing water leakage balconies, between floors and in wet surfaces such as bathrooms, kitchens, toilets, etc.
- Used on surfaces such as concrete, plaster, screed.
- In inner and outer areas for vertical and horizontal applications.
- It is used as an undercoat in the insulation of terrace roofs and balconies.
- It is used for waterproofing the inside of planter boxes.

Advantages
- Provides an economical solution.
- Can be applied to moist surfaces.
- It forms a seamless layer.
- Easily applied on horizontal and vertical surfaces with brush, roller, trowel or spraying machine.
- Application is practical. Powder and liquid components are mixed and poured easily.
- It is elastic and does not shrink or crack.
- Even though it is waterproofing material, it has water-vapour permeability and allows the surface to breathe.
- Protect concrete and plaster surfaces from carbonation, chlorine and air pollution.
- Thanks to its high adhesion and flexibility it provides an economical insulation before ceramic coating or screed.

Surface Preparation
Before the application, concrete surface must be fully cured. Cement based surfaces of the structures contacting with water have to be strong, dry, dustless, clean, and also on scale. Surface must be cleaned off all kinds of oil, grease, rust, and paraffin residue that can weaken adherence and no loose particles must be present. Static cracks on the building must be repaired with suitable Emülzer Repair Mortars or Emülzer Grout Mortars. The surface must be saturated with water and must be kept moist during the application.

If there is water accumulation or ponding, it should be removed from the surface. Iron and wooden wedges on the surface have to be removed, and if there is an active water leakages and cracks; they must be repaired. Corners and edges must be beveled with minimum 4 cm bevels, a joint tape and Permo Chim DUO BMT should be applied on this bevel. Application surface has to be wetted well and then waited until it becomes wet/dry If the coating surface appearance seems matte , this means that material loses its water rapidly and surface is not saturated well or dried quickly. In the instances like hot weather conditions or coatings which are exposed to wind ; water can be added with a ratio of 10% of the component B to the mixture just for the first layer of application.

Application
Liquid component of Permo Chim DUO BMT is poured into a clean container. The powder component is slowly added to the container and mixed with a 400 -600 RPM mixer at least for 3-5 minutes until a homogenous and lumpless mixture is obtained. Mixture should be rest for 3-5 minutes and again mixed for approximately 30 seconds, then it becomes ready to use. Water must not be added to Permo Chim DUO BMT. The powder component must always be added to the liquid component, not vice versa. Permo Chim DUO BMT is applied on the surface at least in 2 layers. Each layer should be applied when the previous layer starts to harden and is not completely cured. In case the first layer is dry, the surface must be moisturized again before the application of the second layer. Consecutive layers must be perpendicular to each other. Fiber Mesh, Joint Tape etc. must be used between 2 coats as reinforcement. Joint Insulation Tape 120/70 should be applied to the corners and horizontal/vertical joints where the application is made. Extra attention should be given when Permo Chim DUO BMT is planned to be applied on perlite (pearl-stone) concrete, gas concrete or high porosity concrete. In such surfaces Permo Chim DUO BMT should be applied after plaster or alum laid. It has to be protected against any impact and puncture until and during over-coating. The mixture in the pot must be used within 30 minutes. Floor covering products such as tile, ceramic, granite are a building material, not a waterproofing material. Ceramics cracks in itself, even though if you preffered to use flexible joint fillers, the joint filler also crack as a result of the structure being seated. Waterproofing must be done under the floor covering materials. If Permo Chim DUO BMT planned to used on the terrace which will be opened to human traffic; it must be covered and protected with flooring materials such as ceramics, tiles and so on.

Watch Points
If surface temperature is below +5°C or over +25°C in Permo Chim DUO BMT application, then suitable temperatures must be waited for. Also application should not be made in very hot, rainy or windy weathers. In outer surface applications, the surface has to be protected from sun, wind, frost or rain during the first 24 hours. For example if Permo Chim DUO BMT applied in +23°C gains mechanic strength after 3 days, becomes impermeable to water after 7 days, and gains final strength after 14 days. Higher temperatures decrease the time, lower temperatures increase the time. Working and reaction time of cement and acrylic based systems are affected by environment and ground temperature, and relative humidity in the air. Low temperatures slow down the chemical reaction, and increase working period, coating time, and work time. Also coverage decreases because viscosity increases. High temperatures accelerate the chemical reaction and times stated above are reduced depending on this. Environment and ground temperatures must not fall down below the minimum allowed value in order Permo Chim DUO BMT to complete its curing period. Wet film thickness must not pass 2 mm in single layer. The application has to be at least two layers. Places to be walked on must be covered with alum or ceramic.

Consumption
Depends on surface condition, for each layer 1 - 1.5 kg/m^2; minimum two layers.

Packaging
25 kg Kraft Bag + 6 kg Plastic Drum = 31 kg Set
30 Sets / Pallet

CE

Permo-Chim Duo BK 6100

Two Component, Semi-Elastic, Waterproofing Mortar



Description
It is cement based, polymer modified, semi-elastic, two component waterproofing and concrete protection mortar. The liquid component is pure elastomeric resin emulsion. The powder component is hydraulic connective that is a composition of additive and filling materials.

Usage Areas
- It is especially used for preventing water leakage balconies, between floors and in wet surfaces such as bathrooms, kitchens, toilets, etc.
- It is used as an undercoat in the insulation of terrace roofs.
- It is used in bridges, viaducts, and engineering structures as a protective coating to provide resistance against defrosting salts.
- In inner and outer areas for vertical and horizontal applications on the direction which water comes from.
- In insulation of foundations.
- On retaining walls.
- Waterproofing the inside of planter boxes.

Advantages
- Semi-elastic and water impermeable.
- Applied to wet surfaces.
- Provides an economical solution.
- Practical to apply. Liquid and powder components are simply mixed and applied.
- Applied by brush or spraying machine.
- Long working time.
- It is applied only to the side that contacts with water (positive water pressure).
- Can be walked on it.
- Protects concrete and plaster surfaces against air pollution and acid gases found in the atmosphere.
- While it is waterproof, it provides breathability for the surface.
- Protects concrete and plaster surfaces against carbonization and chloride.
- Forms a water impermeable layer under grouts and ceramics with high adhesion performance and half-flexible structure.
- Forms a jointless, seamless, permanent, water impermeable coating.
- Resistant to chemicals and salt solutions in soil.
- Water vapor permeable.
- Resistant to freezing - thawing cycle.

Surface Preparation
Before the application, concrete surface must be fully cured.
Cement based surfaces of the structures contacting with water have to be strong, dry, dustless, clean, and also on scale. Surface must be cleaned off all kinds of oil, grease, rust, and paraffin residue that can weaken adherence and no loose particles must be present.

Static cracks on the building must be repaired with suitable Emülzer Repair Mortars or Emülzer Grout Mortars. The surface must be saturated with water and must be kept moist during the application. If there is water accumulation or ponding, it should be removed from the surface. Iron and wooden wedges on the surface have to be removed, and if there is an active water leakages and cracks ; they must be repaired. Corners and edges must be beveled with minimum 4 cm bevels, a joint tape and Permo Chim DUO BK should be applied on this bevel. Application surface has to be wetted well and then waited until it becomes wet/dry. If the coating surface appearance seems matte , this means that material loses its water rapidly and surface is not saturated well or dried quickly. In the instances like hot weather conditions or coatings which are exposed to wind; water can be added with a ratio of 10% of the component B to the mixture just for the first layer of application.

Application
Liquid component of Permo Chim DUO BK is poured into a clean container. The powder component is slowly added to the container and mixed with a 400 -600 RPM mixer at least for 3-5 minutes until a homogenous and lumpless mixture is obtained. Mixture should be rest for 3-5 minutes and again mixed for approximately 30 seconds, then it becomes ready to use. Water must not be added to Permo Chim DUO BK. The powder component must always be added to the liquid component, not vice versa. Permo Chim DUO BK is applied on the surface at least in 2 layers. Each layer should be applied when the previous layer starts to harden and is not completely cured. In case the first layer is dry, the surface must be moisturized again before the application of the second layer. Consecutive layers must be perpendicular to each other. Fiber Mesh, Joint Tape etc. must be used between 2 coats as reinforcement. Joint Insulation Tape 120/70 should be applied to the corners and horizontal/vertical joints where the application is made. Extra attention should be given when Permo Chim DUO BK is planned to be applied on perlite (pearl-stone) concrete, gas concrete or high porosity concrete. In such surfaces Permo Chim DUO BK should be applied after plaster or alum laid. It has to be protected against any impact and puncture until and during over-coating. The mixture in the pot must be used within 30 minutes. Floor covering products such as tile, ceramic, granite are a building material, not a waterproofing material. Ceramics cracks in itself, even though if you preffered to use flexible joint fillers, the joint filler also crack as a result of the structure being seated. Waterproofing must be done under the floor covering materials. If Permo Chim DUO BK planned to used on the terrace which will be opened to human traffic; it must be covered and protected with flooring materials such as ceramics, tiles and so on.

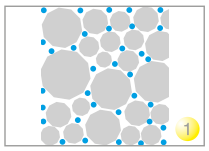
Watch Points
If surface temperature is below +5°C or over +25°C in Permo Chim DUO BK application, then suitable temperatures must be waited for. Also application should not be made in very hot, rainy or windy weathers. In outer surface applications, the surface has to be protected from sun, wind, frost or rain during the first 24 hours. For example if Permo Chim DUO BK applied in +23°C gains mechanic strength after 2 days, becomes impermeable to water after 7 days, and gains final strength after 14 days. Higher temperatures decrease the time, lower temperatures increase the time. Working and reaction time of cement and acrylic based systems are affected by environment and ground temperature, and relative humidity in the air. Low temperatures slow down the chemical reaction, and increase working period, coating time, and work time. Also coverage decreases because viscosity increases. High temperatures accelerate the chemical reaction and times stated above are reduced depending on this. Environment and ground temperatures must not fall down below the minimum allowed value in order Permo Chim DUO BK to complete its curing period. Wet film thickness must not pass 2 mm in single layer. The application has to be at least two layers. Places to be walked on must be covered with alum or ceramic.

Consumption
Depends on surface condition, for each layer 1-1.5 kg/m^2; minimum two layers.

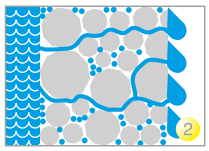
Packaging
20 kg Kraft Bag + 5 kg Plastic Drum = 25 kg Set
30 Sets / Pallet

Permo-Chim Crystal 6025

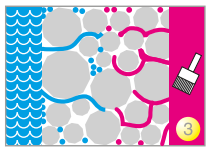
Single-Component Crystallizing Waterproof Mortar



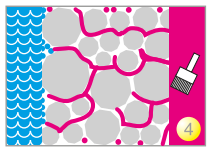
Humidity In Concrete



Water moves to capillary space and creates moisture and humidity.



PERMO CHIM CRYSTAL starts reaction with humidity and lime then moves into water.



PERMO CHIM CRYSTAL, capillary spaces are filled with crystallized particules and makes the surface waterproofed.

Description

It is a single-component, cement-based, crystallizing waterproofing mortar. It can be applied on positive and negative sides.

Usage Areas

- Against ground humidity and water leakage in slabs, foundations, retaining and shear walls, and elevator shafts,
- In pools, water tanks, cisterns and basements with rough or plastered concrete,
- On the floors of damp environments such as bathrooms, kitchens, toilets, etc. to prevent water leakage to the storeys below,
- In balconies for waterproofing concrete planter boxes from outside,
- To waterproof galleries, and drainage and water channels,
- To be spread at intervals during concreting.

Advantages

- It can be applied onto the side exposed to water (positive water pressure) as well as the opposite side (negative water pressure).
- It can be applied onto damp surfaces.
- It forms a durable coating against negative water pressure.
- While it is waterproof, it provides breathability for the surface.
- It has freeze-thaw cycle resistance.
- With perfect bonding to the structure it is applied, it provides a seamless, durable waterproofing, resistant to abrasion as well as to the formation of tears and holes.
- It is very practical. You simply mix the product with the required amount of water and apply.
- It provides an economical solution.

CE

Surface Preparation

The application surface must be cured. Surface must be cleaned from dust, rust, oils, bitum, paint, silicon or moulding oils which can effect the adherence in negative way. Loose particals must be removed or repaired with suitable Emülzer Repair or Grout Mortars before the application. Before the application surface must be full filled with appropriate amount of water and must stay dump during the application. Puddles must be cleaned. If there is a leakage in holes it must be repaired with Emülzer Speed-X Powder.

Application

For brush applications 10 lt, for trowel applications 7 lt of water is added to 25 kg of Permo-Chim Crystal. And mixed with slow speed mixer until homogenous mixture is obtained. This mixture must be consumed within 20-30 minutes.
Permo-Chim Crystal can be applied in different methods like below;
Liquid: Two coats on moistured surface with help of brush at least in two coats with a brush, or trowel. Each coat must be applied as the former coat starts to solidify, and before it dries up.
Plaster: Permo-Chim Crystal is added to a plaster with a thickness of 5-10 mm on old concrete, brick walls and briquettes.
Powder Strewing: On construction joints Permo-Chim Crystal spread as powder form. Applied in powder form areas like raft foundations and below the foundations before pouring the concrete.
On all above conditions surface must be cured with water after the application. Surface must be humid for one week after the application.
If ceramic or faience will be applied onto Permo-Chim Crystal, a faience adhesive should be applied directly onto newly applied Permo-Chim Crystal.

Consumption

Liquid : Positive water pressure : 1-2 kg/m² (in two coats)
Negative water pressure: 2 kg/m² (in two coats)
Plaster : 2-3 kg/m² (5 mm thick plaster)
Powder : 2 kg/m²

Packaging

25 kg Kraft Bag
48 Bags / Pallet

Repair and Injection Materials

EM 70

(Polymer Modified Fine Repair Mortar)

EM 80 T

(Polymer and Fiber Modified Coarse Repair Mortar)

Em-Grout N

(Plastic Mortar Suitable to Normal Weather Conditions)

Em-Grout R

(Fast Setting Plastic Mortar)

Speed-X Powder

(Stopper for Accelerated Setting)

Speed-X Flash

(Powder Formed Leak Stopper With Fast Setting Properties)

PU Injection Systems

MEMBER OF INSULATION ASSOCIATION İZODER

SUDER WATERPROOFERS ASSOCIATION

MADE IN TURKEY

EM 70 T 6050

Polymer Modified Fine Repair Mortar

Description

Emülzer® EM-70 T is a polymer added, single-component, thixotropic fine repair mortar produced with high quality cement and special granulometric siliceous sand and it is used for applications up to 5 mm thick.

Usage Areas

- Used for the repair of surfaces impaired due to site conditions.
- Used for the repair of surface flaws and segregated areas.
- Used for bevelling corners.

Advantages

- It is especially produced for preparing surfaces for water-proofing applications.
- Does not lead to crack or dust formation.
- Minimizes shrinkage.
- Ensures high adherence without undercoating.
- Resistant to water and frost.

Surface Preparation

- The area to be treated should be clean and in good condition.
- The surface to be treated should be free from water repellent chemicals, mold grease, dust, cement foam, paint residues, detergent, curing materials, silicon and any other substances which may impede adherence.
- Static cracks must be first enlarged in V shape.
- The surface must be saturated with water and must be kept damp all through the application.

Application

- Emülzer® EM-70 T is poured into a clean container, combined with 7 liters of water for trowel application and mixed to a homogenous consistency (approximately for 3 minutes with a low speed mixer). Water must be added to Emülzer® Repair Mortar; never vice versa.
- Water must be added gradually, not all at once.
- The mixture must be consumed within 25-40 minutes.
- It is not possible to use solidified mixture by adding extra water.
- After the application of the last coat, the surface must be levelled with a soft, damp sponge.
- After the application it is critical to prevent Emülzer® EM-70 T from drying fast, it must be kept damp for 1-3 days. This can be achieved by laying a damp burlap, plastic, etc. or damping the concrete. Emülzer® EM-70 T must be protected from sun, frost, wind and other undesirable weather conditions during the curing period.
- The applications thicker than 5 mm must be performed in coats.
- It must be applied at temperatures between +5°C and +35°C.

Consumption

Depending on the condition of the surface 3 to 4 kg/m^2 of powder repair mortar for an application of 2 mm.

Packaging

Net: 25 kg Kraft bag
48 Bags / Pallet

CE

EM 80 T 6040

Polymer and Fiber Modified Coarse Repair Mortar

Description

Emülzer® EM-80 T is a polymer and fiber added, single-component, thixotropic coarse repair mortar produced with high quality cement and special granulometric siliceous sand and it is used for filling holes up to 30 mm.

Usage Areas

- Used for the repair of surfaces impaired due to site conditions.
- Used for the repair of surface flaws and segregated areas.
- Used for bevelling corners.

Advantages

- It is especially produced for preparing surfaces for water-proofing applications.
- Does not lead to crack or dust formation.
- Minimizes shrinkage.
- Ensures high adherence without undercoating.
- Resistant to water and frost.

Surface Preparation

- The area to be treated should be clean and in good condition.
- The surface to be treated should be free from water repellent chemicals, mold grease, dust, cement foam, paint residues, detergent, curing materials, silicon and any other substances which may impede adherence.
- Static cracks must be first enlarged in V shape.
- The surface must be saturated with water and must be kept damp all through the application.

Application

- Emülzer® EM-80 T is poured into a clean container, combined with 7 liters of water for trowel application and mixed to a homogenous consistency (approximately for 3 minutes with a low speed mixer). Water must be added to Emülzer® Repair Mortar; never vice versa.
- Water must be added gradually, not all at once.
- The mixture must be consumed within 25-40 minutes.
- It is not possible to use solidified mixture by adding extra water.
- After the application of the last coat, the surface must be levelled with a soft, damp sponge.
- After the application it is critical to prevent Emülzer® EM-80 T from drying fast, it must be kept damp for 1-3 days. This can be achieved by laying a damp burlap, plastic, etc. or damping the concrete. Emülzer EM-80 T must be protected from sun, frost, wind and other undesirable weather conditions during the curing period.
- The applications thicker than 30 mm must be performed in coats.
- It must be applied at temperatures between +5°C and +35°C.

Consumption

Depending on the condition of the surface 3 to 4 kg/m^2 of powder repair mortar for an application of 2 mm.

Packaging

Net: 25 kg kraft bag
48 Bags / Pallet

CE

Em-Grout N 2140

Plastic Mortar Suitable to Normal Weather Conditions



Description

As a cement-based, single-component, anti-retreat care and repair mortar EM-Grout N offers flexibility in application time with its plasticity and ensures high adherence.

Usage Areas

- Floor, foundation and field concrete,
- Curtains, girders and columns,
- To repair reinforced concrete elements with thin and thick reinforcement,
- In mounting rail bottoms,
- In the joints of prefabricated elements.
- All types of engineering buildings such as metro, tunnel, dam, motorways and port.

Advantages

- It is easy to apply. It will be ready to use by the addition of water.
- Has high plasticity.
- It can be used to ensure resistance to high speed.

Application

- The area to be treated should be clean and in good condition.
- The surface to be treated should be free from cement foam, dust and any other substances which may impede adherence.
- Absorbant surfaces should be saturated with water beforehand.
- There shouldn't be any puddling or water drops.
- Having poured water into a clean container first, grout should be added in powder form.
- 25 kg of EM-Grout N is mixed with 3,5 liters of water for a plastic consistency and with 4 liters of water for a more fluid consistency. (The amounts may change depending on weather conditions.)
- It must be mixed with a low speed mixer for 2-3 minutes.
- After 1-2 minutes, it must be mixed once more, again with a low speed mixer and for 2-3 minutes.
- The mixture prepared should be placed within 20 minutes.
- No water should be added once the material is in reaction.
- Once it is solidified it should be continuously cured with water.
- It is not possible to use solidified mixture by adding extra water.
- The thickness of the placement should be 10-15 mm in a single coat. For the applications thicker than 50 mm, aggragate with a calibre of max. 12 mm must be added in an amount of 30%.

Consumption

Powder density in dry form: 1,70 kg/lt±2%
Density mixed with water : 2,25 kg/lt±2%

Packaging

Net: 25 kg kraft bag
48 Bags / Pallet

CE

Em-Grout R 2100

Fast Setting Plastic Mortar



Description

As a cement-based, single-component, anti-retreat care and repair mortar EM-Grout R has a short application time and it ensures high strength.

Usage Areas

- Floor, foundation and field concrete,
- Curtains, girders and columns,
- To repair reinforced concrete elements with thin and thick reinforcement,
- In mounting rail bottoms,
- In the joints of prefabricated elements.
- All types of engineering buildings such as metro, tunnel, dam, motorways and port.

Advantages

- It is easy to apply. It will be ready to use by the addition of water.
- Has high plasticity.
- It can be used to ensure resistance to high speed.

Application

- The area to be treated should be clean and in good condition.
- The surface to be treated should be free from cement foam, dust and any other substances which may impede adherence.
- Absorbant surfaces should be saturated with water beforehand.
- There shouldn't be any puddling or water drops.
- Having poured water into a clean container first, grout should be added in powder form.
- 25 kg of EM-Grout N is mixed with 3,5 liters of water for a plastic consistency and with 4 liters of water for a more fluid consistency. (The amounts may change depending on weather conditions.)
- It must be mixed with a low speed mixer for 2-3 minutes.
- After 1-2 minutes, it must be mixed once more, again with a low speed mixer and for 2-3 minutes.
- The mixture prepared should be placed within 20 minutes.
- No water should be added once the material is in reaction.
- Once it is solidified it should be continuously cured with water.
- It is not possible to use solidified mixture by adding extra water.
- The thickness of the placement should be 10-15 mm in a single coat. For the applications thicker than 50 mm, aggragate with a calibre of max. 12 mm must be added in an amount of 30%.

Consumption

20 kg/m^2
Powder density in dry form: 1,70 kg/lt±2%

Packaging

Net: 25 kg kraft bag
48 Bags / Pallet

CE

Speed-X Powder 3040

Stopper for Accelerated Setting

Description

It is an accelerated setting powder stopper for water leakages. It contains mineral fillers, special cements and polimer catalyst additives. It is not a waterproofing product. After the application of Speed-X Powder, a waterproofing product must be applied on the surface.

Usage Areas

- It is used for stopping pressured water leakages, strong water flows, and capillar water leakages as well as inhibiting humidity.
- It is an immediate solution to stop water leakage in foundation curtain walls, basements, water tanks, elevator shafts and damaged water pipes.
- It can be used on concrete, plaster, alum, and bricks.

Advantages

- It is easy and fast applied product.
- It is an ideal material for urgent insulation applications.
- It dries very fast. It stops water leakage in a very short period of time.
- The curing time can be obtained between 30 seconds and 2 minutes by checking.
- Any type of waterproofing product can be applied on to Speed-X Powder after 15-20 minutes.
- It does not shrink or crack.
- It does not contain any chloride.
- It can be applied from the opposite direction of water flow (negative water pressure).

Application

- 1 unit of water is mixed with 2,5-3 units of Speed-X Powder until it becomes homogenous. (Quantity should be arrange as to consume 2-3 minutes.) The paste form of Speed-X Powder must be pressed onto leakage area with rubber gloves for approximately two minutes.
- Reaction occurs just 1 minute after adding water, so the mixture must be prepared in small amounts and consumed immediately.
- In case of dense leakage, Speed-X Powder can be applied directly in powder form. If it has to be applied onto a large surface, the direction of the application must be from outer sides to the middle.
- After the Speed-X Powder application finished, Emülzer® Permo-Chim Crystal must be applied directly.
- At low temperatures the mortar must be prepared with hot water.

Consumption

1,600 kg - 2 kg for 1 lt of filling mixing with 0,5 lt water

Packaging

5 kg Plastic Pail
75 Pails / Pallet

Speed-X Flash 3041

Powder Formed Leak Stopper With Fast Setting Properties

Description
Speed-X Flash is ready-to-use, powder form leak stopper with fast setting properties. It is applied in powder form without mixing with water. It is not a waterproofing material. Waterproofing application is required after stopping the leakage by Speed-X Flash.

Usage Areas
- Speed-X Flash which provides waterproofing by curing in 2-5 seconds to the point where it contacts with water is used indoors and outdoors; on all kinds of mineral based surfaces such as concrete, plaster, screed, briquette, etc.
- Used for blocking existing water leaks before waterproofing.
- For stopping active water leaks and to dry the surface waters and moisture on the surface.
- Used to quickly cut off water that has leaked or pressurized from cracks and gaps.
- Used for the inner insulation of basement floors.
- It is used for stopping or blocking pressurized water leaks, strong water leakages and capillary water leaks before sealing.
- Used for immediately stopping leakage on foundation walls, basements, tunnels, water deposits, elevator pits and damaged water pipes.
- Used at urgent sewage connections.

Advantages
- Easy and fast to apply.
- It is an ideal supporting material for emergency insulation applications.
- The mixture is made of fast cement, chemical and polymer additives.
- Speed-X Flash expands to the opposite direction of water flow and does not shrink and crack after it has cured.
- It does not contain soda or chlorine, so it does not rust steel reinforcements and provides excellent adherence to any kind of mineral based surface.
- It freezes rapidly and stops the flow of water in a very short period of time.
- 15-20 minutes after application all types of waterproofing material can be applied on it.
- It is applied from opposite direction of water flow (negative water pressure).

Surface Preparation
The surfaces to be applied must be moistured. The surfaces must be clean and free from loose particles. Layers to reduce adherence such as oil, grease, dirt, paint, cement foam, rust, salt efflorescence must be thoroughly cleaned before application. Cracks and holes should be scraped to a depth of 2 cm before application.

Application
Speed-X Flash is applied in powder form. It must not contact with water before application. Gloves should be used during application. Take some powder in your hand, squeeze it and push it in the crack or hole towards the source of the active water leak. Hold it until Speed-X Flash hardens and water flow is ended. Negative waterproofing (with Permo Chim Crystal) is required immediately after the Speed-X Powder application. Speed-X Flash is not flexible. Cracks can be occured in areas exposed to vibrations where motion or seating is observed.

Consumption
Approximately 2 kg Speed-X Flash for each 1 liter gap.

Packaging
5 kg Plastic Pail
75 Pails / Pallet

PU INJECTION SYSTEMS

Description

Pu Injection Systems are the most common type of injection used for repairing basement leaks and waterstopping, due to its versatility. It is used exclusively for stopping leaks in poured concrete foundation walls and structures. When waterstopping is required in subway tunnels and mineshafts, the cracks and rock fissures are injected with polyurethane.

Usage Areas

- Waterprooring of structures,
- Foundation pit sealing,
- Curtain injection,
- Sewer repair,
- Stabilization of structures,
- Soil stabilization,
- Crack repairs,
- Surface protection,
- Joint sealing,
- Surface sealing,

Advantages

- Humidity or leakage is stopped before reaching the reinforcement in the concrete. This will prevent the corossion and protects the stability of your structure. Polyurethane injection involves a crack flushing process that cleans out the crack prior to the injection.
- The chemical expansion of the polyurethane will fill voids within the concrete.
- The rapid curing of polyurethane is beneficial when rapid waterstopping is required.
- Fast application.

Application

1- Application by 1 Component Pump:

Transfer the mixed material to the hopper and stir briefly

2- Application by 2 Component Pump:

Provide for a sufficient volume flow to ensure that components A and B are mixed homogenously in the mixing device (static mixer). Upon conclusion of the injection process and the material's curing process the patching can be removed in a non-destructive manner, e.g. by heating with a hot air gun. The packers can be knocked off or dismounted. The drill holes are then closed with suitable mineral materials and the surface is reprofiled.

Consumpion

Depending on the crack characteristic. (width,depth, etc.)


WATERPROOFING SINCE 1935
SUYA ve RUTUBETE KARŞI
WATERPROOFING

Bituminous Membranes

EMP SELF
(Elastomeric Modified Bituminous Self Adhesive Waterproofing Membranes)
EMC SELF
(Elastomeric Modified Bituminous Self Adhesive Waterproofing Membranes)
EM 300P
(Polyester Felt Reinforced Bituminous Membrane)
EM 400P
(Polyester Felt Reinforced Bituminous Membrane)
EM 300PAR
(Slate Coated Bituminous Membrane)
EM 400PAR
(Slate Coated Bituminous Membrane)
EM 300PAL
(Aluminium Foil Coated Bituminous Membrane)
EM 400PAL
(Aluminium Foil Coated Bituminous Membrane)
EM 300PS
(Silica Sand Coated Bituminous Membrane)
EM 400PS
(Silica Sand Coated Bituminous Membrane)
Membrane Primer
(Bituminous Membrane Primer)
Bituminous Fillet
(Bitumen Based, V Shaped Filleting Tape)

CE MEMBER OF INSULATION ASSOCIATION İZODER SUDER WATERPROOFERS ASSOCIATION TÜRKAK MADE IN TURKEY

EMP SELF / EMC SELF – Self Adhesive Membranes

Elastomeric Modified Bituminous Self Adhesive Waterproofing Membranes

Definition
It is an elastomeric modified, highly flexible, self adhesive bituminous waterproofing membrane with polyester or fiberglass reinforcement. One side covered with PE film other side covered with peelable PP Film. Product thickness varies from 1,5 mm to 4 mm.

Usage Areas
Used in terraces, concrete roofs, metal roofs and foundations first layer and/or second layer.

Advantages
- Easy to use.
- Flexible and long lasting.
- Self-adhesive, no torching needed.
- It can adhere on different surfaces like wood, plastic, glass.
- It has high elongation and tensile strength.
- It has excellent performance at cold weather conditions.

Surface Preparation
Surface must be dry and clean before application. Any loose pieces, dust, oil, grease should be removed. Cracks, fissures should be repaired with suitable mortar. Emülzer® C should be used as a primer.

Application
Since it is a ready to use product; remove the PP film firmly and adhere the membrane on the surface.

Package
1,5 mm and 2 mm - 1 x 15 m/Rolls
3 mm and 4 mm - 1 x 10 m/Rolls

APP Bituminous Membranes EM 300 P / EM 400 P

Polyester Felt Reinforced Bituminous Membranes (EM 300 P = 3mm / EM 400 P = 4mm)

Definition

3-4 mm thick APP bituminous membranes reinforced with polyester felt. Both sides are covered with PE film.

Usage Areas

Used in 2 coats in foundation packaging insulation, and as the first coat in shingle, slated or aluminum foiled membrane applications.

Advantages

Thanks to polyester felt reinforcement, they offer high tensile strength and extension strength.

Surface Preparation

Surface must be dry and clean before application. Any loose pieces, dust, oil, grease should be removed. If necessary use "Emilkote" as a primer.

Application

They can be adhered to Emülzer C or Emilkote primed surfaces by torch application. At seams they should overlap 10 cm horizontally, and 15 cm vertically. They are used as the first coat in shingle, slated or aluminum foiled membrane applications. Bituminous membranes must be applied at least two layers and second layer must overlap the first one 50 cm sideways and 5 meters longitudinally.

Package (1x10m = 10 m² roll)

EM 300P 30 Roll / Euro Pallet
EM 400P 25 Roll / Euro Pallet

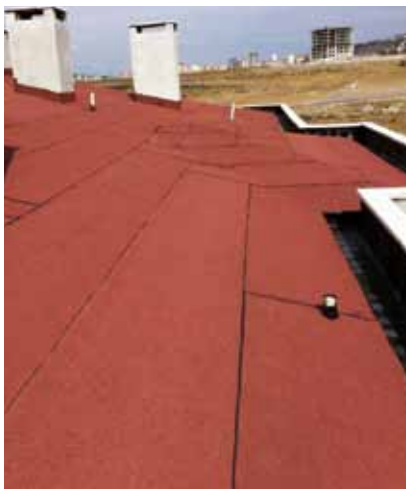
Technical Specifications

TECHNICAL FEATURES	METRIC UNIT	STANDARD	300P	400P
Bearing	gr/m²	TS 11758-1	Polyester	Polyester
Artificial Ageing By Long Term Exposure To Elevated Temperature	kPa	TS EN 1296	Type A 2 kPa; kPa Type T 60 kPa	Type A 2 kPa; Type T 60 kPa
Determination To Tearing (Width/Height)	N	TS EN 12310-1	35/75 N (+-%50)	50/100 N (+-%50)
Resistance to Static Loading	kg	TS EN 12730	min.5 kg	min.5 kg
Tensile Strength (Lengthwise)	N/5cm	TS EN 12311-1	400 N/5 cm (+-%50)	600 N/5 cm (+-%50)
Elongation at Break (Lengthwise)	%	TS EN 12311-1	% 30 (+-%50)	% 30 (+-%50)
Resistance to Impact	mm	TS EN 12691 method A	min.300 mm.	min.300 mm.
Tensile Strength (Transverse)	N/5cm	TS EN 12311-1	300 N/5 cm (+-%50)	400 N/5 cm (+-%50)
Elongation at Break (Transverse)	%	TS EN 12311-1	% 30 (+-%50)	% 30 (+-%50)
Shear Resistance of Joints	N/5cm	TS EN 12317-1	300N/5cm (+-%50)	400N/5cm (+-%50)
Flexibility at Low Temperature	°C	TS EN 1109	max. - 5 º C	max. - 5 º C
Reaction to Fire	-	TS EN ISO 11925-2	Class E	Class E
Thickness	mm	TS EN 1849-1	3 mm (+-0,5 mm)	4 mm (+-0,5 mm)
Deviation from Straightness	mm	TS EN 1848-1	Max. 20 mm for 10 m	Max. 20 mm for 10 m
Width	m	TS EN 1848-1	min. 1 meter	min. 1 meter
Length	m	TS EN 1848-1	min. 10 meter	min. 10 meter
Mass Per Unit Area	kg/m²	TS EN 1849-1	3,9(+-1) kg/m²	4,9(+-1) kg/m²

CE

APP Bituminous Membranes EM 300 PAR / EM 400 PAR

Slate Coated Bituminous Membranes (EM 300 PAR = 3,5mm / EM 400 PAR = 4,5mm)



Definition

It is the APP (Atactic Polypropylene) doped plastomeric water isolation membranes with polyester felt; one side coated with polyethylene film the other side coated mineral stone.

Usage Areas

It is used in groundwork bundling, parking area, terrace and pitched roofs, balconies, plant stands, garden terrace, concrete flumes, eaves trough and concealed gutter, retaining and basement walls, sewage treatment plants and under the coating against artesian in wet areas such as water tanks, ponds, swimming pools and ornamental pools, kitchen, bathroom, wc.

Advantages

It is flexible, long-lasting, resistant to the aggressive effects that may occur in the soil, can easily be applied to different types of surfaces and can easily be applied to the details such as dilation, edges of chimney and parapet returns, it has high tensile and breakage stability.

Surface Preparation

Surface must be dry and clean before application. Any loose pieces, dust, oil, grease should be removed. If necessary use "Emilkote" as a primer.

Application

They can be adhered to Emülzer® C or Emilkote primed surfaces by torch application. At seams they should overlap 10 cm horizontally, and 15 cm vertically. Bituminous membranes must be applied at least two layers and second layer must overlap the first one 50 cm sideways and 5 meters longitudinally.

Package (1x10m = 10 m² roll)

EM 300PAR 25 Roll / Euro Pallet
EM 400PAR 20 Roll / Euro Pallet

Technical Specifications

TECHNICAL FEATURES	METRIC UNIT	STANDARD	300 PAR	400 PAR
Bearing	gr/m²	TS 11758-1	Polyester	Polyester
Thickness ± 0.2	mm	TS EN 1849-1	3.5 (+-0,5 mm)	4.5 (+-0,5 mm)
Temperature Resistance	C	TS 11758-1	>110	>110
Cold Bending (Maximum)	C	TS EN 1109	-5 max.	-5 max.
Tensile Strength (Height/ Width)	N/5 cm	TS 1908	400/300 (+-%50)	600/400 (+-%50)
Elongation at Break (Height/ Width)	%	TS 1908	30/30 (+-%50)	30/30 (+-%50)
Top Surface Coating	-	TS 11758-1	Mineral Stone	Mineral Stone
Sub-Surface Coating	-	TS 11758-1	Pe	Pe
Roll Sizes	m x m	TS 11758-1	1 X 10	1 X 10

CE

APP Bituminous Membranes EM 300 PAL / EM 400 PAL

Aluminium Foil Coated Bituminous Membranes (EM 300 PAL = 3mm / EM 400 PAL = 4mm)

Definition
EM300-400PAL are 3-4 mm thick, APP (Atactic Polypropylene) doped, plastomeric waterproofing membranes with polyester felt; one side coated with polyethylene film the other side aluminium foil.

Usage Areas
It is used in rainfalls, hidden decks and chimney edges.

Advantages
It is flexible, long-lasting, resistant to the aggressive effects that may occur in the soil, can easily be applied to different types of surfaces and can easily be applied to the details such as dilatation, edges of chimney and parapet returns, it has high tensile and breakage stability.

Surface Preparation
Surface must be dry and clean before application. Any loose pieces, dust, oil, grease should be removed. If necessary use "Emilkote" as a primer.

Application
They can be adhered to Emülzer® C or Emilkote primed surfaces by torch application. At seams they should overlap 10 cm horizontally, and 15 cm vertically. They are used as the first coat in shingle, slated or aluminum foiled membrane applications. Bituminous membranes must be applied at least two layers and second layer must overlap the first one.

Package (1x10m = 10 m² roll)
EM 300PAL 30 Roll / Euro Pallet
EM 400PAL 25 Roll / Euro Pallet

Technical Specifications

TECHNICAL FEATURES	METRIC UNIT	STANDARD	300 PAL	400 PAL
Bearing Type	-	-	Polyester	Polyester
Top Surface Coating	-	-	AL	AL
Sub-Surface Coating - PE Foil	-	-	PE Film	PE Film
Length	meter	TS EN 1848-1	10	10
Width	meter	TS EN 1848-1	1	1
Thickness	mm	TS EN 1849-1	3	4
Tensile Strength (Height/ Width)	N/5 cm	TS 1908	800/600	800/600
Elongation at Break (Height/ Width)	%	TS 1908	35/35	35/35
Cold Bending (Maximum)	C	TS EN 1109	-10	-10
Temperature Resistance	C	TS 11758-1	>120	>120

CE

Bituminous Membranes EM 300 PS / EM 400 PS

Silica Sand Coated Bituminous Membranes (EM 300 PS = 3mm / EM 400 PS = 4mm)

Definition

3-4 mm thick bituminous membranes reinforced with polyester felt. One side coated with silica sand and other side covered with PE film.

Usage Areas

It is used at flat roofs ,terraces ,inclined roofs, balconies, plant stands, garden terrace against UV degradation. Also can be used in wet areas such as , kitchen, bathroom, wc under tile applications.

Advantages

Thanks to polyester felt reinforcement, they offer high tensile strength and extension strength.

Surface Preparation

Surface must be dry and clean before application. Any loose pieces, dust, oil, grease should be removed. If necessary use "Emilkote" as a primer.

Application

They can be adhered to Emülzer® C or Emilkote primed surfaces by torch application. At seams they should overlap 10 cm horizontally, and 15 cm vertically. They are used as the first coat in shingle, slated or aluminum foiled membrane applications. Bituminous membranes must be applied at least two layers and second layer must overlap the first one 50 cm sideways and 5 meters longitudinally.

Package (1x10m = 10 m² roll)

EM 300 PS	30 Roll / Euro Pallet
EM 400 PS	25 Roll / Euro Pallet

Technical Specifications

TECHNICAL FEATURES	METRIC UNIT	STANDARD	300 PS	400 PS
Bearing Type	-	-	Polyester	Polyester
Bearing Weight	gr/m²	-	160	180
Top Surface Coating	-	-	Silica Sand	Silica Sand
Sub-Surface Coating - PE Foil	-	-	PE Film	PE Film
Length	meter	TS EN 1848-1	10	10
Width	meter	TS EN 1848-1	1	1
Thickness	mm	TS EN 1849-1	3	4
Deviation from Straightness	mm	TS EN 1849-1	Max. 20 for 10 m	Max. 20 for 10 m
Cold Bending (Maximum)	C	TS EN 1109	-10	-10

CE

Membrane Primer 1035

Bituminous Membrane Primer

Definition
It is a ready to use primer for bituminous membranes obtained by mixing water and bitumen by using special methods.

Usage Areas
It is only used as a priming coat before the application of all brands of bitumen membranes. Thanks to the superior sticking property, it provides a stronger and spaceless surface sticking for the bitumen membranes applied on it. It can be used on all horizontal and vertical surfaces and in closed areas like basement, cellar, etc.

Advantages
- It is very economical.
- Can be easily applied by anyone.
- It can be used in closed areas for not containing toxic and flammable substances
- Because it is water based, it is enviromentally friendy.
- Because it is thinned with water, it adheres perfectly to all kind of surfaces, even when the surface is moist.
- Ready to use.
- Must be applied cold. Does not require heating or thinning.

Surface Preparation
- The application surface should be without dust, rust, dirt, grease and oil and the loose parts should be scrapped out.
- The sharp points or horizontal-vertical joint places subject to cracking should be rounded.
- The large pores and the cracks should be filled with an appropriate repair mortar.

Application
It should be applied as cold. After mixing with the water with 20%, it is applied by grass brush, roller or airless gun. It dries within about 4-5 hours depending on the weather conditions. It should not apply in rainy days or with the temperatures lower than +5°C.

Consumption
0,250 kg/m^2

Packaging
16 kg Metal Can - 45 Pieces / Pallet

Bituminous Fillet 2025

Bitumen Based, V Shaped Filleting Tape

Description
It is a bitumen-rubber based, V-shaped elastomeric filleting tape used for preparing internal edges at vertical and horizontal seams for insulation applications.

Usage Areas
- It is used at the internal edges of hot-applied or self-adhesive bituminous membranes.
- It is used at the edge intersections of building components with different expansion characteristics.
- It is used with water or solvent based bituminous liquid membranes.

Advantages
- Easy and fast application.
- Very elastic. Maintains its elasticity between -20°C and +95°C.
- It perfectly adjusts to different construction materials.
- Can be applied under all weather conditions.

Surface Preparation
- The surface to be treated must be dry and clean.
- For perfect adherence, the surface must be primed with a coat of Emilkote® or Emülzer® C prior to application.

Application
- After having cut the tape into desired length, protective polyethylene foil is melted by welding torch or burner.
- The tape is firmly pressed and applied onto the edge.
- You can start the insulation application immediately after.

Consumption
It depends on footage.

Dimension
25 x 25 x 35 mm
40 x 40 x 57 mm

Packaging
25 x 25 x 35 mm
- 1.20 meters x 44 Bars = 52,80 m/box
  27 Boxes (1425,6 m) / Pallet

40 x 40 x 57 mm
- 1.20 meters x 21 Bars = 25,2 meters
  27 Boxes (680,4 m) / Pallet


1935'TEN BUGÜNE SUYA VE RUTUBETE KARŞI
WATERPROOFING SINCE 1935
EM 300 P
www.emulzer.com.tr
TS 11758
DİK STOKLAYINIZ
STORE UPRIGHT
OVERLAP AT LEAST 10 CMS

Invisible and Coloured Waterproofing Liquids

Saycoat (Transparent Waterproof Coating)

Saysilan (Water-Based Invisible Repellent)

Saysilox (Invisible Transparent Repellent)

İzo Balkon (Invisible Transparent Repellent)

Latex (Admixture for Adherence Improvement)

Pu-Astar (Polyurethane Concrete Undercoat)

Purready (UV Resistant Polyurethane Liquid Coating)

Purready-AL (Polyurethane-Aluminum-Based UV-Resistant Reflective Paint)

Purready B (Bitumen-Polyurethane-Based Single-Component Waterproofing Material)

Pur-Wet (Hybrid Polyurethane Liquid Coating)

PU-Coat II (Double-Component Polyurethane Coating)

PU-Coat II SKM / SKP (Matte and Gloss Aliphatic Polyurethane Top Coat Paint)

Cliolite (Surface Hardening Impregnation Solution)

Cliolite CIT (Corrosion Inhibitor Treatment)

Beyazcoat SOLAR (Acrylic Based, Heat Reducing Liquid Plastic Coating)

Beyazcoat (Liquid Plastic Coating)

Fiber Added Beyazcoat (Fiber Added Liquid Plastic Coating)

Em-Poxy WB (Water-Based Epoxy Undercoat)

Concrete Primer (Acrylic Copolymer Based, Single Component, Primer For Exposed Concrete Surfaces)

CE MEMBER OF INSULATION ASSOCIATION İZODER SUDER WATERPROOFERS ASSOCIATION TÜRKAK MADE IN TURKEY

Saycoat 5020

Transparent Waterproof Coating

Description

It is a liquid sealant which forms a transparent waterproof layer when it solidifies. By the evaporation of the solvent it contains, it adheres firmly to the surface it is applied, forming a waterproof film.

Usage Areas

- It can be used in terrace roofs, domes of mosques, churchs, retaining walls, outside surfaces of buildings, and porous surfaces such as concrete, plasters, alum, bricks, gas concrete, mosaics, etc.
- Surfaces can be coated by using fiber glass, geotextile felt.
- It can be used as an undercoat prior to painting plaster surfaces.
- It is not approved to be used on paints and on non-porous surfaces such as metal, glass, ceramic, etc.

Advantages

- It is ready to use. Dries fast.
- As a cold-applied material it does not require heating or thinning.
- As a transparent material it is decorative as well; it provides a brilliant and vivid appearance.
- It is elastic.
- By protecting walls from humidity it also provides heat economy.
- It protects iron rebar from rust and decay.
- It is resistant to acids, bases, and salts. It is protective.
- It sustains its superiority between -20°C and +86°C.

Application

- Saycoat must be mixed thoroughly prior to application.
- It must be applied at least in two coats with a brush, roller, or sprayer onto the porous surfaces prepared appropriately as instructed.
- Each coat must be applied at least 2 hours later than the former.
- Saycoat is applied to the surface exposed to water.
- Although Saycoat dries fast-in as little as 1 hour-it is recommended to wait 24 hours before applying a second coat. For the applications requiring durability against higher water pressure, it must be reinforced with materials such as fiber glass, geotextile felt, etc.

Consumption

200 - 700 g/m^2 for two coats

Packaging

4,5 kg Metallic case - 140 Pieces / Pallet
16 kg Metallic case - 45 Pieces / Pallet

CE

Saysilan 5030

Water-Based Invisible Repellent

Description

Saysilan is a water-based invisible repellent and undercoat which provides an invisible waterproof barrier in capillaries when it is absorbed by the surface it is applied.

Usage Areas

- It is used on all types of concrete surfaces; mineral plasters; highly absorbant surfaces such as gas concrete, bricks, roof tiles, terra cotta, travertine, etc.; mineral based natural and artificial stones; surfaces with mineral based paints; monuments and statues constructed with these materials.
- It can be used to protect these surfaces (around pools, in balconies and terraces) from stains caused by liquids.
- It can be used as an undercoat prior to painting.
- It can be used in restoration applications.
- It is not approved to be used on painted surfaces, glazed glass surfaces and in underground conditions with high hydrostatic pressure.

Advantages

- It is an invisible material.
- It is an excellent material to protect the appearance of the surfaces.
- It has excellent UV-resistance.
- Thanks to fast water-repellent effect, it provides self-washing surfaces.
- It has excellent penetration properties.
- Ready to use in liquid form.
- Does not form any film on the surface.
- Water vapor permeability provides breathability for the surface.
- Protects the surface from mold, meldew, fungus and moss formation by avoiding moisture which is an excellent environment for microorganism reproduction.
- Avoids the formation of white salty stains on building materials.
- Resistant to alkali environments.
- Provides heat economy by protecting walls from wetting. (5% humidity results in a loss of 30% in thermal insulation value of that material).
- Dries solid without causing stickiness.
- Its water-repellent effect protects building elements from any damage which may be caused by expansion due to freeze and thaw cycles.
- It is non-explosive and inflammable.
- Causes no toxic and ecological damage.

Application

Saysilan must be mixed thoroughly prior to application. It must be applied coat after coat without waiting for the former coat to dry up. It must be applied at least in two coats. It is recommended to wait 24 hours before applying any coating material onto Saysilan. Prior to any application into joints of non-porous building materials such as ceramic, faience, glass brick, glass tile, etc., the joints must be repaired and filled. Saysilan is applied into joints in wet coats by using a thin tipped brush or rake. After the application, any material smeared onto bright surfaces must be wiped off with a damp cloth. Otherwise, these surfaces will become slippery. Saysilan is not approved to be used on painted surfaces, under pressure water (pool, water tank, etc.), or in underground conditions with high hydrostatic pressure.

Consumption

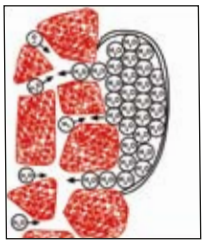
Depending on the absorption of the surface, 200-700 g/m^2 for two coats.
On gas concrete, for instance: 450 g/m^2 for the first coat and 250 g/m^2 for the second coat.

Packaging

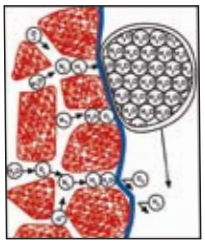
5 kg Plastic drum - 90 Drums / Pallet
20 kg Plastic drum - 27 Drums / Pallet

Saysilox 5041

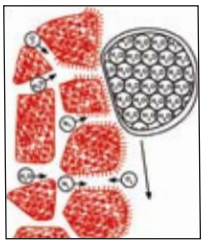
Invisible Transparent Repellent



- Water absorption on uncoated surface.



- Most of the coatings are not breathable products.



- Saysilox and Saysilan does not form a layer on the surface.
- Surface can be breathable.

Description

Saysilox is a solvent and silan-siloxan based surface impregnating and priming material providing an invisible waterproof barrier in capillaries when it is absorbed by the surface it is applied. It does not have any impact on water vapor permeability of the surface, and therefore it provides breathability.

Usage Areas

- The surface to be treated must definitely have a sharp downstream slope.
- It is used for all types of concrete surfaces; mineral plasters; highly absorbant surfaces such as gas concrete, bricks, roofing tiles, etc.; mineral based natural and artificial stones; surfaces with mineral based paints; monuments and statues constructed with these materials.
- It can be used as an undercoat prior to painting.
- It can be used in restoration applications.
- It is not approved to be used under pressure water, on glazed and glass surfaces, in underground conditions with high hydrostatic pressure or on painted surfaces.

Advantages

- It is an invisible material.
- It is an excellent material to protect the appearance of the surfaces.
- Thanks to fast water-repellent effect, it provides self-washing surfaces.
- Has excellent penetration properties.
- It is ready-to-use in liquid form.
- It dries solid without causing stickiness.
- It does not form a layer on the surface.
- Its water vapor permeability provides breathability for the surface.
- It protects the surface from mold, meldew, fungus and moss formation by avoiding moisture that would be an excellent environment for microorganism reproduction.
- It is resistant to alkali environments.
- It provides heat economy by protecting walls from wetting. (5% humidity results in a loss of 30% in thermal insulation value of that material.)
- Its water-repellent effect protects building elements from any damage which may be caused by expansion due to freeze and thaw cycles.
- It has excellent UV-resistance.

Application

Saysilox must be mixed thoroughly prior to application. It must be applied coat after coat without waiting for the former coat to dry up. It must be applied at least in two coats. It is recommended to wait 24 hours before applying any coating material onto Saysilox. Prior to any application into joints of non-porous building materials such as ceramic, faience, glass brick, glass tile, etc., the joints must be repaired and filled. Saysilan is applied into joints in wet coats by using a thin tipped brush or rake. After the application, any material smeared onto bright surfaces must be wiped off with a damp cloth. Otherwise, these surfaces will become slippery. Saysilox is not approved to be used on painted surfaces, under pressure water (pool, water tank, etc.), or in underground conditions with high hydrostatic pressure.

Consumption

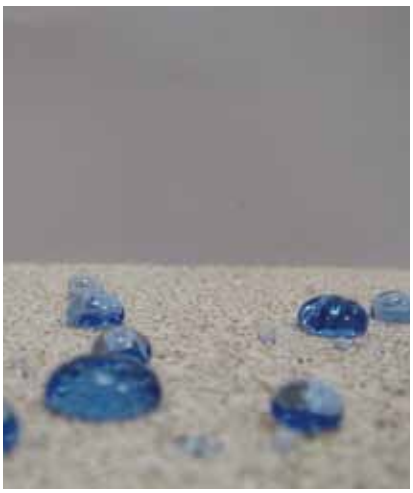
Depending on the absorption of the surface, 200-600 g/m^2 for each application.

Packaging

3,5 kg Metallic case - 140 Pieces / Pallet
15 kg Metallic case - 45 Pieces / Pallet

İzo Balkon 5033

Invisible Transparent Repellent



Description

İzo Balkon is an undercoat repellent providing excellent water-repellent effect by impregnating the surface and forming an invisible water barrier in capillaries.

Usage Areas

- It is used for temporary waterproofing of the balconies and terraces which are not insulated yet, but already coated with ceramic, faience, etc. This application does not cause any damage for these coatings.
- It provides water-repellent effect in the joints of non-porous building elements such as ceramic, faience, glass tile, glass mosaic (BTB), etc.
- It is used as a surface protector for porous, dust and stain sensible coating materials such as cotto and clinker and it is applied before filling the joints.
- It is used on all types of concrete surfaces, mineral plasters, highly absorbant surfaces such as gas concrete, bricks, roof tiles, terracotta, travertine, and on monuments and statues constructed with these materials.
- It can be used to protect these surfaces (around pools, balconies, terraces) from the stains which may be caused by mortar.

Advantages

- It is an invisible material.
- It is an excellent material to protect the appearance of the surfaces.
- Thanks to fast water-repellent effect, it provides self-washing surfaces.
- It is highly penetrating.
- It is ready-to-use in liquid form.
- It dries solid without causing stickiness.
- It does not form any film on the surface.
- Its water vapor permeability provides breathability for the surface.
- It protects the surface from mold, meldew, fungus and moss formation by avoiding moisture that would be an excellent environment for microorganism reproduction.
- It avoids salt efflorescence.
- It is resistant to alkali environments.
- It provides heat economy by protecting walls from wetting. (5% humidity results in a loss of 30% in thermal insulation value of that material).
- Its water-repellent effect protects building elements from any damage which may be caused by expansion due to freeze and thaw cycles.
- It is non-explosive and inflammable.
- It causes no toxic and ecological damage.
- It has excellent UV-resistance.

Application

- İzobalkon should be mixed thoroughly prior to application. It must be applied with saturation technique, coat after coat, without waiting for the former coat to dry up.
- It must be applied at least in two coats. It is recommended to wait 24 hours before applying any coating material onto İzo Balkon.
- Prior to any application into joints of non-porous building materials such as ceramic, faience, glass brick, glass tile, etc., the joints must be repaired and filled.
- İzo Balkon is applied into joints in wet coats by using a thin tipped brush or rake.
- After the application, any material smeared onto bright surfaces must be wiped off with a damp cloth.
- Otherwise, these surfaces will become slippery. İzo Balkon is not approved to be used on painted surfaces, under pressure water (pool, water tank, etc.), or in underground conditions with high hydrostatic pressure.

Consumption

Depending on the absorption of the surface, 200-700 g/m^2 for two coats.

Packaging

1 kg Plastic bottle
408 Bottles / Pallet

Latex 5050

Admixture for Adherence Improvement



Description
It is a synthetic rubber emulsion added to cement mortars to provide waterproofing and improve adherence.

Usage Areas
It is used in thin layer repair mortars, floor alum, concrete repair mortars, plasters, coatings with abrasive strenght, ceramic adhesive mortars, and as an alum undercoat.

Advantages
- It is ready-to-use in liquid form.
- It provides superior adherence.
- It improves elasticity.
- It decreases shrinkage.
- It increases abrasive strenght.
- It increases chemical resistance.
- It is non-corrosive.

Application
- Emülzer® Latex is diluted with clean mixing water with a ratio of 1:1 to 1:4 (Water:Latex), and then mixed with fresh cement and sand.
- As an undercoat, it is applied to the surface with a brush, and if you are going to apply mortar onto Emülzer® Latex layer, it should not be dry.
- It definitely should not be used alone.

Consumption
Depends on the absorption characteristics of the surface.

Packaging
4,5 kg Plastic drum - 90 Drums / Pallet
19 kg Plastic drum - 33 Drums / Pallet

Pu-Astar 5070

Polyurethane Concrete Undercoat



Description
It is a transparent, polyurethane-based, single-component concrete undercoat with a high solid ratio.

Usage Areas
It is used for preparing concrete and other types of surfaces for the application of polyurethane-based top coat ground paints, polyurethane-based parquetry adhesives and all kinds of polyurethane-based ground coating materials.

Advantages
- As a single component material it contains solvent. It is cured as a result of chemical reaction with moisture.
- It fills the pores found on the concrete and other surfaces treated.
- It is easy to use, and is highly durable and solid after being cured.
- It is resistant to water and chemical materials.
- With perfect adherence, it prepares surfaces for the application of polyurethane materials.

Application
- It must be applied with a roller.
- To cover pores perfectly on absorbant surfaces, the second coat must be applied at least 6 hours after the application of the first coat.
- For best results in polyurethane applications the pores found on the surface must be perfectly covered with Emülzer® PU-ASTAR.
- Very absorbant surfaces may require 2-3 coats.
- Emülzer® PU-ASTAR primed surfaces must be protected from water for 4-5 hours.

Consumption
Depending on the absorption characteristics of the applied surface, approximately 0,150-0,250 kg/m^2.

Packaging
4 kg Metallic pail - 80 Pieces / Pallet
15 kg Metallic pail - 33 Pieces / Pallet

Purready 5081

UV Resistant Polyurethane Liquid Coating

Description

It is a single-component, polyurethane-based waterproofing and coating material with high ultraviolet stability. It is ready-to-use in liquid form, and it is suitable to pedestrian traffic.

Usage Areas

It can be safely used for waterproofing and damp-proofing purposes on materials such as concrete, stone, fibre cement, and metal; in gutters, channels and ducts, terrace roofs; for protecting polyurethane foam applications; in water tanks, cold stores, damp environments, and swimming pools.

Advantages

- It has very high adherence. It offers perfect adherence even on aged coatings.
- It is highly resistant to diluted acids, bases, salt, chemicals, mildew and weather conditions. As a very durable material it maintains its original characteristics for years.
- As a single-component, easy-to-apply, elastic material it does not does creep in vertical surfaces. It can cover capillary cracks.
- Because it is produced from UV-resistant resins it is resistant to sunlight. It is stable against depolymerization.
- It can be applied individually, or as a protective coat onto double-component polyurethane materials.
- Because it is an ever elastic material, no cracks occur on the surfaces it is applied.
- Its solid component ratio is high.
- It is resistant to plant roots.
- After having cured, it is suitable to walk on.

Technical Specification

Color	: Gray/White/Special
Basis	: Modified Polyurethane
Thermal Resistance	: Between -35°C and +110°C
Viscosity	: 3000 mPa.s (at 25°C)
Solid Ratio	: 86%
Application Temperature	: Between 5°C and 35°C
Density	: 1.4 gr/cm^3
Pull Out Adherence	: 9.19 Kgf/cm^2
Slipping Adherence	: 75.06 Kgf/cm^2
Hardness	: 65 Shore A
Elongation at Break	: at 20°C % 600
Wear Resistance	: 354 mg *(TS EN ISO 5401-1)*
Carbondioxide Permeability	: 29,59 m *(TS EN 1062-6)*
Water Vapor Permeability	: 2,810 m *(TS EN ISO 7783:2011)*
Water Permeability	: 0,004 kg/$m^2.h^{0,5}$ *(TS EN 1062-3)*
Impact Resistance	: ≥10Nm (CLASS II) *(TS EN ISO 6272-1)*
Bond Strenght By Pull-Off	: 2,0 N/mm^3 *(TS EN 1542)*

Application

- The surface to be treated must be dry, clean and free from all types of grease.
- Maximum surface humidity must be max. 5%. Otherwise the product results in foaming and swelling on wet parts.
- It takes at least 28 days for fresh concrete surfaces to dry up as required before application
- Before the Purready application, PU-ASTAR must be applied to the surface as one layer.
- After having mixed thoroughly, it must be applied at least in two coats.
- It is recommended to wait for approximately 12 hours before applying the next coat. It is strictly recommended to wear gloves during application.
- It can be applied very easily by using a brush, roller or sprayer.
- Curing period is 5 to 7 days.

Consumption

Min. 2 kg/m^2. It must be applied at least in two coats.

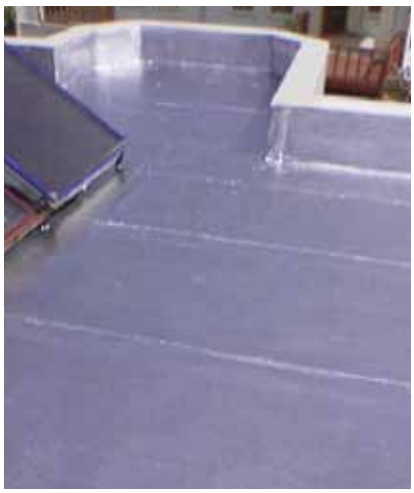
Packaging

5 kg Metallic pail - 80 Pieces / Pallet
25 kg Metallic pail - 33 Pieces / Pallet

CE

Purready-AL 5083

Polyurethane-Aluminum-Based UV-Resistant Reflective Paint



Description

It is a single-component, polyurethane-based reflective paint containing reflective aluminum and offering high ultraviolet stability. It is ready-to-use in liquid form, and it is suitable for pedestrian traffic.

Usage Areas

- To protect surfaces insulated by Purready from UV rays,
- To control heat increase on the surfaces of metal and concrete tanks and other building elements during daytime,
- As a reflective and decorative element applied on preventive waterproofing materials in domes, vaults, north walls and prefabricated gutters,
- As a topcoat preferably on Purready to protect metallic, iron or cast elements such as tanks, pipes, and channels against corrosion.

Advantages

- By reflecting UV rays it ensures the durability of the insulation for many years.
- Due to its reflective properties, it provides a cooler and more comfortable atmosphere in the interior of the building.
- It is highly resistant to lubrication, diluted acids, bases, salt, chemicals, mildew, air pollution and atmospheric conditions. As a very durable material it maintains its original characteristics and elasticity for many years.
- As a single-component material it is easy to use.
- Because it is produced from UV-resistant resins it is resistant to sunlight.
- It is stable against depolymerization.
- It can be applied onto single or double-component polyurethane materials as a protective coat.
- After having cured (for approximately 72 hours), it is suitable to walk on.
- It helps you to detect cracks and renovate waterproofing earlier and thus saves you from unexpected paint expenses.
- It is highly resistant to wearing due to its excellent adhesion characteristics.
- It dries very fast.

Surface Preparation

The surface to be treated must be well insulated, in good condition and sloping downstream to avoid puddling. There shouldn't be any damp areas on the surface to be treated. Otherwise the product leads to foaming and blistering.

Application

- The mixture should not be diluted and should be applied cold.
- The surface to be treated must be clean, dry and free from dust and grease.
- It must be applied with a roller, brush or pulverizer, and in a single coat.
- During application it is strictly recommended to wear gloves.
- It takes 3 days to complete its cure.

Consumption

Approximately 0,150-0,250 kg/m^2

Packaging

Net: 15 kg Metallic pail - 33 Pieces / Pallet

Purready B 5082

Bitumen-Polyurethane-Based Single-Component Waterproofing Material

Description
As a single-component, polyurethane-based, bitumen-added waterproofing and coating material it is ready-to-use in liquid form, and it is suitable for pedestrian traffic.

Usage Areas
It can be safely used against humidity on materials such as concrete, stone, eternit, metal; in gutters, channels and ducts, and terrace roofs.

Advantages
- Upon setting, it forms an impermeable, seamless, and protective layer.
- With high adherence, ensures perfect results even with the previous coatings.
- It is highly resistant to aging, diluted acids, bases, salt, chemicals, mildew and atmospheric conditions. As a very durable material it maintains its original characteristics for many years.
- It is an elastic, single-component, easy-to-use material and it does not creep on vertical surfaces. It covers capillary cracks.
- It is stable against depolymerization. It can be applied onto single or double-component polyurethane materials as a protective coat.
- It is an ever elastic material so the surfaces treated with it do not crack.
- Has a high solid ratio.
- It is resistant to plant roots.
- After having cured (for approximately 72 hours), it is suitable to walk on.

Surface Preparation
- The surface to be treated must be dry, clean and free from all types of grease.
- Maximum surface humidity must be max. 5%. Otherwise the product results in foaming and swelling on wet parts.
- Fresh concrete surfaces should be left to setting for at least 28 days.

Application
- Before the Purready application, PU-ASTAR must be applied to the surface as one layer
- After having been stirred thoroughly, the material must be applied with a brush, roller or sprayer.
- It should not be applied in a single coat, but in a couple of fine coats to avoid bubbling.
- The consumption must be 2,00 kg/m^2 minimum.
- It requires mesh application between the coats.
- It is recommended to wait for approximately 12 hours before the application of each coat.
- During application it is strictly recommended to wear gloves.
- It takes 5-7 days to complete its cure.

Cleaning the Equipment
The equipment used should be cleaned with industrial solvents as soon as the application is over.

Consumption
Minimum 2,00 kg/m^2 minimum.

Packaging
Net: 25 kg Metallic pail - 33 Pieces / Pallet

CE

Pur-Wet 5085

Hybrid Polyurethane Liquid Coating



Description

Hybrid Polyurethane based, single component, ready-to-use, self-spreading water insulation and coating material that does not contain solvents and can be applied on wet surfaces.

Usage Areas

It is applied safely against water and humidity on materials such as concrete, stone, roofing material and metal, in eaves trough, channels and canalettes, terrace roofs, cold storage depots.

Technical Properties

Color	: Grey
Base	: Hybrid polyurethane
Shell Formation	: 45 minutes (+23°C/50% relative humidity)
Curing Time	: 3 hours (for 1 mm thickness)
Resistance to Heat	: -40°C - +80°C
Viscosity	: 7000 mPas (20°C Brookfield Spindle 6)
Shore A Rigidity	: 40 Shore A
Crack Bridging	: 3 mm
Resistance to Vapor	: 6 Bar (film thickness: 3 mm /24 h)
Solid substance ratio	: 100%
Application Temperature	: +5°C - +40°C
Density	: 1.4 g/cm^3
Tensile strength	: 1.1 (N/mm^2)
Tearing Strength	: 6.2 N/mm
Elongation at Break	: 200%

Advantages

- Can be applied on wet and humid surfaces
- It has excellent adhesive strength on many different surfaces such as concrete, wood, ceramic, aluminum, glass, steel and zinc.
- It can be processed and dries fast
- Upon application it forms a seamless, water proof and protective layer
- It can be applied between temperatures of +5°C to +40°C
- It has high adherence power. Does not require the primer coat. Adheres perfectly even on old finishes.
- It is highly resistant against oil, rust and weather conditions. It preserves its initial properties for years to come.
- It is a single component, easy to use elastic material.
- It can form crack bridging.
- It is resistant to sun light due to the fact that it is manufactured of UV resistant resins.
- Due to its sustained elasticity, cracks do not form on the surfaces of application.
- Can be stepped on after being cured (approximately 24 hours).
- It is suitable to contact with potable water.
  (Middle East Technical University
  Report No. : 2014.03.04.147/01
  Report Date : 24.03.2014)

Surface Preparation

The application surface must be durable and clean and free of oil. The wetness or humidity of the application surface would not be a problem.

Application

- PUR-WET is a ready to use material and it would be sufficient to stir it for a short time prior to application.
- It must be applied in two layers and in total of 2 mm thickness by a roller, brush or airless spray gun.
- Low temperatures or adverse weather conditions may slow down the curing process.

Consumption

2,8 kg/m^2 in two coats.

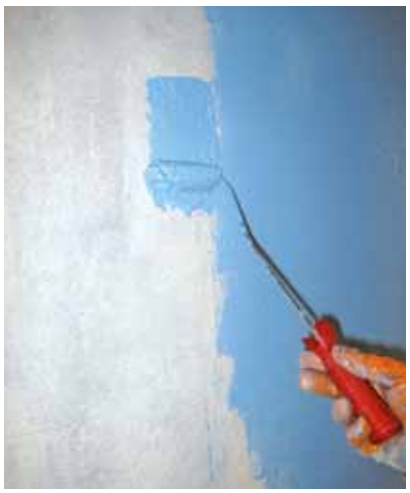
Packaging

Net 20 kg Metallic pail - 33 Pieces / Pallet

CE

Pu-Coat II 5060

Double-Component Polyurethane Coating



Description

As a double-component, polyurethane-based, solvent-free waterproofing material in liquid form, it is especially ideal for potable water tanks.

Usage Areas

- It is especially developed for waterproofing metallic or concrete water tanks. It can be used on concrete, marble, plaster, stone, wooden, and metallic surfaces as well.
- It is used for waterproofing concrete or ceramic coated terraces provided that a UV resistant top coat added.
- It is used for providing a waterproof coating resistant to light vehicle traffic and foot traffic.

Advantages

- Because it does not contain any solvent, it can be safely used in closed spaces.
- It is suitable to contact with potable water. (Environment Lab. Report: 01.09.2006, No: 04130-04131, İSKİ Water Quality Control Management: 21.02.2007, Report of Middle East Technical University for the conformity to BS 6920 and use in drinking water systems Report No: 2014.03.04.147/03)
- It is waterproof; protects from corrosion; is resistant to friction, strokes and certain chemicals.
- It has strong adherence to the surfaces it is applied.
- It is safe; it has no harmful effect on health.
- It is very durable.

CE

Surface Preparation

- The surface to be treated must be dry, clean, and free from dust, dirt, rust, and grease.
- There shouldn't be any damp areas on the surface to be treated. Otherwise the product leads to foaming and blistering. Em-Poxy WB must be used as a primer on concrete surfaces.

Application

- All the hardener contained in the little pail is mixed with all the main component contained in the big pail to a homogenous consistency. Product mixed for 2-3 minutes.
- The mixture must be consumed within 30-45 minutes; otherwise it will lose its workability due to jelling.
- It must be applied at least in two coats, and each coat must be applied 6 hours later than the preceding coat.
- If this interval exceeds 24 hours, thte first coat must be sandpapered prior to the application of the other coat.
- After the application the surface must be protected from rain and water exposure for at least 6-8 hours. It can be applied with a brush or roller.
- In flooring application dry sand must be added to Pucoat II.
- Application temperature must be between +5°C and +30°C.

Technical Properties

Density	: 1,55 (±0,05) g/cm^3 (Comp. A) 1,10 (±0,05) g/cm^3 (Comp. B) 1,45 (±0,05) g/cm^3 (Comp.A+B)
Pot Life	: 30-45 minutes (20°C)
Setting Time	: Touch: 6 hours Bone-dry: 24 hours
Thermal Resistance	: (-10°C) - (+85°C)
Abrassion Resistance	: 85 mg (TS EN 5470-1)
CO_2 Permeability	: 808,63 m (TS EN 1062-6)
Water Vapour Permeability	: 7.116 m (TS EN ISO 7783:2011)
Water Permeability	: 0,002 kg/m^3.h$^{0.5}$ (TS EN 1062-3)
Bond Strenght By Pull-Off	: 2,1 N-mm^2 (TS EN 1542)

Consumption

600 g/m^2 minimum for one coat, and it must be applied in two coats minimum.

Packaging

Avaible as a 5 kg + 1 kg - 60 Sets / Pallet
or 20 kg + 4 kg set - 20 Sets / Pallet

Pu-Coat II SKM 5150 / Pu-Coat II SKP 5100

Matte and Gloss Aliphatic Polyurethane Top Coat Paint


Description

Aliphatic, UV-resistant, double component, polyurethane based, matte and glossy top coat paints which can be applied onto epoxy coatings, concrete and metal indoor and outdoor surfaces.

Usage Areas

- As a top coat floor or wall paint; on concrete and metal surfaces,
- On surfaces with Pu and epoxy coating,
- In industrial steel buildings,
- In production and storage areas, garages, hangars and loading ramps,
- In parking areas,
- In outdoor sporting fields,
- In tennis courts,
- In data processing and control centers.

Advantages

- It is resistant to water, sea water, salt, numerous chemicals, outdoor weather conditions, weak acids and bases.
- It is resistant to scratch and abrasion.
- It has high ultraviolet stability. It does not lead to chalking and colour change.
- It is suitable to sterile conditions. It is hygienic and easy to clean.
- The surface treated becomes waterproof.

Surface Preparation

- Pressure strength of the concrete to be treated must be 25 N/mm^2 minimum and tensile strength 1,5 N/mm^2 minimum.
- The humidity ratio in the concrete must be lower than 5%.
- The surface to be treated must be clean and dry and free from any other substance such as dirt, grease, old coatings and curing materials.
- Gaps and holes must be completely cleared first and then filled to smooth the surface.
- Any swelling must be sandpapered and levelled.
- All dust and loose and displaced particles must be removed by using a brush and/or vacuum cleaner.
- During application relative humidity must not exceed 50% when the ambient temperature is +10°C, and 80% when the ambient temperature is +30°C.
- The temperature of the surface to be treated must be between +10°C and +30°C.
- The temperature of the surface to be treated must be 3°C higher than the dew point.
- Ambient temperature and surface temperature must be increased by using heaters for the applications performed in cold weather conditions and Pu-Coat II SKM/SKP containers must be kept under +20°C the previous night.
- Direct Pu-Coat II SKM/SKP applications on concrete does not require undercoating.
- If former Pu-Coat II SKM/SKP coating has been applied more than 12 hours ago, the surface must be sandpapered thoroughly before the application of Pu-Coat II SKM/SKP.

Application

First stir Component A and Component B separately, and then add Component B to Component A and stir the mixture continuously to a homogenous consistency with a low speed mixer for 3 minutes. To minimize air drag avoid stirring too much. The mixture should be applied to the prepared surface with a merino roller. The first coat can be thinned with 10% cellulosic thinner. The thickness of each coat must not exceed 100 microns. 2 coats will be sufficient. It is critical to apply the second coat on time. Otherwise decreased adherence may lead to cleavage. If the edges match 'wet' during application, a seamless effect can be created.

Consumption

Approximately 0,300 kg/m^2 in two coats.

Packaging

Pu-Coat II SKM (Matte)

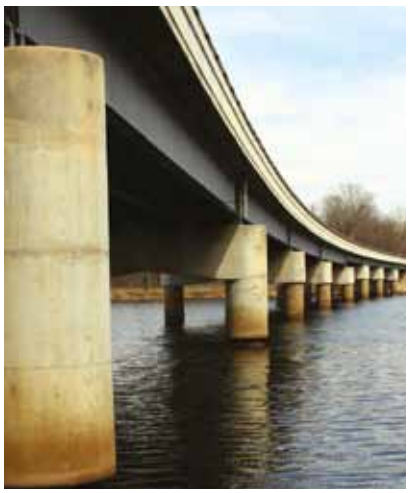
7 kg Component A + 0,5 kg Component B = Net 7,5 kg as a set

Pu-Coat II SKP (Gloss)

6,5 kg Component A + 1 kg Component B = Net 7,5 kg as a set

Cliolite 5093

Surface Hardening Impregnation Solution



Description
It is a styrene acrylic co-polymer based solution used for surface hardening and impregnation.

Usage Areas
- It is used on all kinds of concrete surfaces as well as highly absorbent surfaces such as bricks, eternit, plaster panels, polyester, gas concrete and roofing tiles, and on painted surfaces.
- It is used on alkali (calcareous) surfaces.
- It is used as an undercoat prior to painting.
- It is not approved to be used under water pressure, and in underground conditions with high hydrostatic pressure.

Advantages
- Adheres perfectly to porous and chalky surfaces.
- Can be cured free from atmospheric conditions. Allows application in the regions with high humidity or frequent rain fall.
- It is resistant to acids and alkalies.
- Has breathability.
- Self-clean.
- UV resistant.
- Allows application in a wide temperature range.
- Can be applied onto surfaces with little humidity as well.

Application
- It can be applied with a brush, roller or pistol.
- Cliolite must be mixed thoroughly prior to application.
- It must be applied in two coats.
- The interval between the application of two coats must be 3-6 hours.

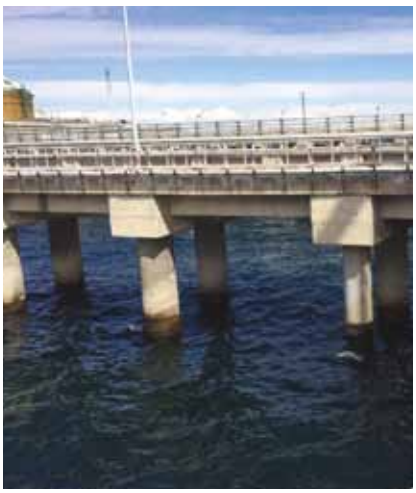
Consumption
100 g/m^2 for each coat

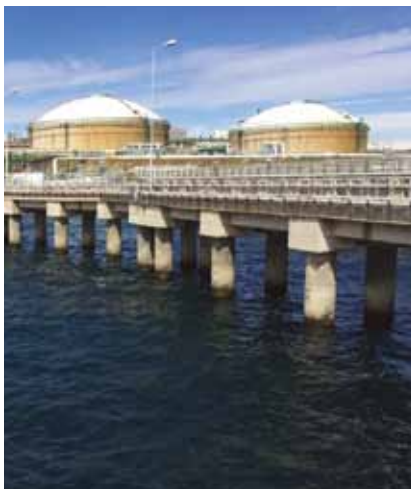
Packaging
200 kg Barrell

CE

Cliolite CIT 5095

Corrosion Inhibitor Treatment





Description
A surface-applied clear liquid that penetrates concrete and provides an organofunctional silane molecule to inhibit the electrochemical corrosion process between the rebar and the chloride ions, and oxygen and moisture within the concrete.

Usage Areas
- Steel-reinforced cast-in-place, precast, post tension, GFRC, prestressed or other steel-reinforced concrete.
- Parking decks, facades, balconies, walkways, piers, bridge decks, beams, columns and other steel-reinforced concrete structures.
- Marine environments with high relative humidity and areas where deicer salts are used.

Advantages
- Inhibits corrosion of carbon and galvanized steel rebar.
- Is effective in both marine and high-humidity environments.
- Is easy to apply.
- Is effective in heavily chloride-contaminated concrete.
- Is effective in carbonated concrete.
- Complies with VOC regulations.
- Is vapor permeable.
- Dries quickly.
- Prevents ingress of additional chlorides.

Surface Preparation
Concrete surface must be cleaned to remove all traces of dirt, dust, efflorescence, mold, grease, oil, asphalt, laitance, paint, coatings, curing compounds and other foreign materials that would inhibit penetration. Acceptable cleaning methods include shotblasting, sandblasting, waterblasting, grinding and chemical cleaning. In some instances, the use of a power broom or street sweeper can be utilized. Check with your Protectosil representative determine what method is appropriate to verify that surface preparation is adequate prior to treatment.

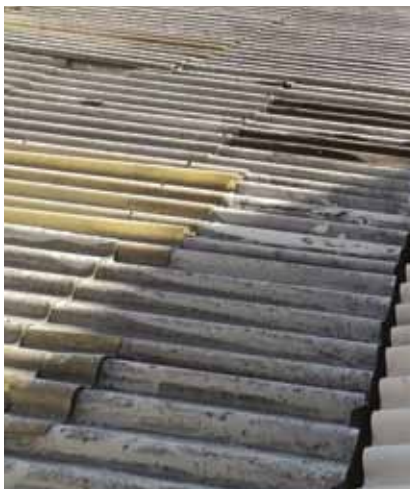
Application
Apply multiple coats of Cliolite CIT to entire concrete surface, including repaired areas. Allow a minimum of 15 minutes between coats (or until visibly dry). Most applications require two or three coats at 230 to 180 ml/m^2 for each coat. The exact amount of Cliolite CIT will depend on the present corrosion rate, the chloride ion level and the service environment of the structure. Cliolite CIT should be applied to concrete using low pressure pumping equipment with a wet fan type spray nozzle. Alternate methods include roller, brush or pouring (in crack for example). Do not alter or dilute the material. Do not apply to a wet or damp substrate. The proper application conditions are between 40°F and 100°F (5°C to 38°C). Lower or higher application temperatures require prior written approval from our technical service department. Do not apply if rain is expected within 4 hours following application, or if high winds or other conditions prevent proper application. The substrate should be as dry as possible prior to application. Depending on weather conditions, allow between 24 and 72 hours for the substrate to dry after rain or cleaning with water.

Consumption
Each layer 180-230 ml/m^2

Packaging
Net: 200 lt Barrel

BeyazCoat Solar 5015

Acrylic Based, Heat Reducing Liquid Plastic Coating



Description

Beyazcoat Solar is an economic surface heat reducing waterproofing product which reflects the radiant heat energy before reaching the surface with the help of its microsphere particles. It minimizes the surface temperature.

Usage Areas

- On the roof and walls of buildings and special structures,
- It is used on surfaces such as all kinds of concrete, plaster, stone, metal, brick, wood, decorative coatings.

Advantages

- It is single component, ready to use and easy to apply.
- Reduces the internal temperatures of the buildings, reduces energy consumption in cooling and reduces costs.
- Prevents mold and fungus formation.
- Has high adhesion strength.
- Creates a crack bridge, remains elastic.
- Resistant to UV rays.
- Water based, not toxic and non-flammable.
- There are many color options.

Usage Areas

The entire surface must be clean, free from cement foam, loose particles, dirt, oil and dust. The surface should be abraded by water jet or mechanical abrasion to provide better adhesion. If old coatings and coatings are adhered to the surface well, application can be made on it. Bubbles, holes and cracks on the surface should be cleaned and repaired with an elastic filling. The very fine cracks that can be found on the surface can be repaired with Beyazcoat Solar in several layers and by brushing and filling into the cracks. According to the condition of the surfaces, Beyazcoat Solar should be thinned with water at a ratio of 1:1 and a primer coat should be applied. Rusted parts on metal surfaces should be cleaned by sandblasting or other methods and then primed with an anticorrosive primer. Adhesion to other metal surfaces must also be ensured by proper surface preparation (priming, degreasing, abrasion).

Application

Apply the selected primer according to the surface to be applied and let it dry. Apply Beyazcoat Solar with brush, roller or by spraying with airless gun in two or more layers to obtain the total coating thickness recommended. Wait 4-8 hours between coats, then apply and let the surface dry overnight after finishing the last coat.

Consumption

1-1,3 kg/m^2 for two layers.

Packaging

Net: 20 kg Plastic Drum
33 Pieces / Pallet

Beyazcoat 5010 / Fiber Added Beyazcoat 5012

Liquid Plastic Coating

Description

As an asphalt and solvent-free superior waterproofing material, Beyazcoat is applied in liquid form, and upon setting, it becomes a very elastic, impermeable, seamless, and durable coating. Fiber Added Beyazcoat is reinforced with strengthening fibres.

Usage Areas

- Beyazcoat can be used for waterproofing and damp-proofing a wide range of building materials such as concrete, plaster, brick, glazed tile, cement brick, gas concrete, wood, galvanize, iron sheet and zinc.
- It can be safely used on all vertical and horizontal surfaces made of these materials; on roofs and terraces; for repairing window frames, drip moldings, water ducts, eaves, raindrips, strainers and chimney bottoms.
- It can be used in wet areas like bathrooms and kitchens.

Advantages

- Beyazcoat is fully impermeable.
- Beyazcoat is a highly durable, inflammable, tar, asphalt and solvent-free waterproof sealant. It can be painted.
- It is very easy to apply, and as a semi-fluid material it works very good even on the hardest-to-cover surfaces.
- It is elastic. Its elongation is up to 300% at 1 to 1,5 mm thickness.
- It has perfect adherence to all types of building materials.
- Its elasticity is resistant to temperature changes.
- It is resistant to light chemicals.
- Its microporosity provides breathability for the surfaces.
- Thanks to biocids, it inhibits bacteria and mildew growth.
- As a decorative material, it is produced in white, but it can be easily tinted by using tube colorants which are easily available in the market.

Application

- Depending on the condition of the surface, Beyazcoat, 1:1 diluted with water, is applied as an undercoat, and over this undercoat Fiber Added Beyazcoat is applied at least in two coats without thinning.
- Each coat must be applied after 24 hours maximum, and each application must be vertical to former application.
- Beyazcoat requires a protective topcoat when it is applied to water storage tanks, or any surfaces exposed to foot traffic or other mechanical strokes.

Application of Terraces

- The surface to be treated must be dry, clean, and free from dust, dirt, rust, and grease.
- There must be slope to prevent water pods.
- Filleting and repairing on the surface must be done with cement mortar without lime.
- 1:1 diluted with water, is applied as an undercoat.
- After 24 hours, Beyazcoat must be applied with roller or brush in two coats.
- Vertical and horizontal connection points must be reinforced with corner tape, when the first layer is still wet.

Consumption

0,750 kg/m^2 in vertical application and 1,500 kg/m^2 in horizontal application.

Packaging

4,5 kg Pail - 80 Pieces / Pallet
19 kg Pail - 33 Pieces / Pallet

CE

Em-Poxy WB 7500

Water-Based Epoxy Undercoat

Description

It is a double-component, epoxy and water based, easy-to-clean undercoating material with humidity tolerance and resistant to some chemicals.

Usage Areas

It is used as an undercoat on concrete, metal, wood, asphalt, etc. before the application of polyurethane and epoxy-based top coats.

Advantages

- It is water based.
- Fills the holes found on the concrete and other surfaces treated.
- It is easy-to-use and it becomes a hard and durable undercoat after having been cured.
- It is resistant to water and chemicals.
- With perfect adherence, it prepares the surface perfectly for the application of polyurethane and epoxy materials.

Surface Preparation

- Pressure strength of the concrete to be treated must be 25 N/mm^2 minimum and tensile strength 1,5 N/mm^2 minimum.
- The surface to be treated must be clean and dry and free from any other substance such as dirt, grease, old coatings and curing materials.
- Gaps and holes must be completely cleared first and then filled with Em-Poxy WB which is prepared in paste form by adding sand.
- To ensure a smooth surface any swelling must be levelled.
- All dust and loose and displaced particles must be removed by using a brush and/or vacuum cleaner.
- The temperature of the surface to be treated must be between +10°C and +30°C.
- The temperature of the surface to be treated must be 3°C higher than the dew point.
- Ambient temperature and surface temperature must be increased by using heaters for the applications performed in cold weather conditions and Em-Poxy WB containers must be kept under +20°C the previous night.

Application

First, Component A is mixed to a homogenous consistency in its orijinal packaging using a low speed mixer for approximately 1 minute and then Component B is added into it to continue mixing for approximately 3 minutes again with the low speed mixer. The application should be performed with a roller or brush. The mixture can be applied within approximately 40 minutes depending on the air temperature. The surface treated must be protected from water for 4-5 hours. For perfect adhesion the concrete surface should be a little humid and it will be sufficient to wipe the surface with a damp cloth. As the undercoat completes its cure, the application of the top coat must be performed within minimum 12 and maximum 18 hours.

Consumption

0,150 kg/m^2 for a single coat. Depending on the absorbance of the surface to be treated the application of a second coat may be required.

Packaging

5 kg (Component A) + 5 kg (Component B) = Net 10 kg as a set

CE

Concrete Primer 5005

Acrylic Copolymer Based, Single Component, Primer For Exposed Concrete Surfaces



Description
Acrylic copolymer based, single component primer for exposed concrete surfaces with an effective bonding and holding feature.

Usage Areas
- Indoors and outdoors.
- Prior to cement or plaster based mortar applications on exposed concrete surfaces.
- Protection of water absorbent surfaces such as cement & plaster, plywood, aerated concrete, briquette chipboard briquette from humidity.
- As a primer in heat insulation applications if necessary.
- As a primer to increase the adhesion before ceiling plaster application.
- Used to increase adherence before applications on the previous coats.

Advantages
- Increasing the adherence of the concrete surface.
- Preventing rapid water absorption.

Surface Preparation
The surface to be treated must be without dust, rust, dirt, grease and should be a solid.

Application
- The primer should be mixed with 7-10 kg of water before using it and it is applied to the surface with a brush or roller.
- CONCRETE PRIMER should be kept in homogeneous condition by mixing it at certain intervals and it should not be sediment.

Cleaning of Tools
The tools can be cleaned with soapy water immediately after using, and with industrial solvents after drying.

Consumption
150-250 g/m^2 for single layer.

Packaging
Net: 15 kg Plastic Drum
27 Pieces / Pallet

Epoxy Floor Coatings

Em-Poxy A (Epoxy Primer)

Em-Poxy PK (For Textured Applications)

Em-Poxy KY (Self Levelling Type)

Em-Poxy WB (Water-Based Epoxy Undercoat)

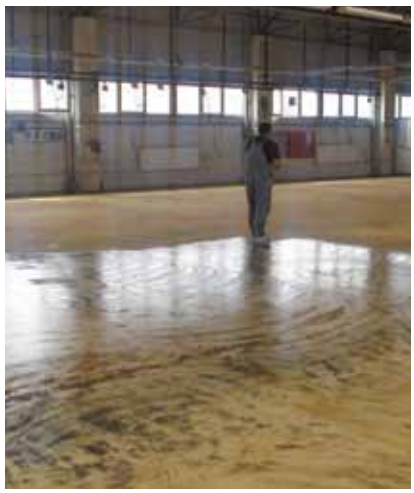
Pu-Coat II SKM (Matte Aliphatic Polyurethane Top Coat Paint)

Pu-Coat II SKP (Gloss Aliphatic Polyurethane Top Coat Paint)

MEMBER OF INSULATION ASSOCIATION
İZODER
SUDER
WATERPROOFERS ASSOCIATION
TÜRKAK
MADE IN TURKEY

Em-Poxy A 7010

Epoxy Primer



Description
It is a double-component, epoxy-based, non-solvent, transparent undercoating material with low viscosity.

Usage Areas
It is used as an undercoat on concrete, metal, wood, asphalt, etc. before the application of polyurethane coatings and epoxy-based top coating systems.

Advantages
- Non-solvent.
- Fills the holes found on the concrete and other surfaces treated.
- It is easy-to-use and it becomes a hard and durable undercoat after having been cured.
- It is resistant to water and chemicals.
- With perfect adherence, it prepares the surface perfectly for the application of polyurethane and epoxy materials.

Surface Preparation
- Pressure strength of the concrete to be treated must be 25 N/mm^2 minimum and tensile strength 1,5 N/mm^2 minimum.
- The humidity ratio in the concrete must be lower than 5%.
- The surface to be treated must be clean and dry and free from any other substance such as dirt, grease, old coatings and curing materials.
- Gaps and holes must be completely cleared first and then filled with Em-Poxy A which is prepared in paste form by adding sand.
- To ensure a smooth surface any swelling must be levelled.
- All dust and loose and displaced particles must be removed by using a brush and/or vacuum cleaner.
- During application relative humidity must not exceed 50% when the ambient temperature is +10°C, and 80% when the ambient temperature is +30°C.
- The temperature of the surface to be treated must be between +10°C and +30°C.
- The temperature of the surface to be treated must be 3°C higher than the dew point.
- Ambient temperature and surface temperature must be increased by using heaters for the applications performed in cold weather conditions and Em-Poxy A containers must be kept under +20°C the previous night.

Application
First stir Component A and Component B separately, and then add Component B to Component A and stir the mixture continuously to a homogenous consistency with a low speed mixer for 3 minutes. To minimize air drag avoid stirring too much. The mixture should be applied to the prepared surface with a roller or trowel. It may require a second coat if it is applied onto an absorbant surface. It is critical to apply the second coat on time. Otherwise decreased adherence may lead to cleavage.

Cleaning the Equipment
The equipment used should be cleaned with industrial solvents as soon as the application is over.

Consumption
Approximately 0,150-0,300 kg/m^2 depending on the absorbance of the surface to be treated.

Packaging
10 kg (Component A) + 5 kg (Component B) =
Net 15 kg as a set

CE

Em-Poxy PK 7200

For Textured Applications



Description

It is a double-component, epoxy resin-based, textured (orange peel effect) floor coating containing a very small amount of solvent.

Usage Areas

- As a top coat; on concrete surfaces,
- In base coated systems rugged with sand,
- In areas requiring a nonskid and easy-to-clean surface,
- In production and storage areas, garages, hangars and loading ramps,
- In parking areas,
- At hospitals,
- In kitchens,
- In data processing and control centers.

Advantages

- Contains a very small amount of solvent.
- Has a high chemical and mechanical strength.
- Has a high adhesion strength.
- Has a high abrasive strength.
- It is liquid-proof.
- It is economical.
- Can provide nonskid surfaces.
- It is suitable to sterile conditions. It is hygienic and easy to clean.

Surface Preparation

- Pressure strength of the concrete to be treated must be 25 N/mm^2 minimum and tensile strength 1,5 N/mm^2 minimum.
- The humidity ratio in the concrete must be lower than 5%.
- Potential movements must be considered in designing joints and whereever necessary joints must be transferred to coating.
- The surface to be treated must be clean and dry and free from any other substance such as dirt, grease, old coatings and curing materials.
- Gaps and holes must be completely cleared first and then filled with Em-Poxy A or Em-Poxy WB which is prepared in paste form by adding sand.
- To ensure a smooth surface any swelling must be levelled.
- All dust and loose and displaced particles must be removed by using a brush and/or vacuum cleaner.
- Concrete surfaces must be undercoated with Em-Poxy A. (Make sure the surface is primed with a seamless and poreless undercoat. Apply the undercoat with a brush or roller.)
- During application relative humidity must not exceed 50% when the ambient temperature is +10°C, and 80% when the ambient temperature is +30°C.
- The temperature of the surface to be treated must be between +10°C and +30°C.
- The temperature of the surface to be treated must be 3°C higher than the dew point.
- Ambient temperature and surface temperature must be increased by using heaters for the applications performed in cold weather conditions and Em-Poxy PK containers must be kept under +20°C the previous night.

Application

First stir Component A and Component B separately, and then add Component B to Component A and stir the mixture continuously to a homogenous consistency with a low speed mixer for 3 minutes. To minimize air drag avoid stirring too much.
The mixture should be applied to the prepared surface with a coral roller in two coats and the thickness of each coat must be 200 microns. It is critical to apply the second coat on time. Otherwise decreased adherence may lead to cleavage. If the edges match 'wet' during application, a seamless effect can be created.

Consumption

Approximately 0,600 kg/m^2 in two coats depending on the absorbance of the surface to be treated.

Packaging

Component A + Component B = Net 12,5 kg as a set

Em-Poxy KY 7400

Self-Levelling Type

Description
Emülzer® Em-Poxy KY is a double-component, epoxy-based, non-solvent paint and coating ensuring a smooth and bright surface.

Usage Areas
- Pharmaceutics,
- Food,
- Automotive industry,
- Beverage industry,
- Kitchens,
- Hospitals,
- All types of production, packaging and storage areas,
- Data processing and control centers,
- Hangars,
- Parking areas.

Advantages
- Non-solvent.
- Has a high chemical and mechanical strength.
- Has a high adhesion strength.
- Has a high abrasive strength.
- Easy-to-clean with its poreless and smooth surface.
- It is suitable to sterile conditions and it is hygienic.

Physical Properties

Colour	: RAL colours
Batch density	: 1,6 g/cm^3
Adhesion strength	: > 3 N/mm^2
Pot life	: 50 minutes at 20°C
Waiting period for another coat	: 12-18 hours at 20°C
Complete curing period	: 7 days

Surface Preparation
- Pressure strength of the concrete to be treated must be 25 N/mm^2 minimum and tensile strength 1,5 N/mm^2 minimum.
- Potential movements must be considered in designing joints and whereever necessary joints must be transferred to coating.
- The surface to be treated must be clean and dry and free from any other substance such as dirt, grease, old coatings and curing materials.
- Gaps and holes must be completely cleared first and then filled with Em-Poxy A or Em-Poxy WB which is prepared in paste form by adding sand.
- To ensure a smooth surface any swelling must be levelled.
- All dust and loose and displaced particles must be removed by using a brush and/or vacuum cleaner.
- During application relative humidity must not exceed 50% when the ambient temperature is +10°C, and 80% when the ambient temperature is +30°C.
- The temperature of the surface to be treated must be between +10°C and +30°C.
- The temperature of the surface to be treated must be 3°C higher than the dew point.
- Ambient temperature and surface temperature must be increased by using heaters for the applications performed in cold weather conditions and Em-Poxy WB containers must be kept under +20°C the previous night.

Application
First stir Component A and Component B separately, and then add Component B (hardener) to Component A and stir the mixture continuously to a homogenous consistency with a 300-400 rpm mixer for 3 minutes minimum. The mixture should be applied to the prepared surface with a merino roller in two coats and the thickness of each coat must be 250 microns. For a thick coating, up to 1:1 sand (0,1-0,3 mm) may be added into the mixture. In this case, Component A and Component B must be mixed first and then sand must be added slowly. It is applied with a trowel. It is critical to apply the other coats on time. Otherwise decreased adherence may lead to cleavage of the top coat.

Curing
Emülzer® Em-Poxy KY may be ready to walk on (under control) after having completed its initial setting period. It takes 7 days at 25°C to become fully resistant to heavy load and chemical effects.

Consumption
800 g/m^2 in two coats, the thickness of each coat being 250 microns. A greater amount of material is required for sand applications and rough surfaces.

Packaging
Component A + Component B = Net 12,5 kg as a set

Em-Poxy WB 7500

Water-Based Epoxy Undercoat

Description

It is a double-component, epoxy and water based, easy-to-clean undercoating material with humidity tolerance and resistant to some chemicals.

Usage Areas

It is used as an undercoat on concrete, metal, wood, asphalt, etc. before the application of polyurethane and epoxy-based top coats.

Advantages

- It is water based.
- Fills the holes found on the concrete and other surfaces treated.
- It is easy-to-use and it becomes a hard and durable undercoat after having been cured.
- It is resistant to water and chemicals.
- With perfect adherence, it prepares the surface perfectly for the application of polyurethane and epoxy materials.

Surface Preparation

- Pressure strength of the concrete to be treated must be 25 N/mm^2 minimum and tensile strength 1,5 N/mm^2 minimum.
- The surface to be treated must be clean and dry and free from any other substance such as dirt, grease, old coatings and curing materials.
- Gaps and holes must be completely cleared first and then filled with Em-Poxy WB which is prepared in paste form by adding sand.
- To ensure a smooth surface any swelling must be levelled.
- All dust and loose and displaced particles must be removed by using a brush and/or vacuum cleaner.
- The temperature of the surface to be treated must be between +10°C and +30°C.
- The temperature of the surface to be treated must be 3°C higher than the dew point.
- Ambient temperature and surface temperature must be increased by using heaters for the applications performed in cold weather conditions and Em-Poxy WB containers must be kept under +20°C the previous night.

Application

First, Component A is mixed to a homogenous consistency in its orijinal packaging using a low speed mixer for approximately 1 minute and then Component B is added into it to continue mixing for approximately 3 minutes again with the low speed mixer. The application should be performed with a roller or brush. The mixture can be applied within approximately 40 minutes depending on the air temperature. The surface treated must be protected fron water for 4-5 hours. For perfect adhesion the concrete surface should be a little humid and it will be sufficient to wipe the surface with a damp cloth. As the undercoat completes its cure, the application of the top coat must be performed within minimum 12 and maximum 18 hours.

Consumption

0,150 kg/m^2 for a single coat. Depending on the absorbance of the surface to be treated the application of a second coat may be required.

Packaging

5 kg (Component A) + 5 kg (Component B) = Net 10 kg as a set

CE

Pu-Coat II SKM 5150 / Pu-Coat II SKP 5100

Matte and Gloss Aliphatic Polyurethane Top Coat Paint

Description
Aliphatic, UV-resistant, double component, polyurethane based, matte and glossy top coat paints which can be applied onto epoxy coatings, concrete and metal indoor and outdoor surfaces.

Usage Areas
- As a top coat floor or wall paint; on concrete and metal surfaces,
- On surfaces with Pu and epoxy coating,
- In industrial steel buildings,
- In production and storage areas, garages, hangars and loading ramps,
- In parking areas,
- In outdoor sporting fields,
- In tennis courts,
- In data processing and control centers.

Advantages
- It is resistant to water, sea water, salt, numerous chemicals, outdoor weather conditions, weak acids and bases.
- It is resistant to scratch and abrasion.
- It has high ultraviolet stability. It does not lead to chalking and colour change.
- It is suitable to sterile conditions. It is hygienic and easy to clean.
- The surface treated becomes waterproof.

Surface Preparation
- Pressure strength of the concrete to be treated must be 25 N/mm^2 minimum and tensile strength 1,5 N/mm^2 minimum.
- The humidity ratio in the concrete must be lower than 5%.
- The surface to be treated must be clean and dry and free from any other substance such as dirt, grease, old coatings and curing materials.
- Gaps and holes must be completely cleared first and then filled to smooth the surface.
- Any swelling must be sandpapered and levelled.
- All dust and loose and displaced particles must be removed by using a brush and/or vacuum cleaner.
- During application relative humidity must not exceed 50% when the ambient temperature is +10°C, and 80% when the ambient temperature is +30°C.
- The temperature of the surface to be treated must be between +10°C and +30°C.
- The temperature of the surface to be treated must be 3°C higher than the dew point.
- Ambient temperature and surface temperature must be increased by using heaters for the applications performed in cold weather conditions and Pu-Coat II SKM/SKP containers must be kept under +20°C the previous night.
- Direct Pu-Coat II SKM/SKP applications on concrete does not require undercoating.
- If former Pu-Coat II SKM/SKP coating has been applied more than 12 hours ago, the surface must be sandpapered thoroughly before the application of Pu-Coat II SKM/SKP.

Application
First stir Component A and Component B separately, and then add Component B to Component A and stir the mixture continuously to a homogenous consistency with a low speed mixer for 3 minutes. To minimize air drag avoid stirring too much. The mixture should be applied to the prepared surface with a merino roller. The first coat can be thinned with 10% cellulosic thinner. The thickness of each coat must not exceed 100 microns. 2 coats will be sufficient. It is critical to apply the second coat on time. Otherwise decreased adherence may lead to cleavage. If the edges match 'wet' during application, a seamless effect can be created.

Consumption
Approximately 0,300 kg/m^2 in two coats.

Packaging
Pu-Coat II SKM (Matte)
7 kg Component A + 0,5 kg Component B = Net 7,5 kg as a set
Pu-Coat II SKP (Gloss)
6,5 kg Component A + 1 kg Component B = Net 7,5 kg as a set

Complementary Products

Insulation Strainers

Styro-Bitüm (Thermal Insulation Plate Adhesive)

Em-Poxy 310 Repair and Adhesion Mortar
(A Two Component Epoxy Based Fixing Paste)

Dilatation Tapes

Corner Tape

Joint Insulation Tape 120/70 (Elastic Waterproofing Tape)

Inner Corner Waterproofing Tape (Elastic Waterproofing Tape)

Outer Corner Waterproofing Tape
(Elastic Outer Corner Waterproofing Tape)

Geotextile Felt (Non-Woven Polyester and Polypropylene Felt)

Puntodrain (Protective Plate for Drainage and Insulation)

Puntodrain PK (Protective Plate for Drainage and Insulation with Geotextile)

Puntodrain RG (Protective Plate for Drainage and Insulation for Green Roofs)

Puntodrain Fixing Pin

PP Fiber (6-12-18 mm)

Nassio (Breathable Waterproofing Membrane)

Butyl Tape

Insulation Brush

Fiber Mesh

Bituminous Foam

Trowel

Concrete Primer (Acrylic Copolymer Based, Single Component, Primer For Exposed Concrete Surfaces)

CE MEMBER OF INSULATION ASSOCIATION İZODER SUDER WATERPROOFERS ASSOCIATION TÜRKAK MADE IN TURKEY

Insulation Strainers



Description
Leaf holders to prevent clogging of water outlets; parapet outlets to prevent water leakage; and ventilation shafts for terraces and asphalt shingle coated hipped roofs.

Advantages
In insulation applications, to solve smaller problems with prefabricated elements will prevent significant future expenses with just a little extra cost.

Types of Strainers
Vertical floor strainers
Floor strainers with side outlet
Parapet outlets and adaptors
Leaf holders
Ventilation shafts
Shingle ventilation - Black/Red/Green

Styro-Bitüm 4030

Thermal Insulation Plate Adhesive (EPS-XPS)



Description
It is a bitumen-based adhesive used for adhering EPS or XPS thermal insulation plates in undersoil insulation applications.

Usage Areas
It is used for adhering thermal insulation plates after bitumen or cement-based undersoil insulation applications.

Advantages
- It can be easily applied by anyone.
- Because it does not contain any flammable and toxic materials, it can be safely used in closed spaces.
- It is elastic.
- It is ready to use; it does not require heating or thinning.
- It is a cold applied material.
- It is thixotropic, so it does not creep.
- It adheres perfectly even to damp surfaces thanks to its water-based characteristic.
- Dries very fast.

Application
- Sytrobitum is applied in points onto the sides and middle parts of thermal insulation plates and then adhered to the surface by pressing firmly.
- If it will be applied onto bituminous membrane, the PE film on the surface of the membrane must be burnt.

Consumption
0,150 - 0,200 kg/m^2

Packaging
13 kg Pail - 33 Pails / Pallet

Em-Poxy 310 Repair and Adhesion Mortar 2072

A Two Component Epoxy Based Fixing Paste

Description
It is a double-component, epoxy resin-based, non-solvent, thixotropic repair and mounting mortar.

Usage Areas
- It is used; for mounting expansion tapes,
- For filling tie rod holes,
- For repairing columns, curtains and girders,
- As a mounting, filling and bevelling mortar for waterproofing joints,
- For repairing and waterproofing concrete cracks,
- For repairing all types of structural concrete,
- For mounting and adhering all types of metal elements onto concrete or steel elements.

Technical Properties

Colour	: Grey
Density	: 1,6 kg/dm^3
Pressure strength	: 75 MPa
Adhesion to concrete	: >4 MPa (Breaking from concrete)
Pot life	: 30 minutes (+30°C)
Initial setting	: 8 hours (+30°C)
Loading	: 24 hours (+30°C)
Actual strength	: 7 days

Advantages
- Highly resistant to corrosion, abrasion and chemicals.
- Resistant to vibration.
- Does not shrink.
- Waterproof and gas-proof.
- Due to fast curing, allows loading in a very short period of time.
- Has high adherence.
- Non-solvent.
- Easy-to-mix and easy-to-apply.
- Has perfect adhesion to concrete, steel and many other building materials.
- Thixotropic; does not creep in horizontal and overhead applications.

Surface Preparation
The concrete should be firm and strong. Holes must be cleared with pressured air, leaving behind no grease, dust, plastic particles or water. Cement based surfaces must be cleared from all dirt and dust prior to application. Metal surfaces must also be cleared from rust and dirt. The material must be mixed to a homogenous consistency with a low speed mixer for at least 2-3 minutes; it should not at all be mixed manually or with a trowel. It must be applied with a trowel or spatula. During application surface, ambient and material temperatures must be between +5°C and +30°C.

Application
- The dosage of the components are designed according to application requirements.
- The hardener is poured into the epoxy and mixed to a homogenous consistency and gray colour; to prevent air bubbles a low speed mixer must be used.
- Pot life must be considered in the preparation of the material and only required amount of it must be mixed. Because it is non-solvent, it cannot be thinned with a thinner.
- During application the air temperature must be +5°C minimum.

Cleaning the Equipment
The equipment used should be cleaned with a detergent and warm water if possible, otherwise with a cellulosic thinner.

Consumption
1,6 kg/dm^3
Approximately 2 kg for 1 meter of expansion tape.

Packaging
Epoxy resin + Hardener = Net 5 kg as a set
60 Sets / Pallet

Dilatation Tapes 4050



Description
It is an elastomer reinforced dilatation tape that is used in the insulation of building dilatations, seams of different construction materials, and large cracks. It is resistant to UV light and external weather conditions, tearing and piercing. The product's elasticity is durable, and it is suitable for use on potable water tanks due to its constant water resistance. Moreover it is resistant to the penetration of plant roots and easy to repair in case of damage.

Usage Areas
- Vertical and horizontal expansion joints
- Joints of construction materials with different elasticity coefficients.
- Insulation of large cracks

Technical Specifications

Specification		Result	Test Standard
Chemical composition	:	TPE	
Colour	:	Grey with red strip	
Thickness	:	1 mm	
Elongation at Break	:	>400%	EN 12311-2
Tensile strength	:	>20 N/mm	EN 12311-2
Dimension stability	:	< 1%	EN 1107-2
Bending at cold	:	at -30°C / No fracture or cracking	EN 495-5
Class of Reaction to Fire:		Class E	EN 13501-1

Resistance to Water Pressure	: >8 Bar EN 1928
Tear Strength	: >160 N/mm EN 12310-2
UV Resistance	: >5000 Hours EN 1297
Hardness	: 70 Shore A
Resistance to Epoxy Delamination	: >20 N/mm^2 DIN 16860

Advantages
It is soft and easily applied.

Surface Preparation
- The application surface must be cleaned of substances that would prevent adherence such as dust, oil, paint, curing material, detergent, mold oil, cement foam and silicon.
- After sweeping the surface with a hard broom or wire brush, the dust must be cleaned from the surface by using a soft broom or a vacuum cleaner.

Application
- The width of the band must be larger than the width of the dilatation. After the dilatation tape is secured on both surfaces, an excess that would allow giving an omega shape is left.
- Emülzer® Em-Poxy 310 Repair and Adhesion Mortar is applied on both sides of the dilatation. The holes on the dilatation tape are compressed on the surface in a manner to lie on top of the assembly mastic and it is ensured that some mastic is released from these holes.
- There must be no air bubbles left in between. Finally, mastic is applied on top of the tape as well as the sides to cover all of its holes.
- It is joined lengthwise with an overlay of 20 cm by using a heat source or a special adhesive. Open flame or epoxy assembly mixture is not used for this process.
- The tape must not be moved until the epoxy adhesive has hardened.

Packaging
25 meter Roll
Width: 25 cm x 25 m / Roll

Corner Tape 4400



Description
Emülzer® Corner Tape is a composite insulation tape that is used to insulate chamfers, cracks and building joints. Between two layers of geo-textile coating that is used as an adherence enhancer there is waterproof layer of PVC.

Usage Areas
- In the insulation of floor and wall corners.
- In the insulation of corners and chamfers.

Advantages
- It is thin and soft. Especially in application on ceramic it does not form any crease on edges.
- It has high tearing resistance.
- It is waterproof.
- Thanks to its textile surface achieves excellent adherence on insulation materials.

Surface Preparation
- The roughness of the surface must be levelled.
- The surface to be treated must be clean and dry and free from any substances which may prevent adherence such as dust, grease, paint, curing materials, detergent, mould grease and silicon.
- The floor must be swept thoroughly with a hard broom or wire brush and then the surface must be cleared from dust with a soft broom or vacuum cleaner.

Application
- The product to be used for insulation is applied on the surface (Permo Chim Duo, Beyazcoat, Purready, etc.). Before the product dries Emülzer® Corner Tape is pressed on it and awaited until dry.
- After drying, the tape is completely covered with insulation material.
- At the end of the roll the ends are overlapped by 20 cm.

Packaging
Width: 23.5 cm
Length: 50 m /roll

Technical Properties	Test Method	Result
Weight	EDANA 20.2.89	189 g/m^2
The Heighest Tensile Strength (Longitudinal)	EDANA 20.2.89	135 N/50 mm
The Heighest Tensile Strength (Transverse)	EDANA 20.2.89	93 N/50 mm
Elongation at Break (Longitudinal)	EDANA 20.2.89	210
Elongation at Break (Transverse)	EDANA 20.2.89	230
Water Permeability	DIN EN 20811>0,5 BAR	7000
Tensile of Adhesion	(N/25mm)	7
Resistance to Fire	DIN EN 4102	B2

Elastic Inner and Outer Corner Waterproofing Tapes



Description

It is a thermoplastic elastomer (TPE) based, elastic, inner and outer corner joint waterproofing tape with polyester mesh bearing used for waterproofing building and dilatation joints.

Usage Areas

- It is used for waterproofing; floor and wall intersections in damp environments that will be coated with seramic such as bathrooms, kitchens, toilets, terraces and balconies.
- Moving joints,
- Corner intersections and joints in reinforced concrete or precast roof gutters,
- Pipe intersections,
- For repairing cracks in the pools. At corner intersections and dilatations,
- For repairing cracks on plaster and alum.

Advantages

- Can be applied to bituminous surfaces.
- Highly resistant to tearing.
- Easy to apply.
- Protects its elasticity during temperature changes.
- Resistant to weak chemicals.

Surface Preparation

The surface to be treated must be free from grease, dirt, dust, residues and free particles which may impede adherence. To protect the tape against strokes Emulseal PU Mastic must be applied onto corner intersections. The surface must be prepared according to the type of the waterproofing material that will be used.

Application

First of all, waterproofing material must be applied onto the surface in two coats and then the side wings of Emülzer® Joint Insulation Tape must be placed on the surface when the material is still wet. The tape must be pressed smoothly with a trowel or brush and embedded into the waterproofing material. Emülzer® Joint Insulation Tape is covered completely with a second coat of waterproofing material. The tape should not contact with the rubber part found in the middle of the waterproofing material.

Packaging

50 m/roll

Technical Specifications

Components Bearing	: Polyester mesh coating Elastic thermoplastic elastomer (TPE) resistant to wearing
Colour	: Red
Total Width / TPE Part	: 120 mm / 70 mm
Thickness (approximately)	: 0,56 mm
Product Weight (approximately)	: 35 g/m
Resistance to Temperature Min./Max.	: -30°C / + 90°C

Chemical Resistance

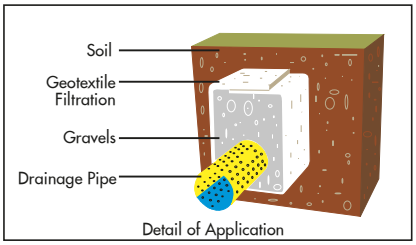
Resistance to chemicals for 7 days storage at room temperature

+ = resistant 0 = weak - = not resistant

Salt Acid 3%	: +
Sulphuric Acid 35%	: +
Lemon Acid 100 g/l	: +
Lactic Acid 5%	: +
Potassium Hydroxide 3% / 20%	: +
Sodium Hypochloride 0,3 g/l	: +
Salty Water (20 g/l Sea Water Salt)	: +

Geotextile Felt

Non-Woven Polyester and Polypropylene Felt



Detail of Application

Description

Geotextile is a non-woven product manufactured by combinining synthetic short yarns mechanically by using needling method. Non-woven geotextile has no woof and warp. Strength is achieved by combining yarns and applying thermal process. Geotextile felt is a permeable textile product which can be used with basic elements or with any material related with soil, running ground or geotechnic engineering.

Usage Areas

Used in motorways, sport facilities, tunnels and underground facilities, art buildings, underground, agricultural areas, garden terraces, airports, mining fields, railways, solid waste storage areas, irrigation channels and reservoirs, shore protection and isolation areas; as a reinforcement against cracks between insulation layers; as a separator between waterproofing and thermal insulation layers; to protect insulation; to drain excess water; to prevent drainage pipes from plugging by wrapping them around; to avoid sinking and in many other applications.

Advantages

- Thanks to thermal process, more strength and less elongation is achieved with the same weight.
- Requires smaller storage area.
- Can be manufactured up to a width of 6 meters, leading to less loss of material.
- Both white and tinted varieties of geotextile are manufactured from 100% pure fiber. No recycled material is used.
- Products can be manufactured with surface weight ranging from 50 g/m^2 to 1000 g/m^2.

Application

Various applications

- In liquid bituminous insulation applications, it is used as a reinforcement between layers and avoids cracks.
- It prevents cracks found on the surface from moving onto insulation surface.
- It protects bituminous membrane or geomembrane applications in foundations.
- It is used as a separator between waterproofing and thermal insulation layers.
- It is used as a separator between thermal insulation and protection layers.
- It is wrapped around drainage pipes in foundations and it is used as a filter layer in terrace gardens.
- It is used in applications designed up withdraw pressure, under road.

Coverage Rate

Calculation of coverage rate:
Coverage rate = area x (roll width + overlap) / roll width

Example

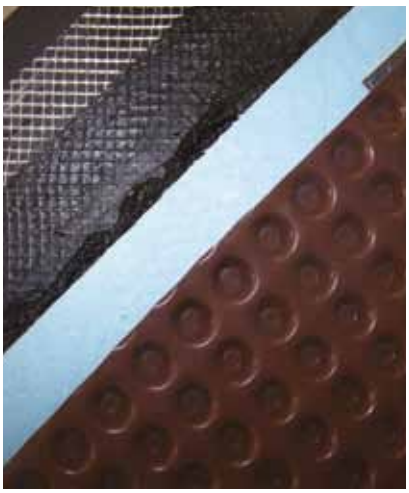
1500 m^2 area, 3 meters width, 20 cm overlap
1500 m^2 x (3,00 m + 0,20 m) / 3,00 m = 1600 m^2 geotextile required coatings.

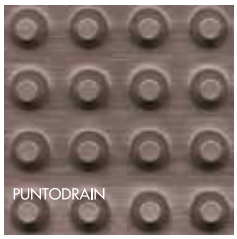
Packaging

Depending on the weight, geotextile felt is packed with various length options.

Puntodrain / PK / RG / Puntodrain Fixing Pin

Protective Plate for Drainage and Insulation





Description
It is a high-density polyethylene (HDPE) plate used for protecting drainage and insulation.

Usage Areas
- Protecting insulation against mechanical damage which may occur during backfilling, and then against chemicals found in the soil,
- Ensuring air circulation,
- Removing accumulated excessive water fastly,
- Preventing humidity raise from under the foundation by capillary action,
- Foundation curtains, foundations, floors, garden terrace applications, tunnels, water channels, railways and highways.
- For repairing all types of structural concrete,
- For mounting and adhering all types of metal elements onto concrete or steel elements.

Advantages
- Very economical compared to other insulation protection methods such as briquet wall or polystrene foam.
- Because it is manufactured up to 3 meters in width and up to 30 meters in length, there is no loss of material resulting from overlap.
- Easy to apply.
- Resistant to plant roots and decay.
- Thanks to more than 1200 blisters/m^2 ensures a homogenous distribution of the soil load.
- Blistered structure contributes to thermal insulation.
- Contributes to sound insulation in interior applications.
- Ensures rapid drainage of ground water thanks to 5,8 litres /m^2 of air gap created between the plate and the surface.
- Ensures air circulation for damp surfaces to dry.

Application
Curtain: Depending on the height of the surface to be applied Puntodrain can be used widthwise or lengthwise. The application starts from 15 cm higher than the end point of the insulation and from the corners. The insulation must not be damaged during mounting. Mounting pins, nails or another type of compatible profiles can be used for mounting.

Packaging
Width: 2 m - 2,40 m - 3 m
Length: 20 m - 25 m - 30 m

Puntodrain PK
Drainage and insulation protection plate with felt

Puntodrain RG
Drainage and insulation protection plate for green roofs

Puntodrain Fixing Pin
Fixing pin used for fixing laths in Puntodrain application

PP Fiber

6-12-18 mm

Description

PP fiber is polymer based 100% synthetic fibers for reinforcement of hydraulic binder mixture against shrinkage and settlement cracks. It improves freze-thawing, fire, impact and abrasion resistance. It blends with concrete homogenously without balling effect. It has resistance alkaline and non-clorined chemicals in low temperatures.

Usage Areas

PP FIBER specially designed for drymix mortar, screeds, overlays as well as plasters, at cement based mortar for repair, precast elements, parking lots, sport fields and light industrial floors.

Advantages

- Basic properties and advantage is inhibiting plastic and settlement shrinkage cracks in early age of concrete.
- Improves the adherence at the mortars.
- It is a passive fire protection element at indoor spaces such as tunnels, at the refractor industry and at high temperatures at reinforced concrete structures.
- It improves fracture and spalling resistance of joint edges and corners.
- It improves freezing-thawing resistance of the concerete.
- Those individual fibers stop the thermal cracking without destroying the surface quality and performance.
- Its surface is treated chemically for perfect distribution on concrete mixture paste.
- It is compatible with all types of Portland Cement Types and Grades.
- It delays the corrosion of the reinforcement

Application

PP Fiber should be ideally added to the batching plant. In case of site mixing, additional mixing time of 3 to 5 minutes (70 cycles) is necessary to ensure that the product is fully degraded and to ensure uniform fiber dispersion throughout the mix.

If mixing is at the batching plant, fiber should be added first along with half of mixing water. After all the other ingredients have been added, including the remaining mixing water the concrete or mortar should be mixed for a further few minutes at full speed to ensure uniform fiber dispersion.

Consumption

6 mm PP fiber 100 - 150 gram per 50 kg cement in mortar and drymix.

12 mm PP fiber 1 bag (600 g) pre-dosed for 1 m^3 of concrete or screed

18 mm PP fiber 1 bag (900 g) pre-dosed for 1 m^3 of concrete

Packaging

6 mm: 0,600 kg/paper bags-bulk

12 mm: 0,600 kg/paper bags-bulk

18 mm: 0,900 kg/paper bags-bulk

Nassio

Breathable Waterproofing Membrane

Description

It is a light three layered waterproofing membrane which allows water vapor permeability while blocking water and wind. The "breatech" film, the mid-layer, serves as the main stratum of the membrane. Its microscobic pores provide moisture permeability, while blocking water molecules which are larger in size. Upper and lower polypropylene layers do not only protect the main stratum, but provide resistance against various construction conditions as well.

Usage Areas

- It is used in hot or cold hipped roofs with any type of pitch.
- It is used between the facing and the thermal insulation layer in siding and other types of curtain walls.

Advantages

- NASSIO is produced in two colors to make it distinguishable from single layered products. Alternative products offered as breathable waterproofing sheets must be checked for colors (the two faces of the sheet must be in different colors) as well as for the technical specifications.
- NASSIO removes moisture from the building: It allows water vapor permeability as if there is no membrane and prevents the formation of mildew and bacteria.
- It keeps the thermal insulation materials dry, and thus improves the durability of the structure.
- NASSIO waterproofs: It is impermeable against rain and snow.
- It blocks air currents. With NASSIO it is possible to create a breathable atmosphere even in closed roofs so the roof does not have to be open. This provides energy saving by improving thermal insulation productivity because there is no need for aeration in the roof.
- Compared to bituminous membranes used under tiles, it is very light in weight.
- With higher strength and lower elongation, it is resistant to t tearing.
- It is easy to apply.
- It is durable.
- It requires less stock.
- Because it is manufactured 1,6 meter wide, there is no loss of material.
- Production is available in a range of 80/90/100/110/130 g/m^2 in terms of surface weight.

Application

Hipped roof (hot roof, cold roof): After having applied NASSIO onto the insulation material, you can easily tile your roof. With NASSIO you do not only waterproof your roof, but thanks to its breathability which removes the air humidity from the roof, you are also able create a dry, healthy atmosphere, and thus NASSIO helps protect the wooden parts of the roof, and improve the durability and performance of thermal insulation boards.
Siding and Curtain Wall Systems: Applying NASSIO onto the thermal insulation materials provides a comfortable atmosphere. Thermal insulation performance improves, and the system becomes much more durable. NASSIO can be safely used in curtain walls thanks to its superior mechanical and vapor permeability characteristics.

Consumption

Consumption Calculation:
Geotextile required can be calculated by the following equation:
Consumption = Area x (Roll width + Overlap) / Roll width
For example: Geotextile required for a 2000 m^2 area (with 1,60 meter roll width and 10 cm overlap) is:
2000 m^2 x (1,60 m + 0,10 m) / 1,60 m = 2125 m^2

Packaging

1,6 m x 100 m roll = 160 m^2/roll

Butyl Tape 4400 - Insulation Brush
Fiber Mesh - Bituminous Foam - Trowel







Butyl Tape

Description
Butyl rubber-based insulating and filling tape that is single or double-sided adhesive, capable of adhering perfectly to various surfaces.

Dimensions
Thickness : 1-5 mm
Width : 5-100 mm
Length : 10 m

Insulation Brush

Description
It is suitable to use in liquid membrane applications.
Water, solvent and heat effects the brush at minimum level.

Fiber Mesh

Description
Used as a reinforcement in liquid waterproofing applications. It is alkali resistant.

Bituminous Foam

Description
Suitable for all roofing products which produced in Turkey. Various type of bitumen impregnated sponge profile and strips.

Usage
- Bituminous foam and strips are used in building roofs and facades.
- They avoid dust, heat, snow and insects to enter inside of the panel endings.
- Bituminous foams can be produced in any requested form to fit roof ridge and eaves to fulfill customer needs.

Trowel

Description
Due to trapezial notches, it is used for coating large spaces and facades, and other kinds of insulation coatings with products like Elastokote, Elastokote 2K, Styro-Bitüm.

Concrete Primer 5005

Acrylic Copolymer Based, Single Component, Primer For Exposed Concrete Surfaces

Description
Acrylic copolymer based, single component primer for exposed concrete surfaces with an effective bonding and holding feature.

Usage Areas
- Indoors and outdoors
- Prior to cement or plaster based mortar applications on exposed concrete surfaces.
- Protection of water absorbent surfaces such as cement & plaster, plywood, aerated concrete, briquette chipboard briquette from humidity.
- As a primer in heat insulation applications if necessary.
- As a primer to increase the adhesion before ceiling plaster application.
- Used to increase adherence before applications on the previous coats.

Advantages
- Increasing the adherence of the concrete surface.
- Preventing rapid water absorption.

Surface Preparation
The surface to be treated must be without dust, rust, dirt, grease and should be a solid.

Application
- The primer should be mixed with 7-10 kg of water before using it and it is applied to the surface with a brush or roller.
- CONCRETE PRIMER should be kept in homogeneous condition by mixing it at certain intervals and it should not be sediment.

Cleaning of Tools
The tools can be cleaned with soapy water immediately after using, and with industrial solvents after drying.

Consumption
150-250 g/m^2 for single layer.

Packaging
Net: 15 kg Plastic Drum
27 Pieces / Pallet

Surface Preparation

General Rules

General rules herein defined should be applied in waterproofing applications. In addition, every product has its own application and surface requirements. So it is critical to read and obey the warning and instructions written on the packaging of every product.

Cleaning

Surface Preparation

Surface preparation is highly important for an effective waterproofing. The surface to be treated must be clean, smooth, firm and free from mould grease, cement foam, dust, mud, lime and paint residues, salt accumulation and loose particles. Very absorbent or bright surfaces should be primed with suitable primers. Otherwise there will be a waste of materials and a lack of adherence.

Some products have to be applied on a bone-dry surface (eg. **Purready, Pu-Coat II, Plus**) while some others require a moist, and even wet surface (eg. **Permo Chim Duo, Permo Chim Crystal**). Before the application please read the instructions on the packaging carefully. Damp the surface when necessary and allow only air-drying.

It is critical to make sure that the surface is not frozen or dewy. In the applications made by cement based products, the surface must be saturated with plenty of water, but there shouldn't be any ponding.

Filleting

Filleting

The homogeneity of waterproofing is critical. Especially the internal edges are active. So they must be filleted in concordance with the characteristics of the product to be applied.

In the applications made by cement based products, Emülzer® Latex added mortar is used for the filleting process. Alkali resistant netting can be spread into the mortar to decrease the risk of cracking. In the applications made by PU base products, Emulseal PU mastic is used and in the applications made by bitumen based liquid or spread membranes, Bituminous Filleting Tape is used; it is a rare product in the world and in Turkey it is solely manufactured by Emülzer®.

External edges must be filleted at the mold phase; if not, later they should be rounded by shaving mechanically.

Mixing

Mixing

The products should not be mixed-not even briefly-after opening the packaging. Double or triple component products and those which can be used after thinning should not at all be mixed with unsuitable tools such as drill and mixer or with a stick. Such a wrong way of mixing will spoil the homogeneity of the product and effect its performance negatively. Which component should be added into which component varies from product to product. It is critical to follow the instructions on the packaging. It is recommended to use a low speed mixer, to mix for 3-5 minutes until a homogenous and smooth texture is obtained, to leave for 2-3 minutes, and then to mix again for about 30 seconds before the application.

Tie Rod Holes

Segration

Floor Drying

Protective Measures

Tie Rod Holes

The holes must be free from any plastic particles and any tie bars left in the concrete must be cut off (at least 2 cm deep). Clean tie rod holes must be filled with **EM-80 T** or **Em-poxy 420 Epoxy Anchorage Paste**.

Segregation

Segregations that occur as the components of the concrete segregate during placement and pebbles collect on the same side, have to be fixed. **EM-80 T** can be used for this purpose. When the repair is completed it should be cured with water, protected from active leakage water, direct sunlight and rainfall; vehicle and foot traffic should not be allowed until curing process is completed.

Application Temperature

The temperature of the surface and environment should be between +5°C and +35°C. Applications in higher or lower temperatures may cause early setting or evaporation, and result in cracks.

Consumption

The products must be used and applied in the amounts and by the methods recommended. Otherwise they may not provide the desired effect and may require early repair or replacement.

Precautions

Terraces: The effect of atmospheric conditions on waterproofing materials varies and it is recommended to protect them from UV rays which are always quite damaging. Emülzer® recommends a combination of thermal insulation plates, geotextile, and bank gravel. Mounting thermal insulation plates is as easy as placing them side by side. And placing geotextile (100 gr/m^2) over and under the plates will protect plates and allow easy rain flow. Plates have to be mounted and covered as quickly as possible. Otherwise deformation may occur due to heat.

Finally, round bank gravel (with a diameter of 16-32 cm) must be spread (5 cm thick) to provide an aesthetic look and to protect plates against wind, etc. The weight of this type of bank gravel is approximately 75 kg/m^2.

Underground: The application should be protected from excavation, from soil and rock filling. The sand used for backfilling should have drainage characteristics and it should be filled in steps and by pressing. Briquet wall, hard thermal insulation plates or drainage plates can be used for protection. Excavation residue and construction rubble are not suitable for backfilling.

Repair

Strainers, terraces and damp environments should be repaired in reinforced concrete level. Repair in levelling or protective alum level will not be effective.

Bituminous Waterproofing Liquids

Cement Based Insulation Materials

Sealants and Joint Fillers

Concrete and Mortar Additives

How to choose products for waterproofing foundations and curtain walls?

Liquid products, mortar additives, bituminous sheets and synthetic sheets can be used in waterproofing. As a manufacturer offering the widest range of products in Turkey, it is our responsibility to resolve any confusion and first of all, to talk about the products and applications which should not be used, since there are so many alternatives in the market.

- Silicon based products with water-repellent and impregnating characteristics are not suitable for undersoil applications. With increasing ground water level and pressure, these products begin to suck water. This type of products can be solely used on the surfaces with strong downstream slope.

- It is neither technically nor economically reasonable to use acrylic based liquid coatings to waterproof foundations.
  Acrylic products come to soften in water and dissolve with the effect various chemicals. They are more expensive also due to colour, and it is not reasonable to use them in underground applications where they are not at all visible.

- Double-component, cement based waterproofing materials with high elasticity or polyurethane based products are technically suitable for foundations, but they should not be used in the economical sense.

- It is possible to achieve highly good results with synthetic membranes. But the application has to be very well protected during construction and filling. Later it will be almost impossible to detect any damage overlooked.

- Waterproofing applications made with bentonite based sheets must be checked prior to backfilling.

- Waterproofing additives added to concrete indeed provide the most durable and economical waterproofing. The only risk related with these products is that the application may be damaged if cracks occur in the concrete as the building settles.

Looking at the range of liquid waterproofing materials almost all of which are manufactured by Emülzer®, it can be easily seen that it is wiser to prefer bituminous products offering high performance at a reasonable price for the waterproofing applications related with foundations. Bituminous products whose performance has been highly increased with synthetic additives have become the most effective alternative also with the aid of cost advantages. As a result, it can be seen thet it is suitable to use bituminous liquid membranes such as EMÜLZER® PLUS, ELASTOKOTE 1K-2K-2K AR, ELASTORENE and EMÜLZER® ALC to waterproof undersoil curtains, and bituminous membranes for the applications under the foundation.

Waterproofing Foundations

Waterproofing Foundations

Until people became well aware of the significance of water-proofing, the term only suggested-and the technique was confined to-waterproofing terraces and roofs. With the developments in construction technologies, it became clear that waterproofing has to start at the excavation stage in all kinds of buildings from houses and office buildings to schools, to hospitals. And earthquakes help us realize-sometimes in a most regretful way as we experienced in 1999 in Turkey-how vital the function of waterproofing is.

Picture:1

Picture:2

Picture:3

One of the most striking findings was that the biggest damage occurred as a result of not protecting foundation reinforcement and bearing reinforcement against corrosion. Due to corrosion inside, it was obvious that the bearing systems could not withstand the horizontal motion of the earthquake shake and storeys collapsed on top of each other.

So waterproofing is definitely a determining factor in the lifetime of a building as well as of the people who live in that building.

No ground water during excavation... Is waterproofing still necessary?

Constructing a foundation without waterproofing due to reasons such as a firm, rocky ground or the lack of ground water, is a biggest fault. Rainfall, earthquakes, construction of buildings all around or even a damaged sewage system may change the direction and level of the ground water. And even the moisture of soil may lead to corrosion in the foundation (Picture 1). Water collected under and around the foundation due to poor drainage is absorbed by the concrete by the capillary action and results in corrosion and loss of strength both in the concrete and reinforcement. It should be noted that, unlike other applications, waterproofing the foundation is a once in a lifetime treatment. It will be impossible to waterproof the foundation or replace the application later, because the building cannot be lifted up or moved aside.

What is Wrapping System and why does it require more membranes?

Wrapping System is a method to waterproof the foundation walls as well as the surrounding curtain walls against ground water and soil moisture. The waterproofing layer is prepared with a membrane, and then the foundation is placed in this wrap. Foundation wrapping system should be applied on time and it should comply with the procedures. For the last 10 years it has become a common practice to use spread covers or membranes in foundations (Picture 2). Because, unlike liquid products, **MEMBRANES** are offered without packaging. They are generally available as 1x10 m rolls. These products are generally 3-4 mm thick and they look definitely waterproof. But it is mostly an underestimated fact that waterproofing is provided by hundreds of rolls, not just by one roll, and because there are so many seams and this results in a limited elasticity, some detachment may occur at seams as the building settles. To minimize that risk, the application on lean concrete should be at least in two coats and include polyester felt bearer.

Waterproofing applications on lean concrete?

Waterproofing materials used on lean concrete have to be strong enough to bear the weigth of the building and have to protect its elasticity to adjust to the movements of the building. **EMÜLZER PLUS, ELASTOKOTE 1K-2K-2K AR, ELASTORENE** and **EMÜLZER® ALC** bituminous liquid membranes are elastomeric, cold-applied materials with high covering power, and they can be used for all types of horizontal and vertical waterproofing applications. The applications made with a brush or trowel must be reinforced by using alkali resistant netting or geotextile felt between two layers. Although the amount consumed varies according to the application method, it is approximately 1,5-2 kg/m^2 for each coat. Bituminous membranes can be used on lean concrete. They have to be reinforced with at least two coats of polyester felt. Otherwise, it cannot bear the load and plastic breakage occurs. In the first coat, only the overlaps are adhered to each other. And the second coat should be completely adhered to the surface. It is critical to lay **GEOTEXTILE** as a separator layer and spread alum for protection as soon as the application is completed (Picture 3). To wrap curtain walls, liquid materials are combined with membranes. It would be useful to extend the application from the raft foundation toward the drainage channel.

Picture: 4

Which products should be used for waterproofing curtain walls?

The products used for waterproofing the curtain walls should be as elastomeric as possible since these are moving parts in the building. **EMÜLZER PLUS** liquid membrane offers high performance, especially on the spots requiring rapid application. Thanks to its elasticity (1000%), Plus moves with the building, and because there is no seam, stretches do not lead to cracking, popping or shrinking. It is applied with bitumen brush. It must be applied at least in three coats with 0,600 kg/m^2 in each coat. It would be reasonable to wait for a day between the application of any two coats. Water based **ELASTOKOTE** and **ELASTOKOTE 2K** bituminous liquid membranes can also be used on these details. (4) Bituminous membranes increasingly become less common, since it is not easy to apply them vertically and they can easily detach from the surface due to their weight. The application extending from the bottom level of the curtain wall connects at the base with the one covering all the raft foundation. And the wrap is complete.

Picture: 5

How to waterproof cold joints created during concreting?

During concreting, breaks, delays, etc. lead to the formation of cold joints. To waterproof these joints, **PERMO-CHIM CRYSTAL** crystallized waterproofing material must be spread between layers. The crystals produced provide an effective waterproofing by filling the cold joints. (Picture 5)

Picture: 6

How to waterproof cold joints created between raft concrete and curtain concrete?

The best method is to utilize waterstop. Waterstop can be PVC based, sodium bentonite based or bitumen based. Unit price of PVC based waterstop is considerably low, but their application is very difficult and risky because they have to be spread between the reinforcement, fixed with strings and connected at seams. The most common problem is that welding at seams may not work and as a result the strings break off during concreting, leading to the deformation of the waterstop. The application of **SWELL-FLEX** bentonite based expanding waterstop is as easy as fixing it by laying the waterstop in front of the reinforcement before the placement of curtain concrete or adhering it with **SWELL- FIX** bentonite based mastic. Waterstop expands in contact with water and waterproofs the joint by filling the gaps in the concrete (Picture 6). **SWELL-FLEX** expanding waterstop should not be used on any concrete thinner than 12 cm. To waterproof joints on thin concrete, **BIBAFLEX** bitumen based non-expanding waterstop should be used. Bitumen based non-expanding waterstop is spread on the concrete just after the placement of the base concrete (when the concrete is wet) and it binds to concrete during hydration. On cured, smooth surfaces, it can be used by heating the surface.

Picture: 7

How to plug tie rod holes?

Tie rod holes must be plugged by using epoxy-based non-shrink **EM-POXY 420 EPOXY ANCHORAGE PASTE** or **EM-80 T**. (Picture-7) Plugging holes with ordinary mortar or polyurethane foam will result in trouble in time.

Picture: 8

Picture: 9

How to waterproof vertical and horizontal edge?

Vertical and horizontal intersections are very risky due to the formation of cold joints. These details have to be worked out in the best way. To fillet internal edges in the waterproofing applications made by bituminous liquids or membranes, EMÜLZER bitumen-rubber based, V-shaped elastomeric **BITUMINOUS FILLET** must be used. With its high elasticity and durability, bituminous filleting tape perfectly adjusts to different construction materials with different expansion characteristics and it offers easy and fast application. After having cut the **BITUMINOUS FILLET** into desired length, protective polyethylene foil is melted by welding torch or burner. The tape is firmly pressed and applied onto the edge. You can start the insulation application immediately after (Picture 8). Prior to waterproofing applications made by **PERMO-CHIM DUO** type double component, cement based products internal edges must be filleted with **EMÜLZER LATEX** added mortar or reinforced with **EMÜLZER CORNER TAPE**. During application, waterproofing mortar must be reinforced with alkali resistant waterproofing netting.

How to waterproof dilatations?

Waterproofing materials used in dilatations must be, above all, elastomeric enough to work with the building and remain active for years with no deformation. Horizontal dilatations can be filled with hot applied **EMÜLDERZ** joint filling paste (Picture 9) whereas vertical dilatations can be filled with cold applied **EMULSEAL PU MASTIC 40** polyurethane based mastic. For more information, see the section on dilatation waterproofing.

Picture: 10

How to protect the waterproofing application on curtain walls?

Waterproofing applications can be effective and durable with the combination three vital factors: good waterproofing, good drainage and good protection. The application can be damaged especially during backfilling of the excavated soil. So the precautions to protect waterproofing in the best way must be definitely completed prior to backfilling. There are two common methods. The first protection method is thermal insulation plates. Underground temperature stays constant after a certain depth, so thermal insulation materials are not necessary to protect waterproofing. However, the protection provided by **PUNTODRAIN** HDPE Drainage Boards allows easy removal of the water collected around the foundation and more than 1600 blisters per square meter offer a good ventilation (5,7 liter/m^2). **PUNTODRAIN** ensures the transfer of water coming from the soil into the drainage channels and balances the distribution of the lateral pressure of the filled soil on the curtain wall. But in the foundations deeper than 3 metres it is healthier to build a protection wall. (Picture 10 and 11).

Picture: 11

Waterproofing Elevator Shafts

Waterproofing Elevator Shafts

The location and dimensions of the elevator shaft must be in compliance with the project. And elevator shafts require positive waterproofing (waterproofing from outside). However, the common practice is preparing the elevator shaft by breaking the floor after concreting, and this mostly results in the formation of a cistern.

When waterproofing is not possible from outside

In such cases **PERMO CHIM CRYSTAL** resistant to negative water pressure offers the right solution of waterproofing from inside. The surface to be treated must be clean and solid, and free from water repellent materials such as grease, rust, cement foam, paint residues, curing materials, release agent and silicon. Cracks must be firstly enlarged, and then moistured and repaired with plaster and repair mortar containing **EMÜLZER LATEX**. To prevent leakage, firstly, the intersection of floor concrete and wall concrete is deepened 5-10 cm and the joint is enlarged. The gap is cleaned thoroughly, filled with epoxy-based, non-shrink **EM-POXY 420 EPOXY ANCHORAGE PASTE**, and filleted. And then, the surface can be insulated with **PERMO-CHIM CRYSTAL** or waterproof plaster depending on its structure and characteristics. The areas prone to cracking such as pointed tips or horizontal/vertical intersections must be filleted.

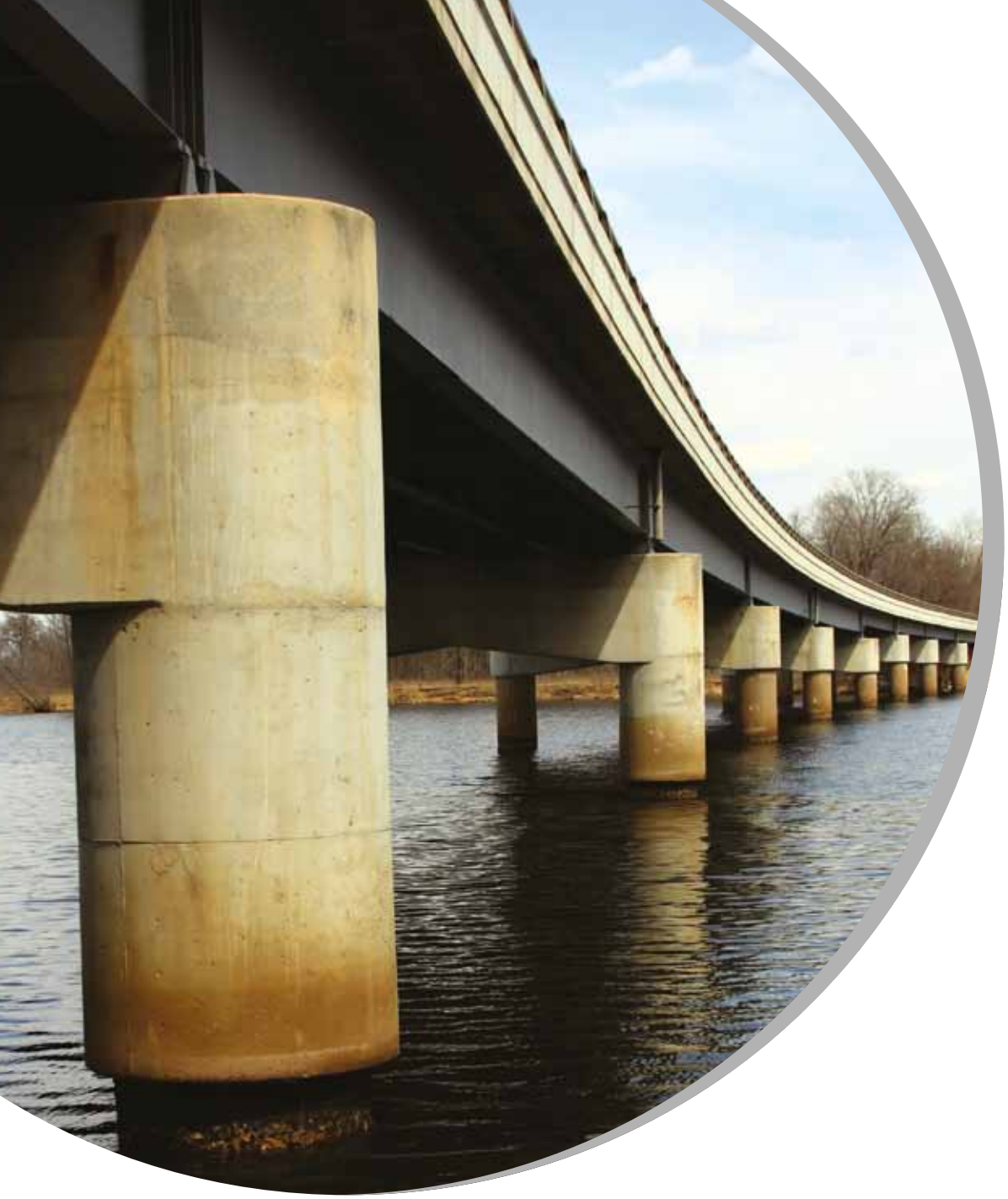
Blocking pressured water,

Water leakage must be blocked by using **SPEED-X POWDER**. To decrease water pressure, the holes are deepened enough to provide easy water flow by using a drill. If there are more than one leakage points, more holes big enough to allow easy water flow are drilled on the lower parts of the wall. A thin plastic pipe is fixed into the hole by using plugging mortar, and in this way all the water flow is directed into these pipes. After having cleaned the holes thoroughly, **PERMO-CHIM CRYSTAL** grout is applied into the holes in one coat. The hole is completely plastered with **PERMO-CHIM CRYSTAL** plaster (all around the plastic pipe) when the **PERMO-CHIM CRYSTAL** grout is still wet. The curing period will be 24 hours.
After having completed the waterproofing application of the surface except the holes, the pipe is removed and the remaining hole is plugged with **EMÜLZER SPEED-X POWDER** which is a perfect accelarated setting powder. The plugging mortar is pressed manually for about 1-2 minutes until it solidifies. When **PERMO-CHIM CRYSTAL** mortar is cured, the insulation is completed by applying **PERMO-CHIM CRYSTAL** grout both into and arond the hole.

Application that follows

Then the surface must be saturated with plenty of water and kept moisturized during application. **PERMO-CHIM CRYSTAL** is poured into a clean container, and mixed with 10 liters of water for brushing, or 7 liters of water for trowelling until a homogenous mixture is obtained (for approximately 3 minutes with a low speed mixer). It is critical to add water to **PERMO-CHIM CRYSTAL**; never vice versa. And is critical to add water water gradually, not all at once.

- The mixture must be consumed within 30-40 minutes. It is useless to add water to solidified mixture.
- **PERMO CHIM CRYSTAL** is applied in two coats by using a brush, roller or trowel. Each coat must be applied as the former coat starts to solidify, and before it dries up. Each coat must be applied at right angle to the application of the former coat.
- Cracks and vertical/horizontal seams must be reinforced with materials such as seam tape, plaster mesh, etc.
- After the application of the last coat the surface is levelled with a soft damp sponge.
- After the application it is critical to prevent **PERMO-CHIM CRYSTAL** from drying fast, it must be kept damp for 5-7 days. This can be achieved by laying a damp sack cloth, plastic, etc. and damping the concrete. **PERMO-CHIM CRYSTAL** must be protected from sun, freeze, wind and other undesirable weather conditions during the curing period.
- If paint will be applied onto **PERMO-CHIM CRYSTAL**, first it must be coated with **EMÜLZER PERMO STOP** added plaster when it is still wet, and then the paint must be applied onto this plaster layer. And if ceramic or faience will be applied, a faience adhesive should be applied directly onto newly applied **PERMO-CHIM CRYSTAL**.
- After having cured, crystals on the surface must be wiped off with **EMÜLZER** Lime and Salt Remover, the surface must be plastered, and the coating must be applied onto this plaster layer.



Waterproofing Marine Structures

Waterproofing Marine Structures

According to the technical specifications defined for marine structures, the bottom and side surfaces of wharfs made up of concrete must be impregnated with water-repellent and abrasionproof materials.

Waterproofing Wharfs

All concrete surfaces including the ones at the bottom must be impregnated with one coat of water-repellenf **SAYSILOX**, and two coats of abrasionproof and waterproof **CLIOLITE**. As a product containing hydrophobic impregnation agents, **SAYSILOX** permeates into concrete surfaces and decreases dust, water and salty water penetration by 85% minimum. To maintain **SAYSILOX** application as well as to provide abrasive strength, **CLIOLITE** must be applied in two coats. The surfaces to be treated with these materials must be dry, clean, and free from grease. The concrete must not be older than 14 days. If the concrete is old or the surface is full of dirt, dust, or curing materials, it must be cleaned thoroughly by sandblasting, and any cracks or gaps must be repaired. **SAYSILOX** is applied onto these clean bottom and side surfaces in one coat by using a roller, brush or sprayer without pulverizer. Consumption depends on the quality of the concrete as well as the application method, but it must be 0.250 kg/m^2 on average. After two hours minimum, and six hours maximum, the first coat of **CLIOLITE** is applied by using a roller, brush or sprayer without pulverizer. And second coat of **CLIOLITE** is applied three hours later. Consumption must be approximately 0.200 kg/m^2 in two coats. It is critical to apply in dry weather, and when the sea is still.

Waterproofing Dilatations

Waterproofing Dilatations

In the design process of joints, determining the geometry of the joint and choosing the right waterproofing and filling materials require technical knowledge. But in general, there are two basic factors in joint design. To provide waterproofing, watertight materials (sealants) are used. In addition, joint filler wicks (back-up materials) are used in order to limit the depth of the waterproofing material in the joint, to shape the back surface and as a bearing.

Today, there is no single material to meet the requirements of all kinds of joints and durable enough to match the lifetime of the building, so it is not reasonable to limit the airproofing and waterproofing characteristics of the joint with the performance of a single material. So it may be necessary to use more than one products and applications to ensure airproofing and waterproofing. Here you will find information on some of the most common dilatation applications.

Preparation of joint surfaces

Joint surfaces must be free from dust and grease as well as any loose particles. Concrete panels mus be cleaned thoroughly by sandpapering, sandblasting, mechanical methods or by a combination of these techniques. In spite of its higher cost, sandblasting is the most effective method. Anti grease solvents or acid wash generally result in negative effects by carrying dirty particles into pores. Getting rid of dust is vital for providing perfect adherence in waterproofing materials which have to be applied on-site. Although final cleaning can be made with a brush, it is much better to use an air compressor or vacuum cleaner. If it is undercoated, the application should form a homogenous film on the whole surface of the joint. Otherwise, excessive material may lead to lack of adherance. It is critical to consider the setting period of the undercoating; waterproofing materials must be applied when the undercoat is bone-dry.

Waterproofing horizontal dilatations

Any elements which may affect waterproofing on joint cheeks are cleared away, and dust is removed with pressured air. The sides of the joint is primed with rubber added **EMÜLZER C**. Polyethylene wick is placed into the dilatation to match 60% of the depth. Dry fine sand is poured (3-5 cm thick) and pressed over the wick. **EMÜLDERZ**, the hot applied, bituminous elastomeric joint filling paste is heated and poured into the joints in liquid form (it should not be poured all at once, but gradually, two or three times). After filling the joint, PVC or EPDM based synthetic dilatation tape (with the suitable width) is fixed with **EM-POXY 310 FIXING AND ADHESIVE MORTAR** in omega (Ω) shape. As a joint filler, polyurethane based **DDM 2K** can be used as well. **DDM 2K** is a cold-applied material. **EMÜLDERZ** Bituminous joint filler is much more economical than a PU based substitute.

Waterproofing vertical dilatations

It is mostly impossible to work with hot applied materials on vertical dilatations. It is usually sufficient to close vertical dilatations by fixing EDPM based **EMÜLZER DILATATION TAPE** with Emülzer® epoxy based **EM-POXY 310 FIXING AND ADHESIVE MORTAR** (in omega (Ω) shape) (Picture 4) and it does not require any other waterproofing material. SBS based elastomeric **MEMBRANE** will be fixed in two coats (first 50 cm and then 100 cm wide) on the dilatation in omega shape. To protect the waterproofing it is necessary to build a 1 m wide wall in front of the application prior to backfilling.

Waterproofing Terrace Roofs

Waterproofing Terrace Roofs

As the first and the leading manufacturer of liquid waterproofing materials in Turkey, Emülzer also offers the widest range of waterproofing products. Bituminous or polyurethane based liquid membranes, acrylic based liquid coatings, cement based, double component waterproofing materials or bituminous membranes can be used for waterproofing terraces. All of these materials are available in Emülzer's product line. Choosing the right materials requires the consideration of the climate conditions, usage areas of the surface to be treated, etc.

The waterproofing material preferred should not be affected or it should be protected from atmospheric conditions, it should not be affected from surface defects or cracks which may be found on reinforced concrete, and it should maintain its performance in connections, dilatations and cold joints. It should comply with the elements which may be found on the roof, such as strainers, fitting lines or antenna, and should be flexible enough to adjust to any repair or addition. Here, the waterproofing of a walk-on terrace with thermal insulation by using **PURREADY**, our single component liquid polyurethane material, is described simply.

Surface Preparation

Surface preparation is the most significant part of waterproofing. Without a strong and well prepared surface the application will not be durable at all. So the cleaning process should continue until a strong surface is obtained. Burnt or cracked alum, old waterproofing residues, curing materials, construction residues must be cleared away. Parapet sides must be bevelled with **EMÜLZER LATEX** added paste. Bevelling decreases the corner angles from 90 degrees to 45 degrees. This process is also called "splaying". Any cracks must be enlarged in V shaped and filled with polyurethane mastic. It is not wise to end the application at the ground and parapet intersection. It should end at least on a higher level than the top level of pebbles that will be spread after the application. It would be more convenient to extend the application up to the top of the parapet wall.

Application

During the application of the first coat of Emülzer® **PURREADY**, 70-75 gr/m^2 of waterproof netting is also spread on the wet Emülzer® **PURREADY** (not end to end, but with 10 cm wide overlaps). The second coat of **PURREADY** can be applied 6 to 24 hours later. This 2. coat of **PURREADY** should cover the whole netting. After this application, waterproofing will be complete. But the protection of the application from atmospheric effects, especially from sunlight, is as important as the waterproofing itself. Our recommendation is to provide protection and thermal insulation by using water-repellent XPS thermal insulation plates. Mounting these plates is as easy as placing them side by side. **GEOTEXTILE** felt (at least 100 gr/m^2) must be applied under and over the plates in order to protect them from any damage and allow easy water flow in rainy weather conditions. During this application, the plates must be mounted and covered as soon as possible. Otherwise, they may deform due to heat or they may be removed due to wind. Finally, round bank gravel (with a diameter of 16-32 cm) must be spread (5 cm thick) to provide an aesthetic look and to protect plates against wind, etc. The weight of this type of bank gravel is approximately 75 kg/m^2.

Waterproofing Pools and Metal and Concrete Water Storage Tanks

Waterproofing Pools and Metal and Concrete Water Storage Tanks

Pools are no more limited with outdoors, they can be constructed anywhere; on terraces, in basements, between buildings in housing projects, over parking areas, etc. Water leakage in the pools may lead to damage in its own bearing system at best and that of the surrounding buildings at worst. For example, due to corrosion, the reinforcement iron with a diameter of 12 mm loses half of its bearing capacity in approximately 7 years. Here are the most frequently asked questions and answers about waterproofing water bearing buildings in the construction phase…

What type of concrete must be used in pool

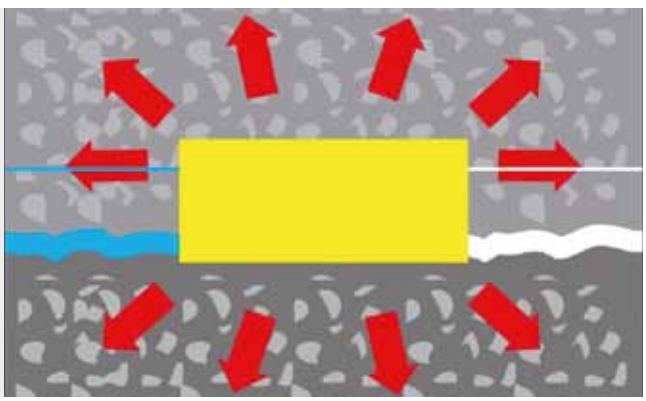
Ready-mixed concrete if possible. Reinforced concrete, C30 class minimum, and with waterproof additives. If concrete has to be prepared on site, waterproof concrete can be simply obtained by using **EMÜLZER PERMO STOP** waterproof additive, 50 kg of cement requiring 330 g of **PERMOSTOP**.

How to handle cold joints created during concreting?

During concreting it is critical not to create cold joints due to breaks, delays, etc. If this is inevitable 1 kg/m2 of **PERMO-CHIM CRYSTAL** can be spread into the construction joints to provide waterproofing. **PERMO-CHIM CRYSTAL** fills the cold joint with crystals to provide waterproof effect.

How to waterproof cold joints created between base concrete and curtain concrete?

The best method is to utilize waterstop. Waterstop can be PVC based. Unit price of PVC based waterstop is considerably low, but their application is very difficult and risky because they have to be spread between the reinforcement, fixed with strings and connected at seams. The most common problem is that welding at seams may not work and as a result the strings break off during concreting, leading to the deformation of the waterstop. The application of sodium bentonite based **SWELLFLEX** is as easy as fixing it by laying the waterstop in front of the reinforcement before the placement of curtain concrete or adhering it with **SWELL-FIX** bentonite based mastic. Waterstop expands in contact with water and waterproofs the joint by filling the gaps in the concrete. But **SWELL-FLEX** expanding waterstop should not be used on any concrete thinner than 12 cm. To waterproof joints on thin concrete, **BIBAFLEX** bitumen based non-expanding waterstop should be used. **BIBAFLEX**, is spread on the concrete just after the placement of the base concrete (when the concrete is wet) and it binds to concrete during hydration. Placement of the whole concrete one off is a common method to prevent the formation of cold joints between base concrete and curtain concrete. But it is not an easy application, and it generally leads to segregation, air gaps and honeycombing in the concrete due to lack of cement paste between cyclopean agregates.



How to waterproof fixture and lighting inlets/outlets?

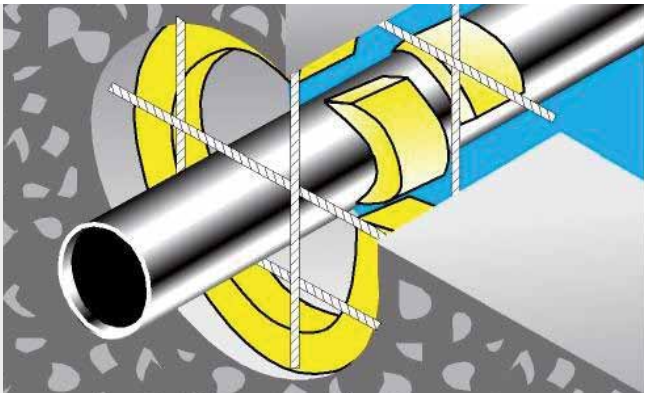
The best method is to wrap **SWELLFLEX** around all the pipes passing through the reinforced concrete. If the pipes are mounted during concreting it would be sufficient to wrap **SWELLFLEX** expansion tape around the pipe. If the pipes are mounted later by drilling the concrete, it will be necessary to apply **SWELLFLEX** also around the hole. In this case, **EMÜLZER LATEX** must be added to the filling paste to increase adherance and provide waterproofing.

How to plug tie rod holes?

Tie rod holes must be plugged by a non-shrink mortar. Epoxy-based non-shrink **EM-POXY 420 EPOXY ANCHORAGE PASTE** as well as a non-shrink repair mortar can be used for this application. Plugging holes with ordinary mortar or polyurethane foam will result in trouble in time.

What type of waterproofing must be applied under the coating during main construction?

Pools bear large amounts of water and they are prone to high pressure differences at the edges due to draining and refilling processes. So the waterproofing materials used must be both elastic and suitable to concrete and coating material. As a double component, super elastic waterproofing paste **EMÜLZER PERMO-CHIM DUO SDH** offers these characteristics. Corner intersections are the most critical spots. So they must be bevelled with repair mortar. After saturating the surface of the concrete with plenty of water, the first coat of **PERMO-CHIM DUO** is applied onto the surface with a brush or comb. Alkali resistant netting is pressed and adhered onto this application when the surface is still wet. And it must be applied firstly at the corners, and then on the whole surface. 2. coat of **PERMO-CHIM DUO** is applied perpendicular to the first coat when it is semi-wet. The application thickness must be at least 2 mm all over the surface.



When to apply the top coat?

Removal of the coating due to any defect or delay will be quite difficult and costly, so the curing of the materials applied must be completed and the surface must be tested with water prior to the application of the top coat. In the test, the pool is filled with water and the level of water as well as the condition of the outer surface of the concrete is observed for a period of time. If the waterproofing application looks successful, the top coat can be applied. For best adherence, it must be primed with **EMÜLZER LATEX** added grout.

How to waterproof ceramic joints?

Although ceramics are waterproof themselves, the combination of hundreds of them may lead to leakage at joints. And joinf fillers must be as elastic and hygienic as the waterproofing material. So it is reasonable to use the type of joint fillers manufactured for pools. With their elasticity, waterproof characteristics and high adherance, **EMÜLZER LATEX** added joint fillers can be used as well.

Is it necessary to waterproof pools and water tanks from outside?

It is surely necessary to waterproof pools and water tanks from outside if they are exposed to water from outside. Water bearing structures require waterproofing not only to prevent water leakage from inside. Water leakage from outside is a critical threat to hygiene and it may also lead to corrosion in the reinforcement system of the pool. Bituminous products can be used in waterproofing from outside. Bituminous products are very advantageous in cost and elasticity. After having applied **EMİLKOTE** as an undercoat on concrete, **ELASTOKOTE 1K-2K-2K AR** and **ELASTORENE** can be used in two coats, but alkali resistant reinforcement netting must be used between the two coats. **PUNTODRAIN** drainage boards must be used to protect the application and drain leaked water.

Waterproofing (metallic or concrete) water storage tanks against corrosion from inside

The tank must be completely dry and free from mud, dirt, rust, grease, etc. The two components of **PU-COAT II** must be mixed in its own container until it becomes homogenous. The first coat is applied by using a brush or roller. Either rebar mesh or geotextile is laid before the first coat dries up. About 6 hours later the second coat is applied to complete the application.
As a completely safe product with no harmful ingredients **PU-COAT II** does not require any special safety precautions. It can be safely used in closed environments and it is suitable to contact with potable water.
PU-COAT II does not mix with water after the application.

Reports:
- Environment Lab. Report: 01-09-2006, No: 04130-04131; İSKİ Water Quality Control Management: 21-02-2007
- Report of Middle East Technical University for the conformity to BS 6920 and use in drinking water systems Report No: 2014.03.04.147/03)

Waterproofing Historical and Stone Buildings

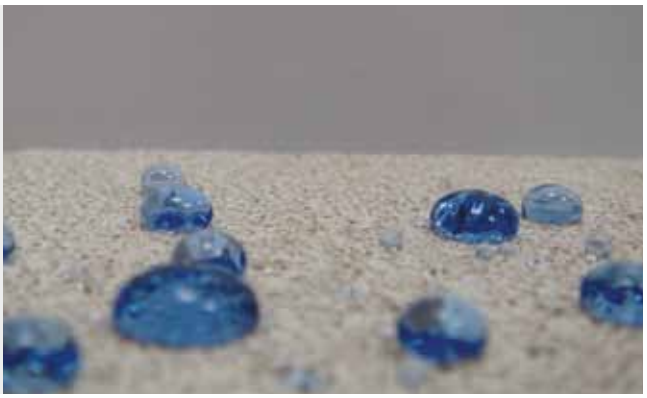
Waterproofing Historical and Stone Buildings

Natural stones are mostly water permeable.

Dust, soot, etc. sticking to the surface of the stone in dry weather permeate deeper into the stone with the rainfall and the stone blackens in time. Acid found in the rainfall also damages the stones.

And the biggest and fastest damage occures as a result of freeze/thaw cycles in the wet stone.

This is surely not at all desirable after all those costly restoration efforts. In historical buildings and in the applications made by white concrete, waterproofing materials which form a layer on the surface create shade variations even when they are transparent, so they are not preferred alternatives. So Emülzer® offers two products with water repellent, impregnating characteristics; one water based, and the other solvent based. In addition to these products, **SAYCOAT** can be used on decorative stone and brick coatings, as another alternative; it is transparent, but it forms a layer.



Invisible waterproofing in historical buildings

Historical or stone buildings whose appearance needs to be perfectly maintained can be insulated invisibly by using **SAYSILOX**. First of all, the surface to be treated must be cleaned with a relevant method (such as pressured water, sandblasting, etc.). When the surface is completely dry, it should be saturated with **SAYSILOX** from the top to the bottom. The best method is to apply **SAYSILOX** with a brush, roller and sprayer, and then to apply a second coat before the first coat dries up. **SAYSILOX** will become water-repellent as soon as it dries up. It will take a few days to complete its cure. Although the pearl effect will decrease after a few months the surface will remain totally water-repellent. This application creates self-cleaning surfaces, so all the dirt or dust accumulating on the surface will always be washed away with the rain before they permeate deeper and blacken the surface.

Transparent waterproofing on decorative surfaces such as stone, brick and terracotta

Our transparent products are ideal for waterproofing decorative coatings such as stone, brick and terracotta without changing their original colors. First of all, the surface to be treated must be cleaned with a relevant method (such as pressured water, sandblasting, etc.). When the surface is completely dry, it should be saturated with **SAYSILOX** from the top to the bottom. The best method is to apply **SAYSILOX** with a brush, roller and sprayer, and then to apply a second coat before the first coat dries up. **SAYSILOX** will become water-repellent as soon as it dries up. It will take a few days to complete its cure. Although the pearl effect will decrease after a few months the surface will remain totally water-repellent. This application creates self-cleaning surfaces, so all the dirt or dust accumulating on the surface will always be washed away with the rain before they permeate deeper and blacken the surface. **SAYSILOX** does not inhibit the breathability of the surface while preventing water from permeating into the coating. **SAYCOAT** transparent coating can also be utilized in this application. Unlike **SAYSILOX, SAYCOAT** forms transparent film on the surface it is applied. Depending on the amount applied, it creates a slightly damp to completely wet brilliance. So it would not be aesthetically convenient to apply **SAYCOAT** partially; it should be applied to the whole surface.

Waterproofing Terrace Gardens

Waterproofing Terrace Gardens

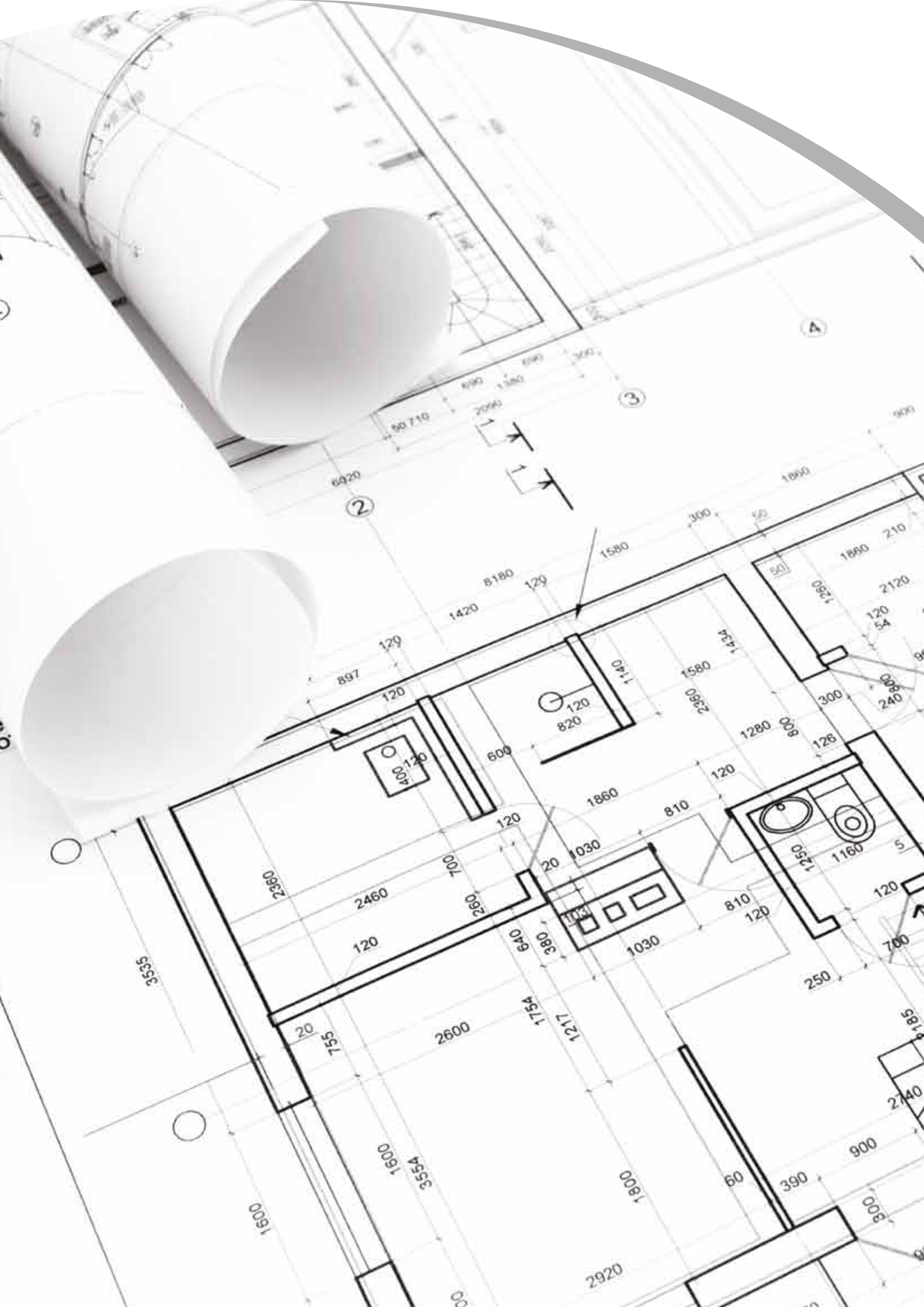
Terrace gardens and undersoil car parks can be perfectly sealed by using a combination of **EMİLKOTE** undercoat, **EMÜLZER PLUS ANTI ROOT, PUNTODRAIN RG** drainage boards and filtration felt. This application does not only provide perfect waterproofing, but thanks to **PUNTODRAIN RG** drainage boards, minimum irrigation enables maximum moisture for the soil.

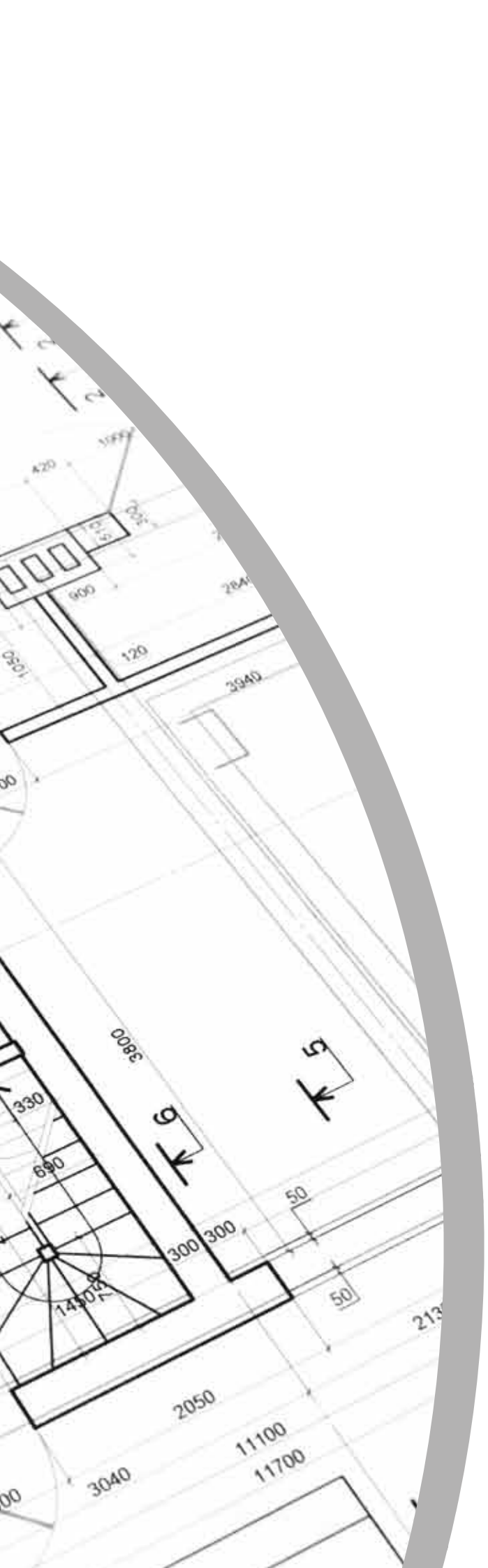
Application

The suface to be treated must be dry, clean, and free from dust and grease. It must be firstly undercoated with **EMİLKOTE** (400 g/m^2). Metallic surfaces must be primed with **EMÜLZER C** instead of **EMİLKOTE**. When the undercoat is completely dry, the first coat of **EMÜLZER PLUS ANTI ROOT** is applied with a brush, roller or sprayer. Before this first coat dries up, reinforcing geotextile (50 g/m^2) is applied onto the surface, overlapping 15 cm at seams. To complete the insulation **EMÜLZER PLUS ANTI ROOT** is applied in 2 more coats. Although **EMÜLZER PLUS ANTI ROOT** dries fast-in as little as 2 hours-it is recommended to wait 24 hours before applying a second coat. This application is sufficient for a soil layer of approximately 10 cm thickness complete with the plants. The number of **GEOTEKSTIL** and **PLUS ANTI ROOT** layers must increase in proportion with the thickness of the soil. After having completed the waterproofing, **PUNTODRAIN RG** drainage boards are mounted and geo-textile (300 g/m^2 minimum) is applied. **PUNTODRAIN RG** serves for drainage as well as for the protection of the insulation, and **GEOTEKSTIL** for filtration. The strainers and outlets utilized must be compatible with the waterproofing application. In terrace gardens, the upper limit of the waterproofing must be at least 20 cm higher than the soil level. It is critical to prevent water outlets from plugging during assemblage and application. After the application, the area can be filled with soil, and it can be landscaped as desired.

Special Applications

Waterproofing terraces and gardens located over underground car parks may require special applications such as dilatations and decorative pools. For more information on such applications and products please visit us at **www.emulzer.com.tr.**





Insulation Solutions

Water Insulation Detail on Lean Concrete at Foundations

Water Insulation Detail of Wet Areas

Water Insulation Detail of Garden Terraces

Water Insulation Detail of Dilatations

Water Insulation Detail of Under-Ceramic Applications

Water Insulation Detail of Elevator Pits (Negative Side)

Water Insulation Detail of Elevator Pits (Positive Side)

Water Insulation Detail of Open Terraces

Water Insulation Detail of Water Tanks

Water Insulation Detail of Heat Isolated Undercoating Terraces

Water Insulation Detail of Heat Isolated Walkable Terraces

Water Insulation Detail of Heat Isolated Non-Walkable Terraces

Water Insulation Detail of Gutters

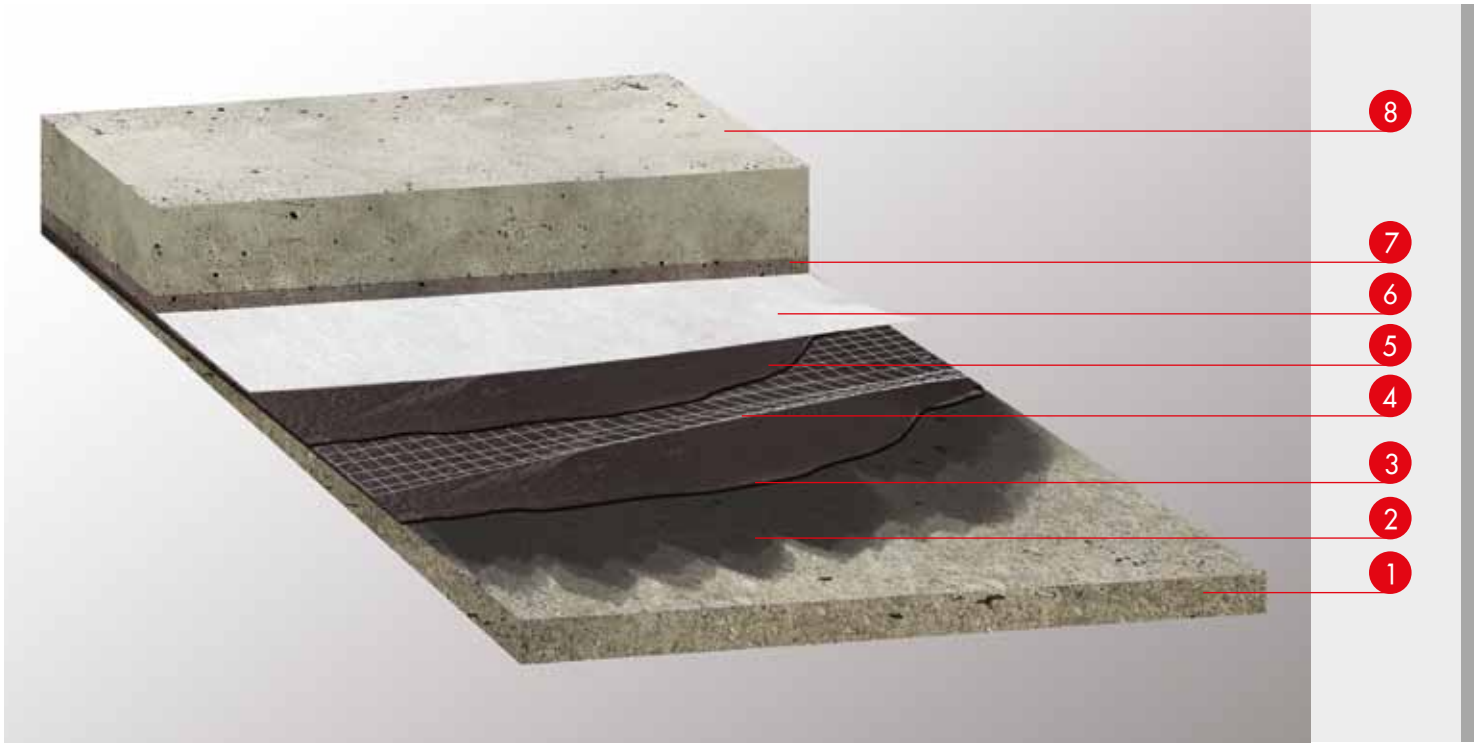
Bitumen Laying and DeadLock Details

Insulation Detail of Precast Over Viaducts

Concrete Pipe Detail

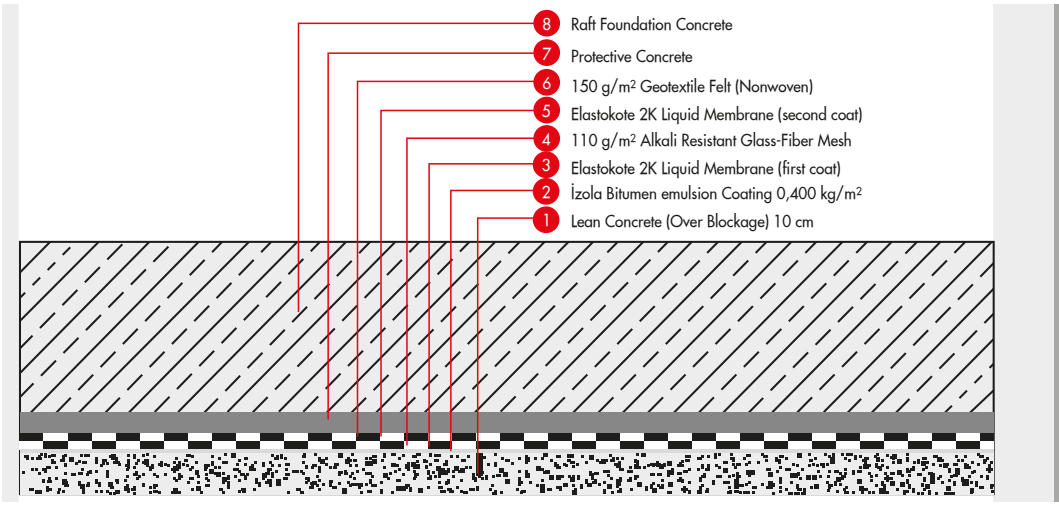
Detail of Steel Construction Viaduct

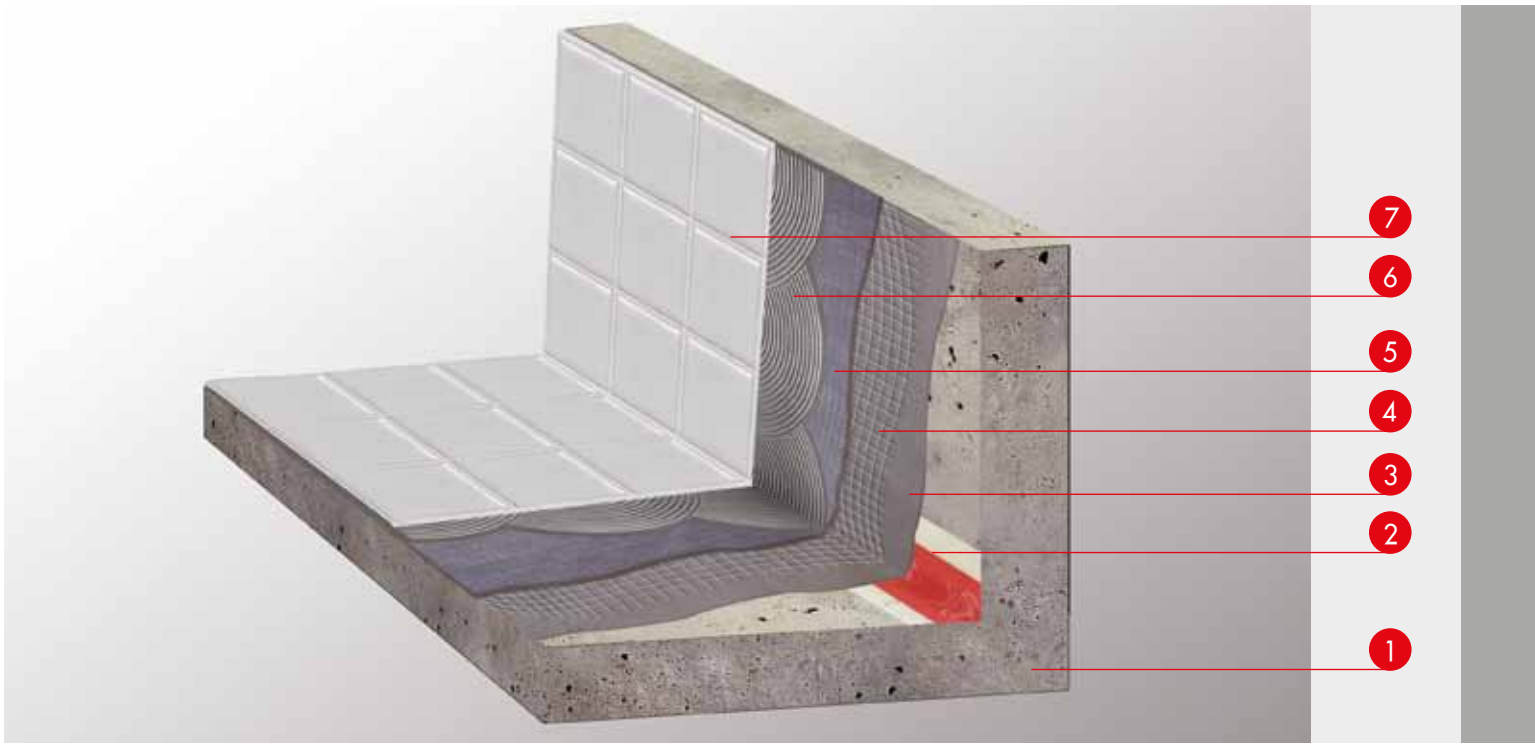
MEMBER OF INSULATION ASSOCIATION
İZODER
SUDER
WATERPROOFERS ASSOCIATION
TÜRKAK
MADE IN TURKEY



Water Insulation Detail on Lean Concrete at Foundations

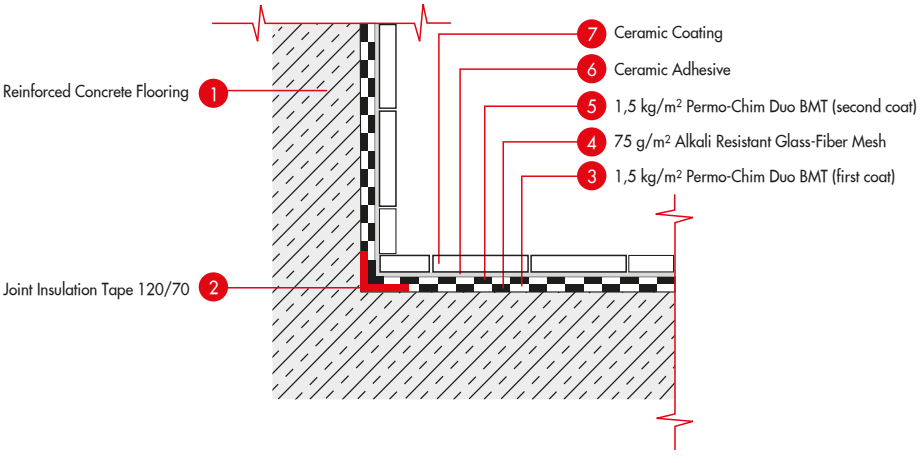
1. Lean Concrete (Over Blockage) 10 cm
2. İzola Bitumen Emulsion Coating 0,400 kg/m²
3. Elastokote 2K Liquid Membrane (First Coat)
4. 110 g/m² Alkali Resistant Glass-Fiber Mesh
5. Elastokote 2K Liquid Membrane (Second Coat)
6. 150 g/m² Geotextile Felt (Nonwoven)
7. Protective Concrete
8. Raft Foundation Concrete

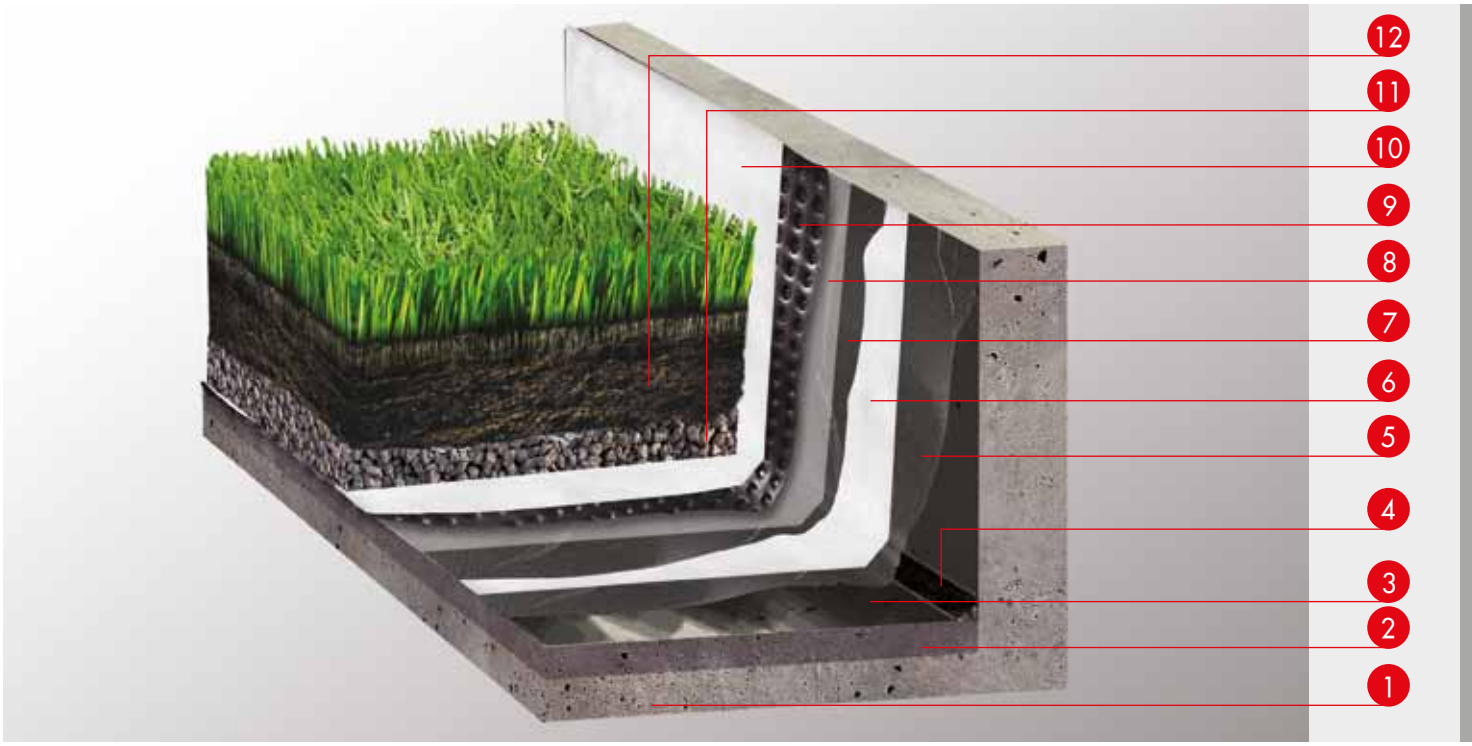




Water Insulation Detail of Wet Areas

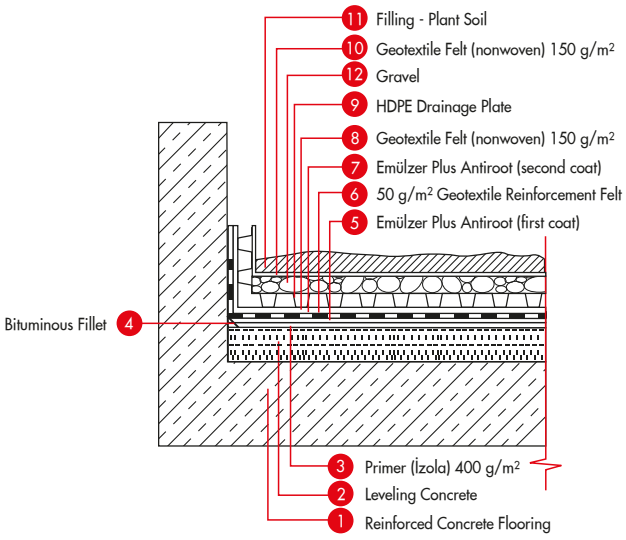
1. Reinforced Concrete Flooring
2. Joint Insulation Tape 120/70
3. 1,5 kg/m² Permo-Chim Duo BMT (First Coat)
4. 75 g/m² Alkali Resistant Glass-Fiber Mesh
5. 1,5 kg/m² Permo-Chim Duo BMT (Second Coat)
6. Ceramic Adhesive
7. Ceramic Coating

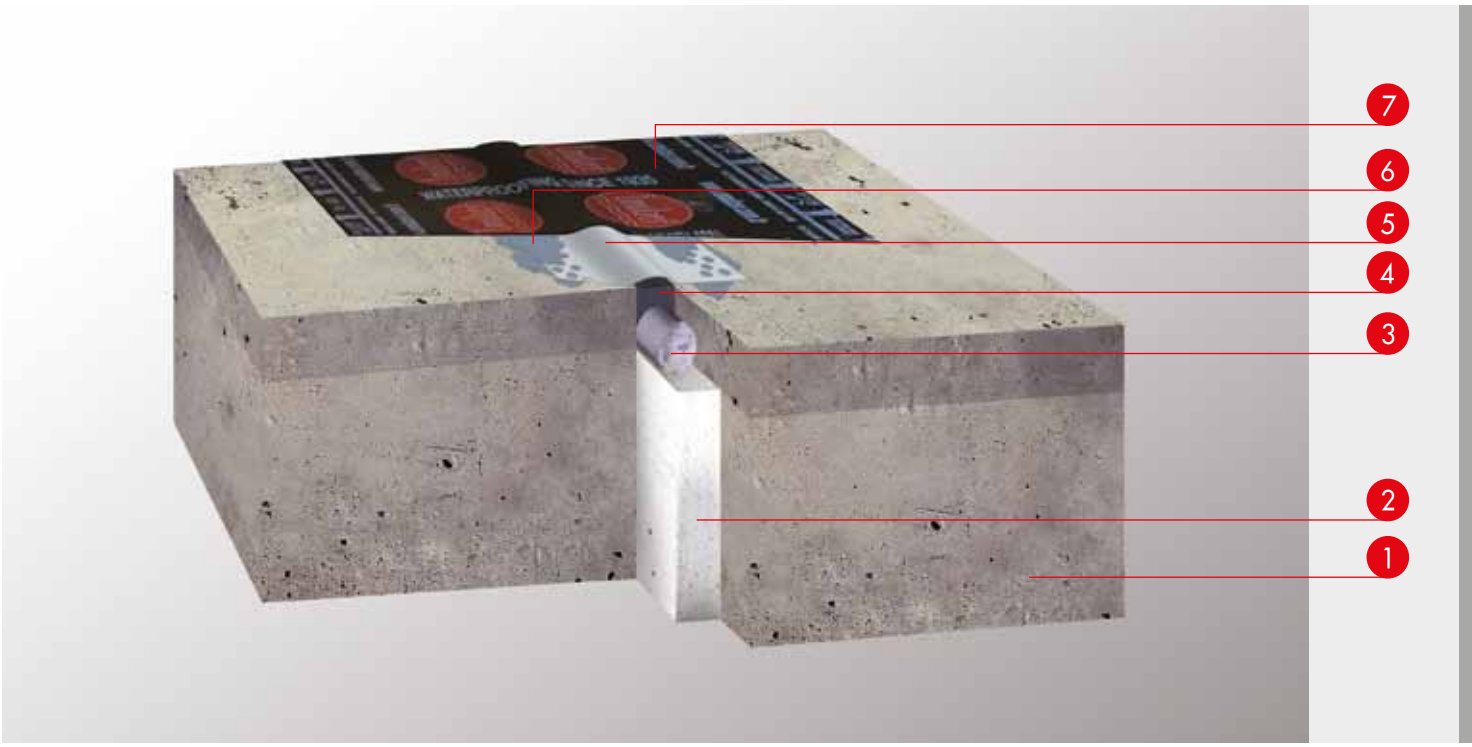




Water Insulation Detail of Garden Terraces

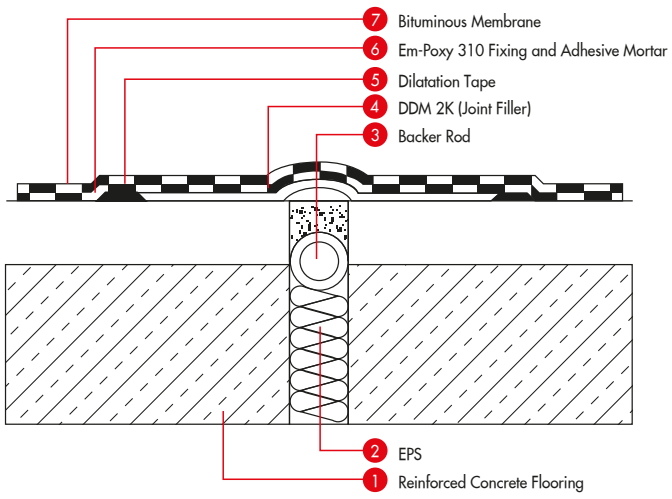
1. Reinforced Concrete Flooring
2. Leveling Concrete
3. Primer (İzola) 400 g/m²
4. Bituminous Fillet
5. Emülzer Plus Antiroot (First Coat)
6. 50 g/m² Geotextile Reinforcement Felt
7. Emülzer Plus Antiroot (Second Coat)
8. Geotextile Felt (Nonwoven) 150 g/m²
9. HDPE Drainage Plate
10. Geotextile Felt (Nonwoven) 150 g/m²
11. Filling - Plant Soil
12. Gravel

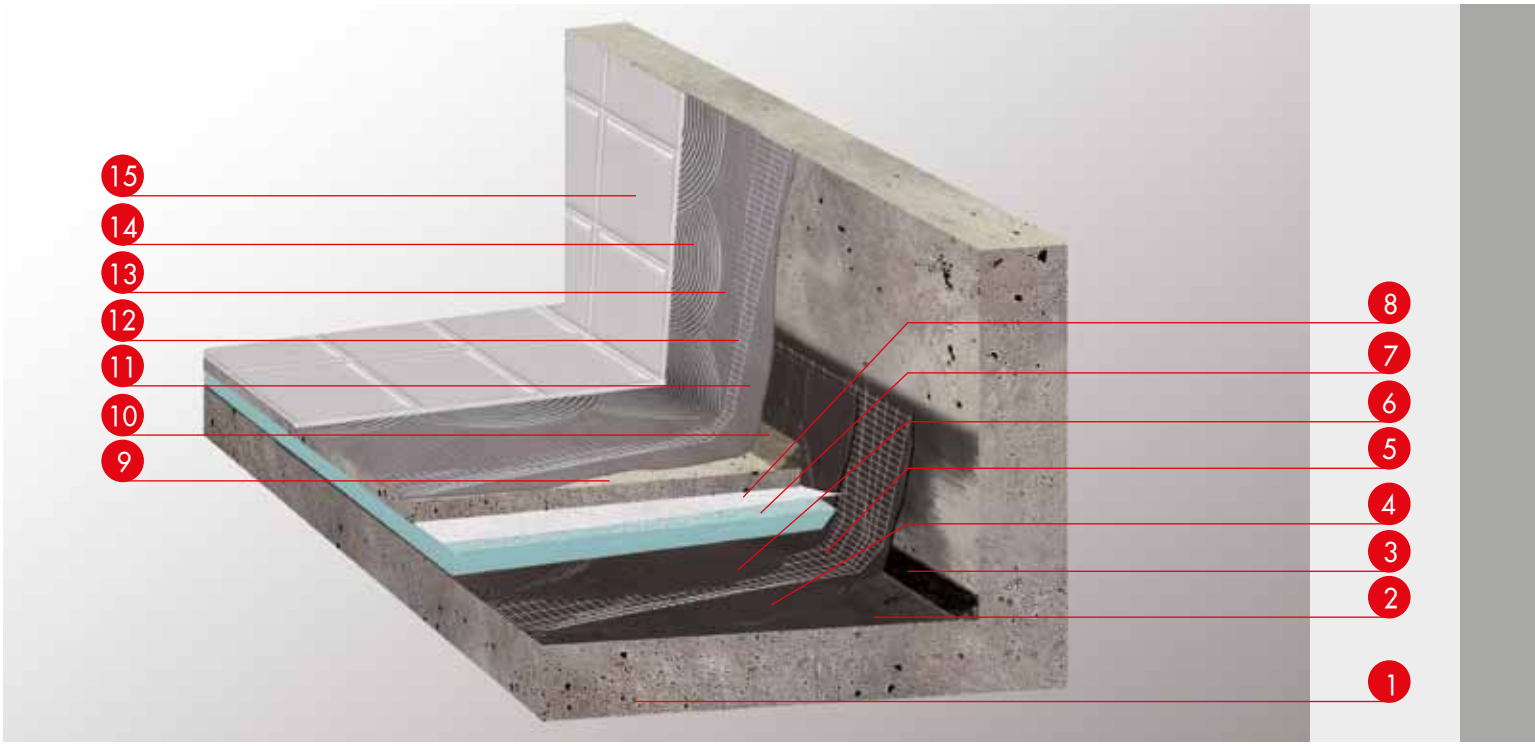




Water Insulation Detail of Dilatations

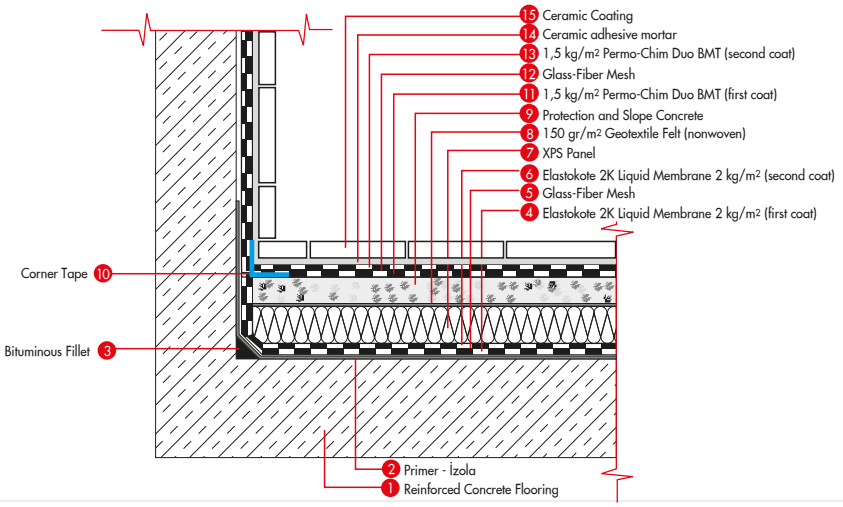
1. Reinforced Concrete Flooring
2. EPS
3. Backer Rod
4. DDM 2K (Joint Filler)
5. Dilatation Tape
6. Em-Poxy 310 Fixing and Adhesive Mortar
7. Bituminous Membrane

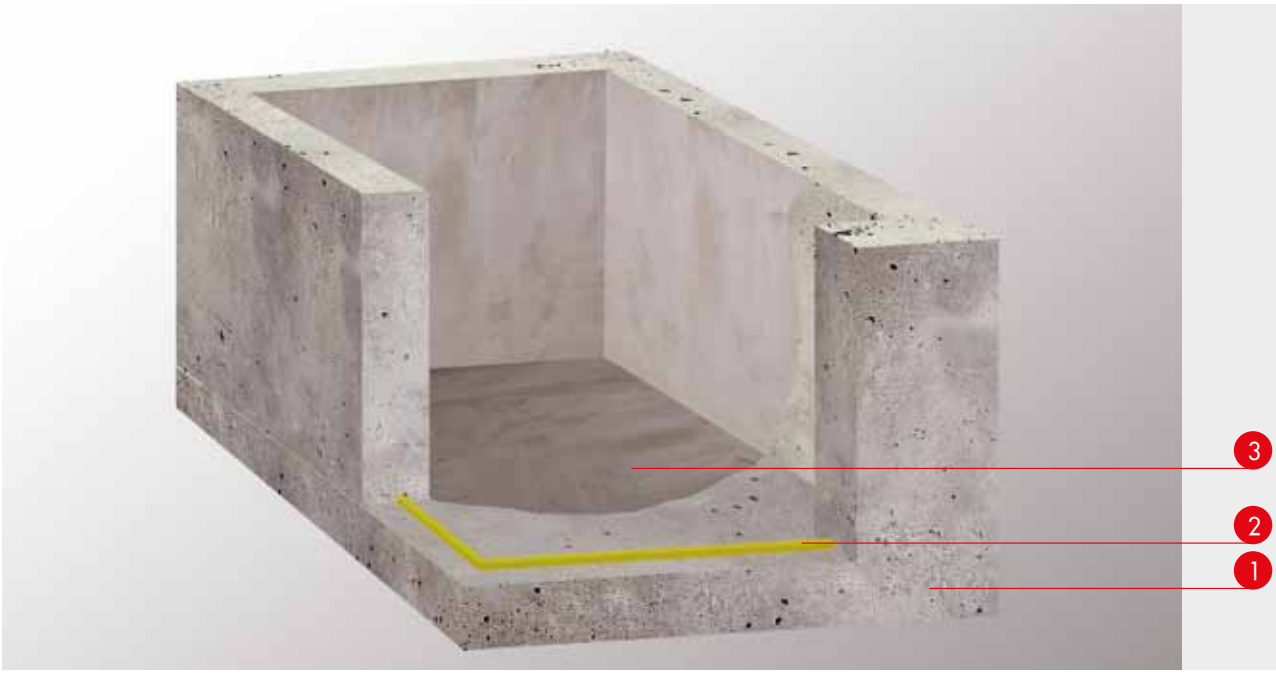




Water Insulation Detail of Under-Ceramic Applications

1. Reinforced Concrete Flooring
2. Primer - İzola
3. Bituminous Fillet
4. Elastokote 2K Liquid Membrane 2 kg/m² (First Coat)
5. Glass-Fiber Mesh
6. Elastokote 2K Liquid Membrane 2 kg/m² (Second Coat)
7. XPS Panel
8. 150 gr/m² Geotextile Felt (Nonwoven)
9. Protection and Slope Concrete
10. Corner Tape
11. 1,5 kg/m² Permo-Chim Duo BMT (First Coat)
12. Glass-Fiber Mesh
13. 1,5 kg/m² Permo-Chim Duo BMT (Second Coat)
14. Ceramic Adhesive Mortar
15. Ceramic Coating

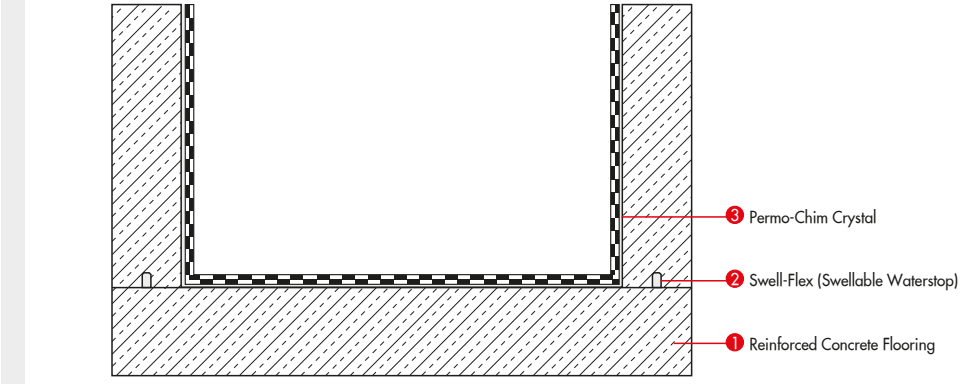


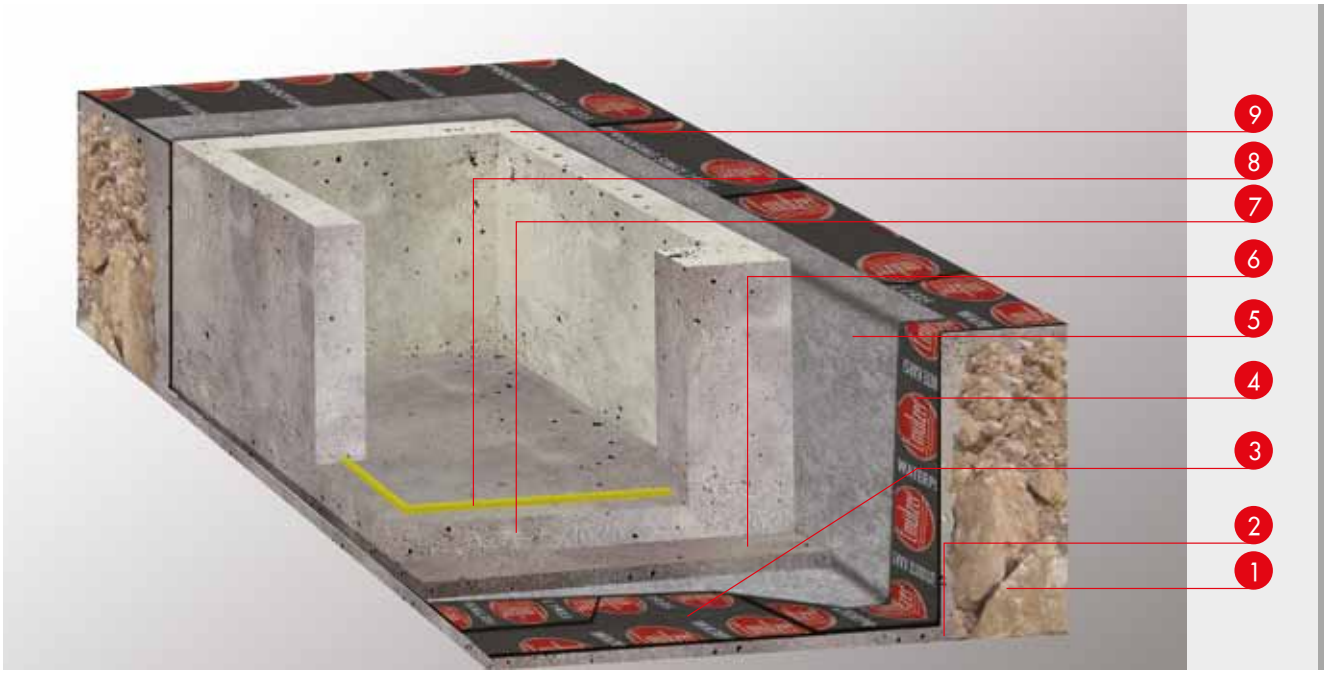


Water Insulation Detail of Elevator Pits

(Negative Side)

1. Reinforced Concrete Flooring
2. Swell-Flex - (Swellable Waterstop)
3. Permo-Chim Crystal

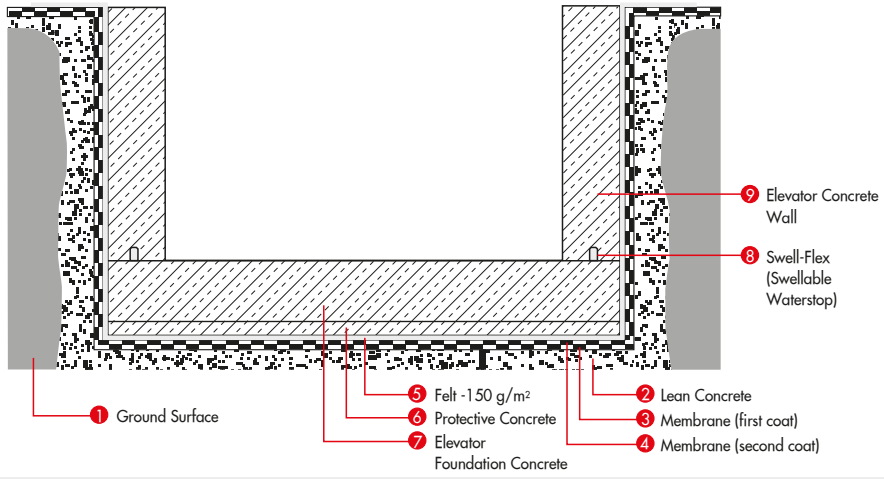


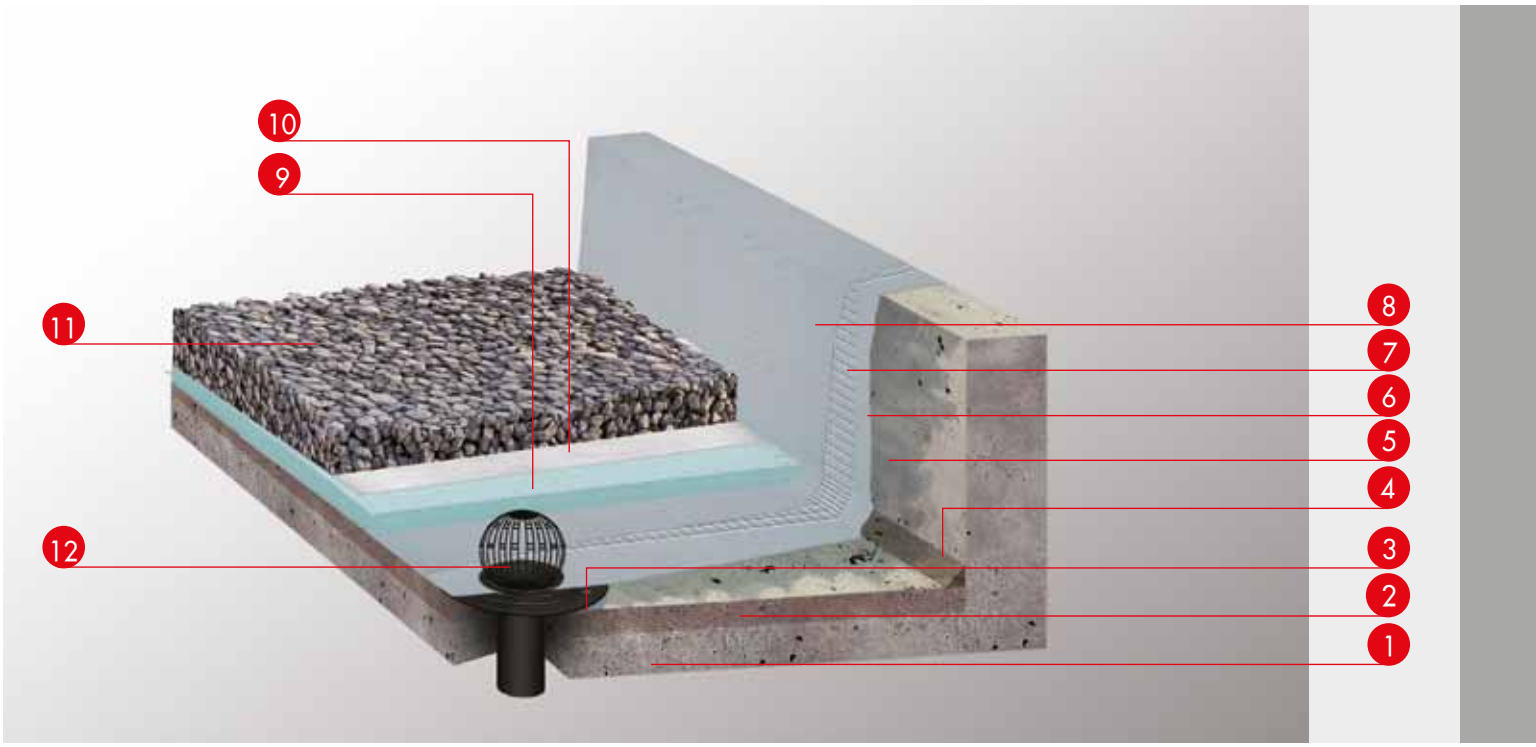


Water Insulation Detail of Elevator Pits

(Positive Side)

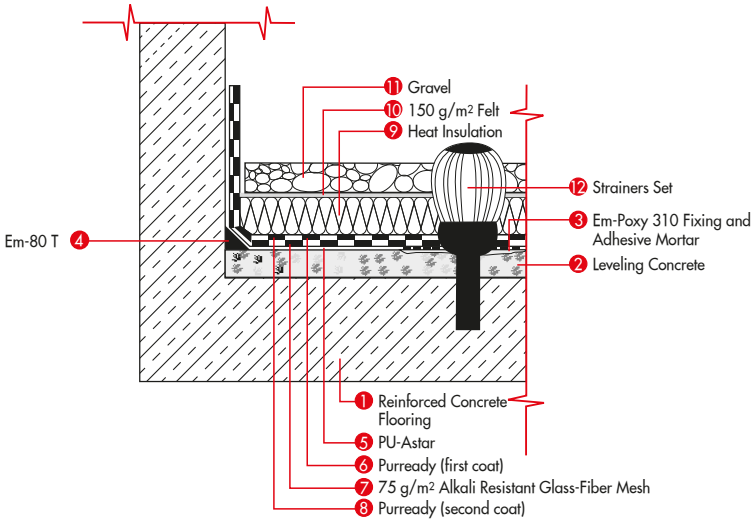
1. Ground Surface
2. Lean Concrete
3. Membrane (First Coat)
4. Membrane (Second Coat)
5. Felt - 150 g/m²
6. Protective Concrete
7. Elevator Foundation Concrete
8. Swell-Flex - (Swellable Waterstop)
9. Elevator Concrete Wall

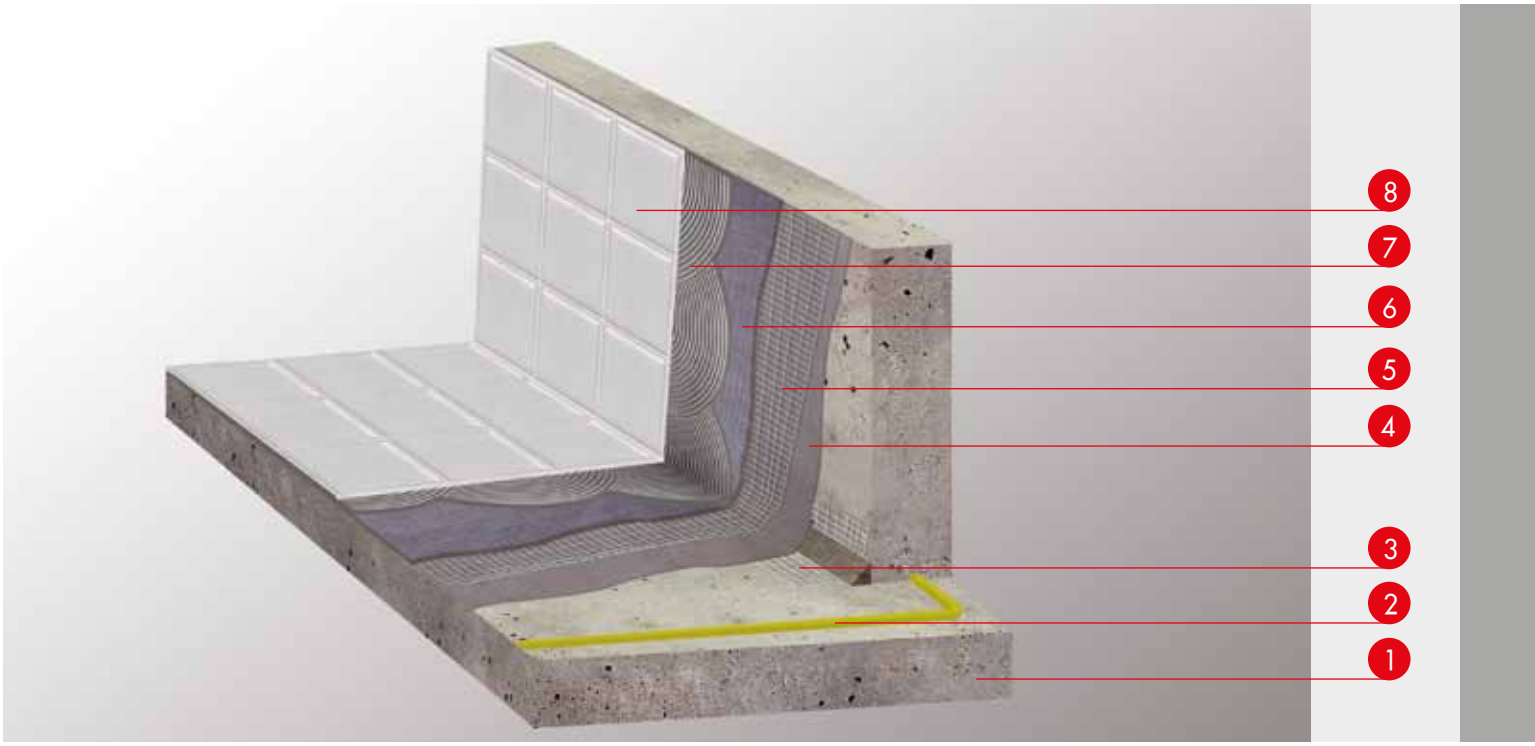




Water Insulation Detail of Open Terraces

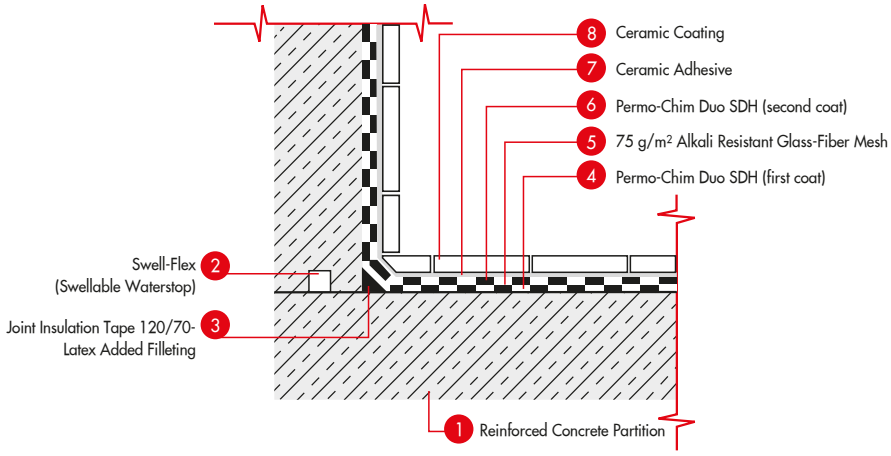
1. Reinforced Concrete Flooring
2. Leveling Concrete
3. Em-Poxy 310 Fixing and Adhesive Mortar
4. Em-80 T
5. PU-Astar
6. Purready (First Coat)
7. 75 g/m² Alkali Resistant Glass-Fiber Mesh
8. Purready (Second Coat)
9. Heat Insulation
10. 150 g/m² Felt
11. Gravel
12. Strainers Set

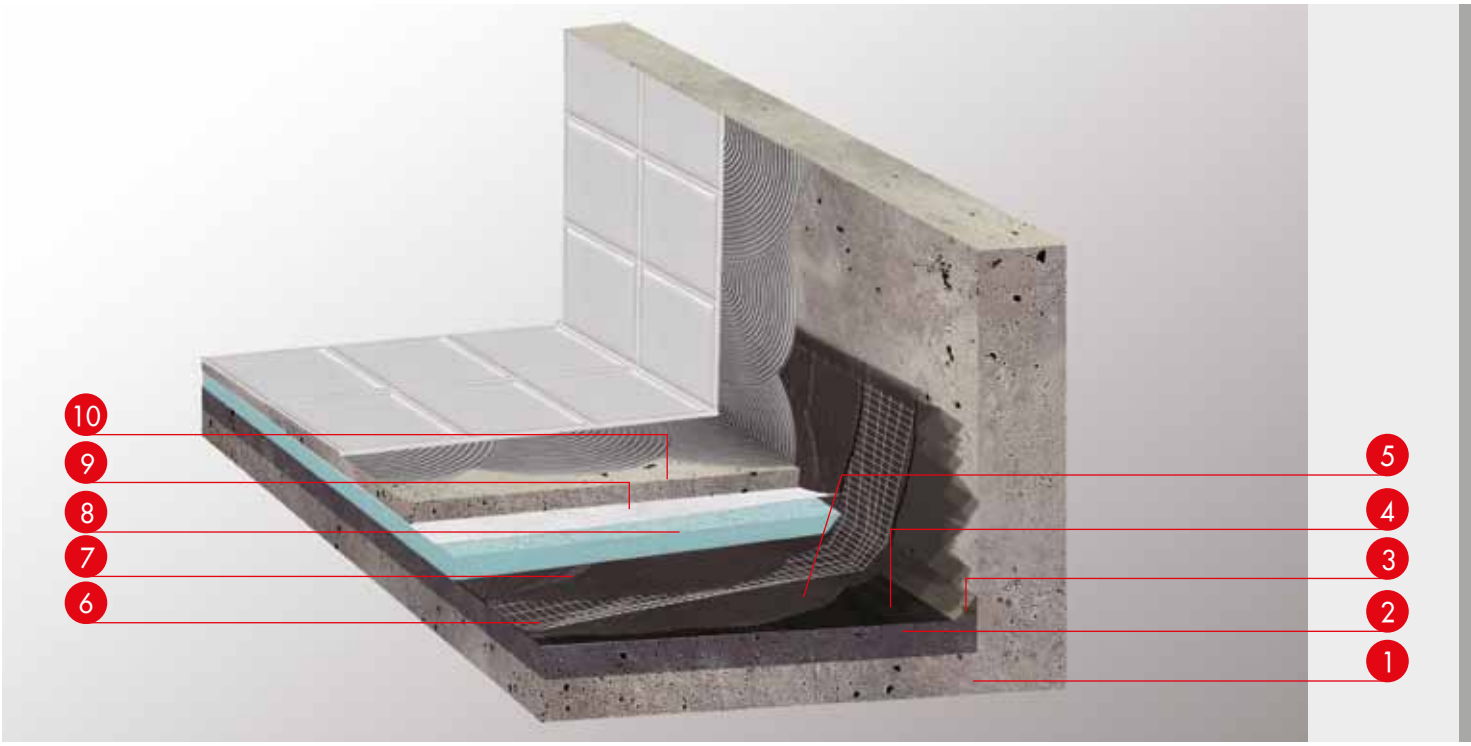




Water Insulation Detail of Water Tanks

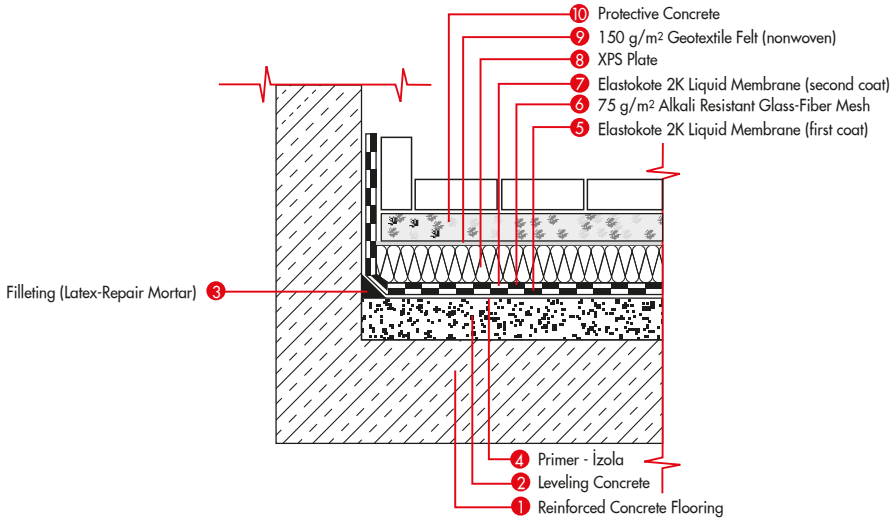
1. Reinforced Concrete Partition
2. Swell-Flex - (Swellable Waterstop)
3. Joint Insulation Tape 120/70 - Latex Added Filleting
4. Permo-Chim Duo SDH (First Coat)
5. 75 g/m² Alkali Resistant Glass-Fiber Mesh
6. Permo-Chim Duo SDH (Second Coat)
7. Ceramic Adhesive
8. Ceramic Coating

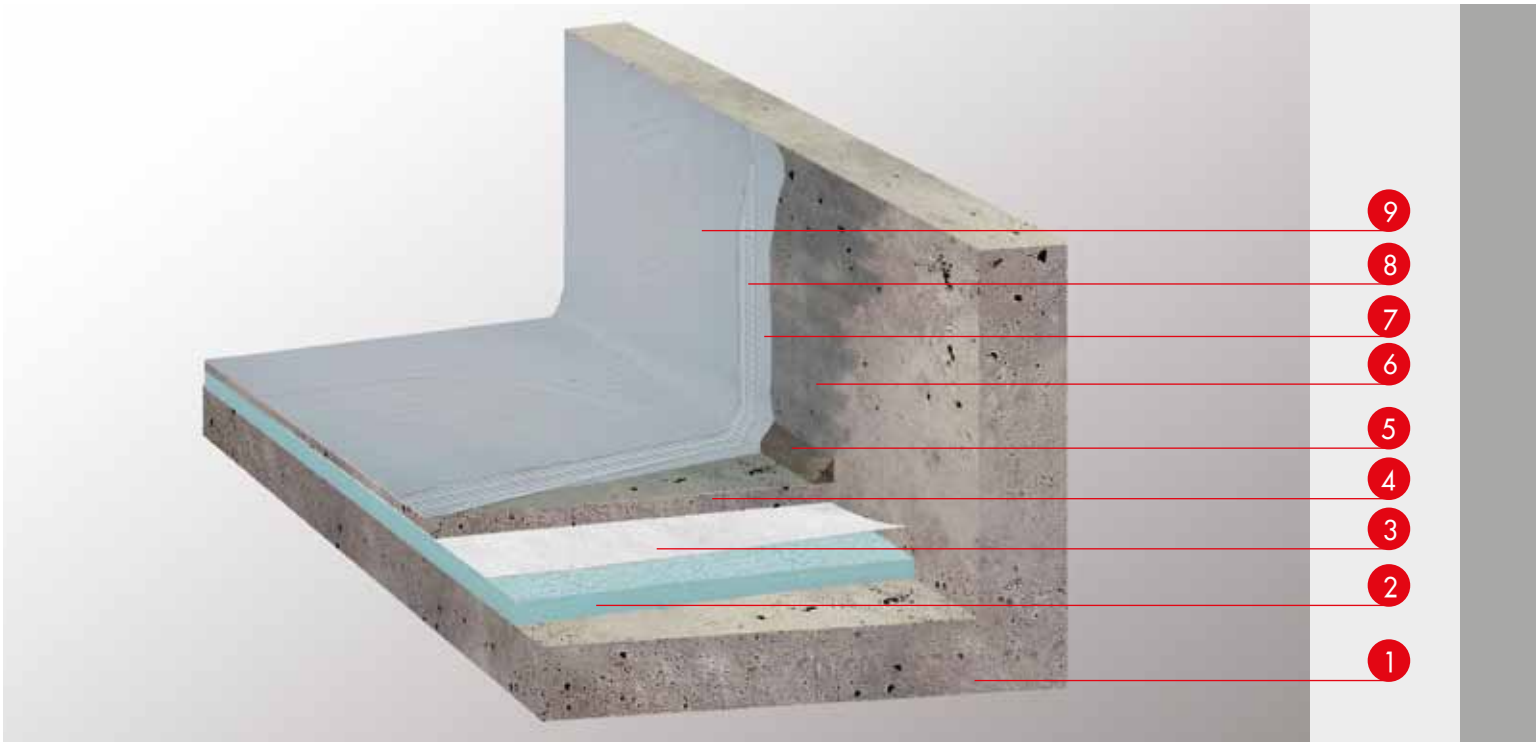




Water Insulation Detail of Heat Isolated Undercoating Terraces

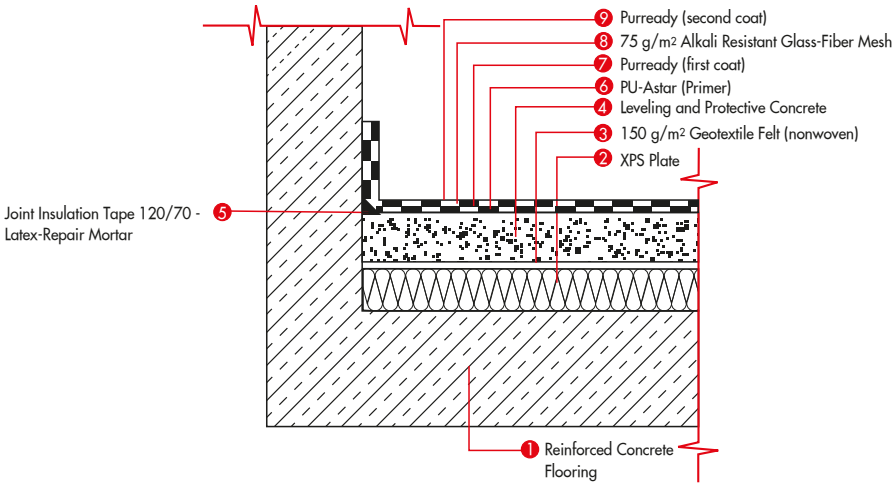
1. Reinforced Concrete Flooring
2. Leveling Concrete
3. Filleting (Latex-Repair Mortar)
4. Primer - İzola
5. Elastokote 2K Liquid Membrane (first coat)
6. 75 g/m² Alkali Resistant Glass-Fiber Mesh
7. Elastokote 2K Liquid Membrane (second coat)
8. XPS Plate
9. 150 g/m² Geotextile Felt (nonwoven)
10. Protective Concrete

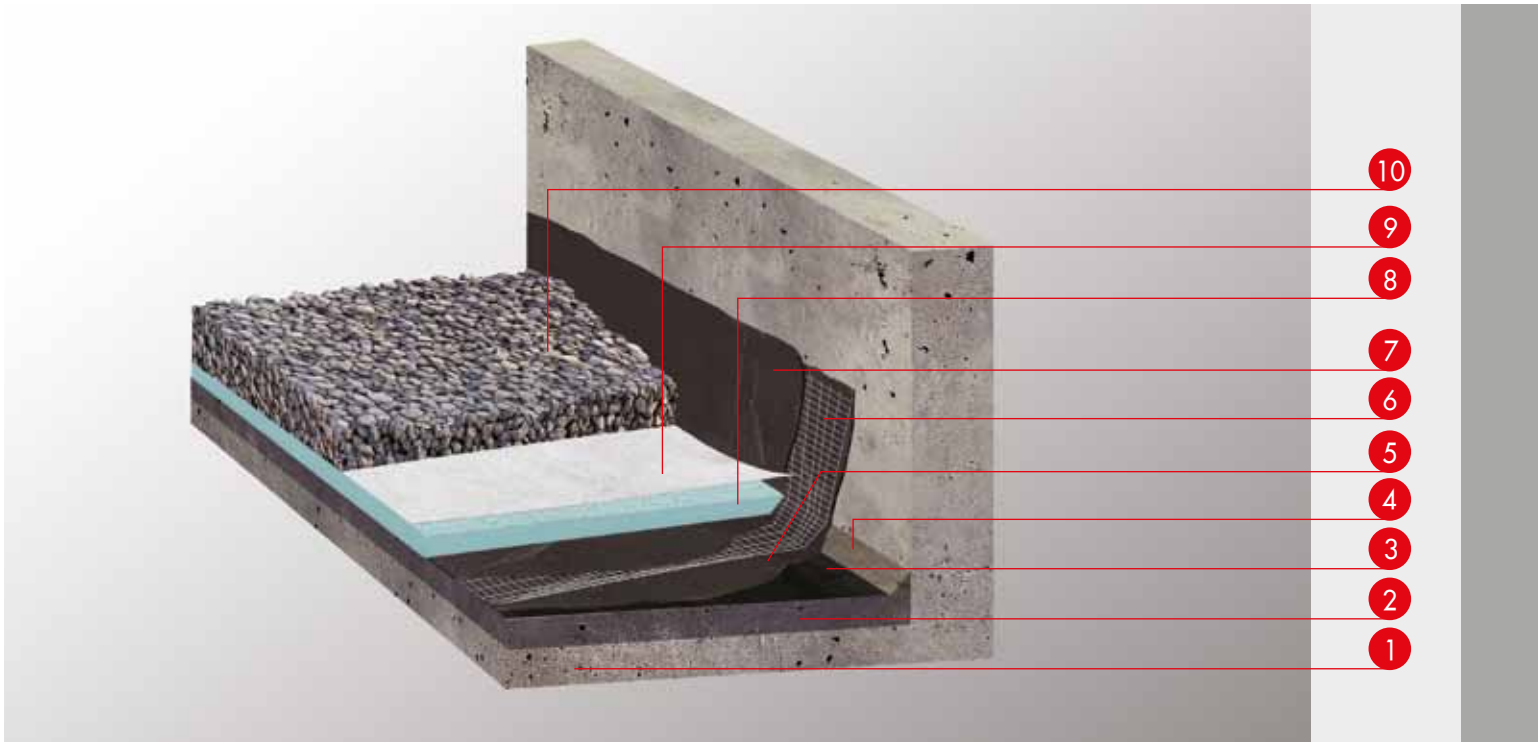




Water Insulation Detail of Heat Isolated Walkable Terraces

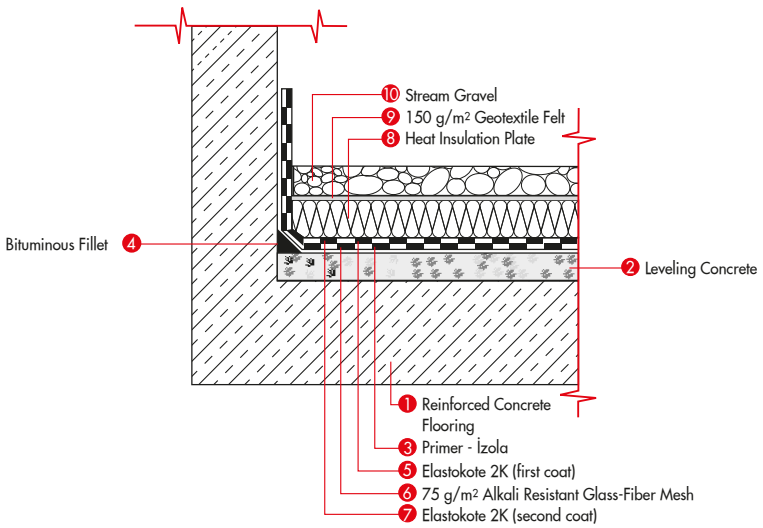
1. Reinforced Concrete Flooring
2. XPS Plate
3. 150 g/m² Geotextile Felt (Nonwoven)
4. Leveling and Protective Concrete
5. Joint Insulation Tape 120/70 - Latex-Repair Mortar
6. PU-Astar (Primer)
7. Purready (First Coat)
8. 75 g/m² Alkali Resistant Glass-Fiber Mesh
9. Purready (Second Coat)

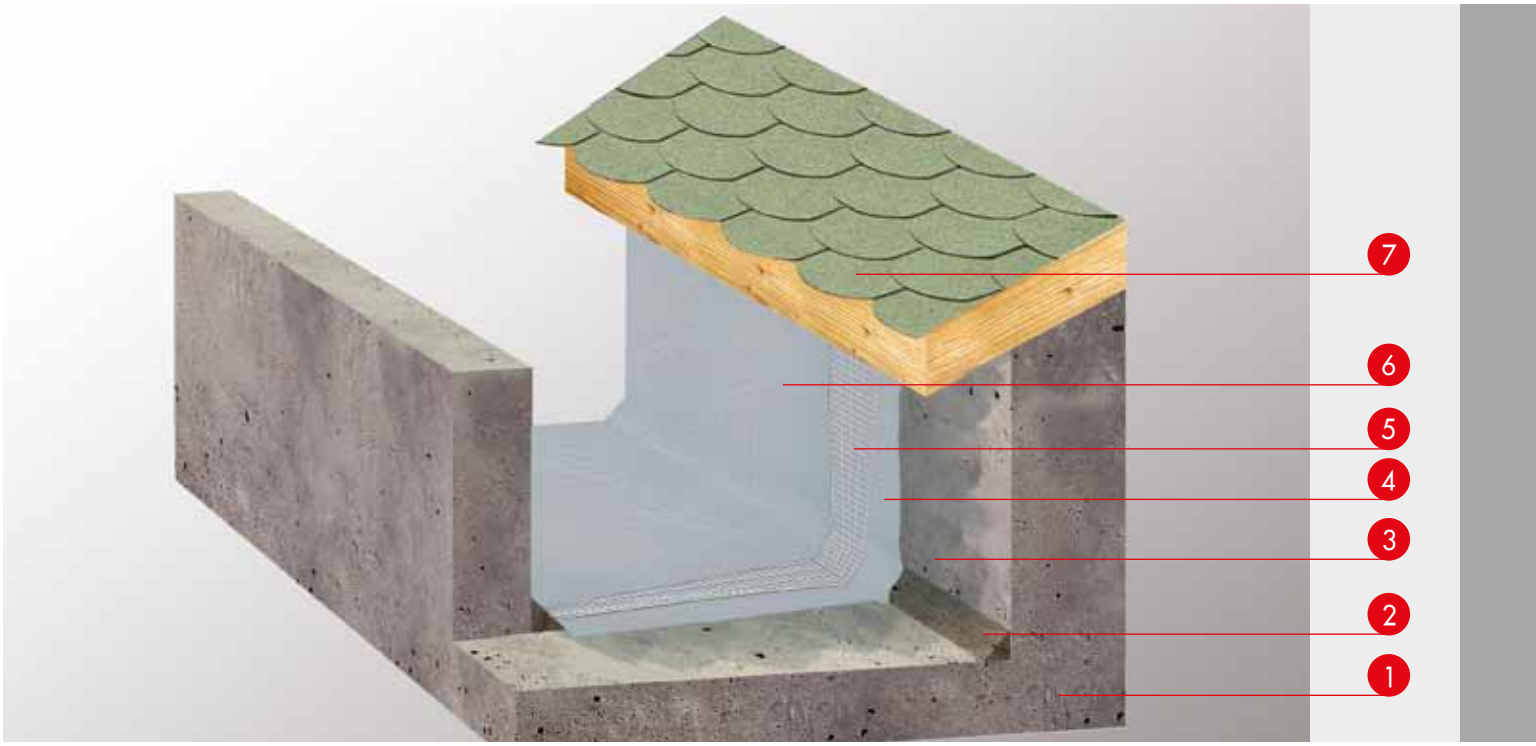




Water Insulation Detail of Heat Isolated Non-Walkable Terraces

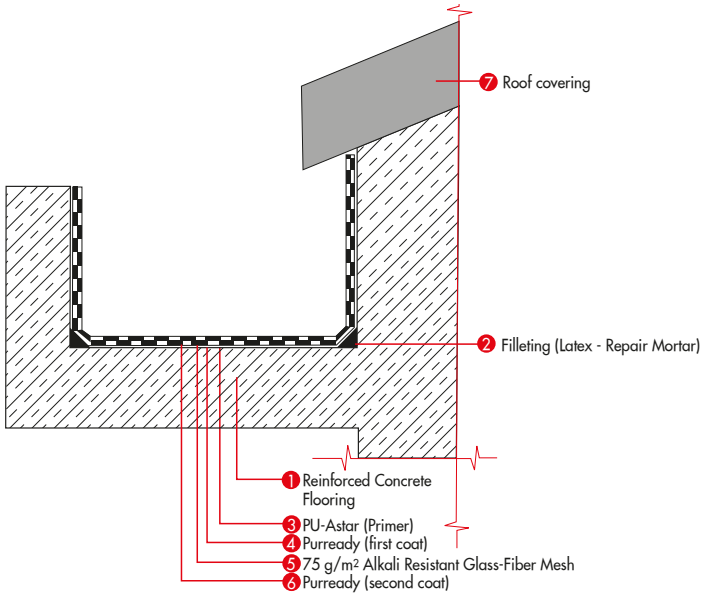
1. Reinforced Concrete Flooring
2. Leveling Concrete
3. Primer - İzola
4. Bituminous Fillet
5. Elastokote 2K (First Coat)
6. 75 g/m² Alkali Resistant Glass-Fiber Mesh
7. Elastokote 2K (Second Coat)
8. Heat Insulation Plate
9. 150 g/m² Geotextile Felt
10. Stream Gravel

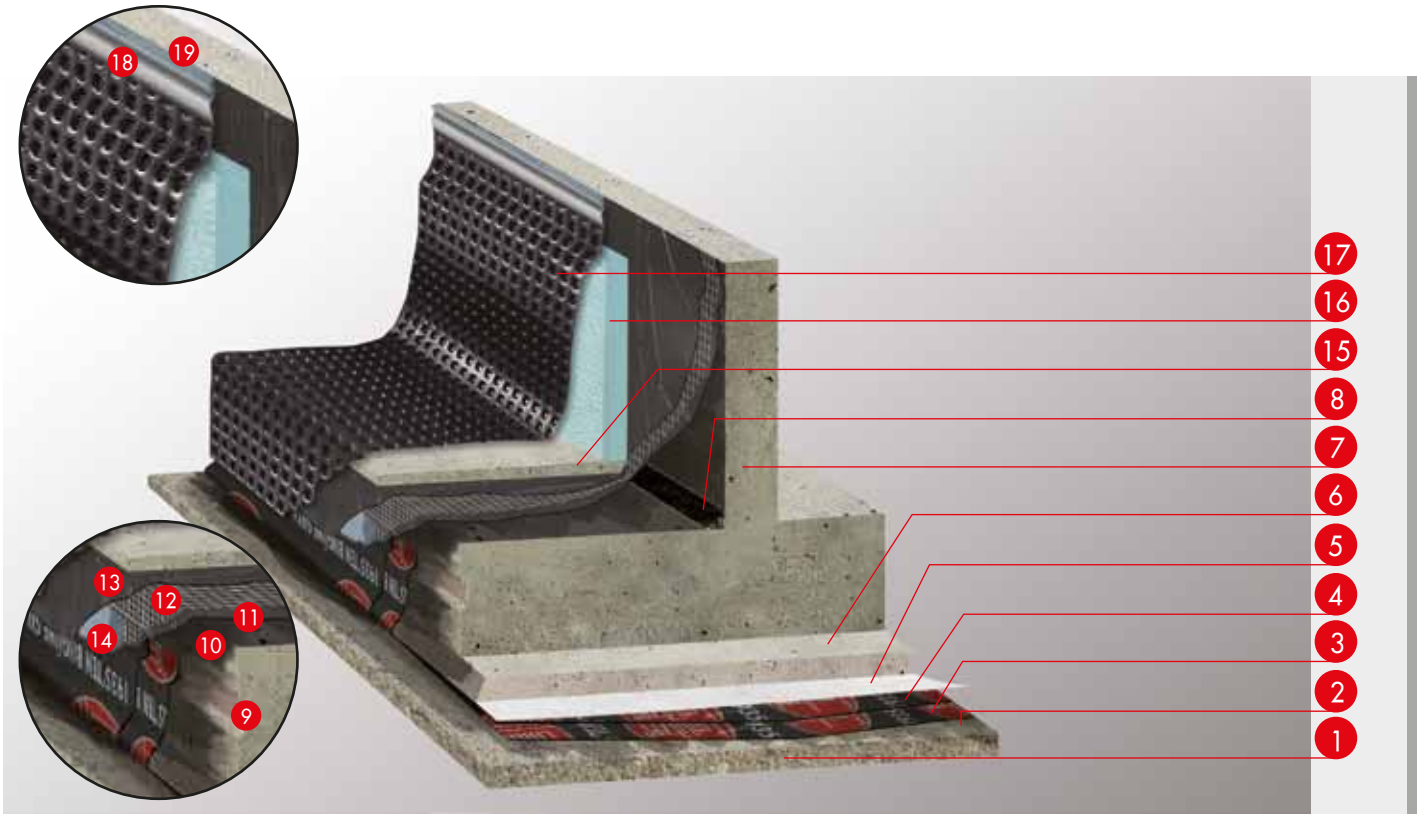




Water Insulation Detail of Gutters

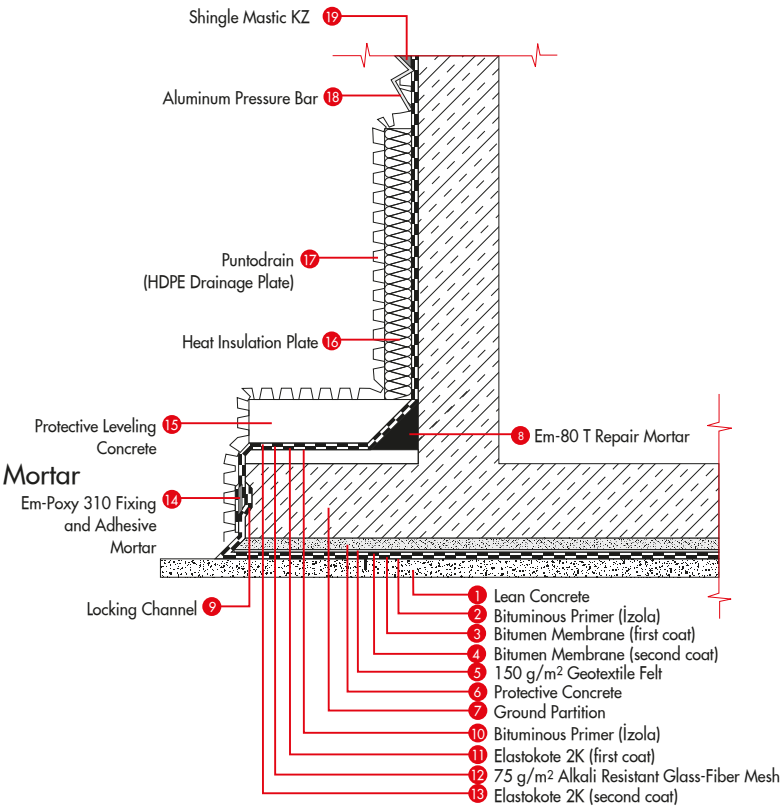
1. Reinforced Concrete Flooring
2. Filleting (Latex-Repair Mortar)
3. PU-Astar (Primer)
4. Purready (First Coat)
5. 75 g/m² Alkali Resistant Glass-Fiber Mesh
6. Purready (Second Coat)
7. Roof covering

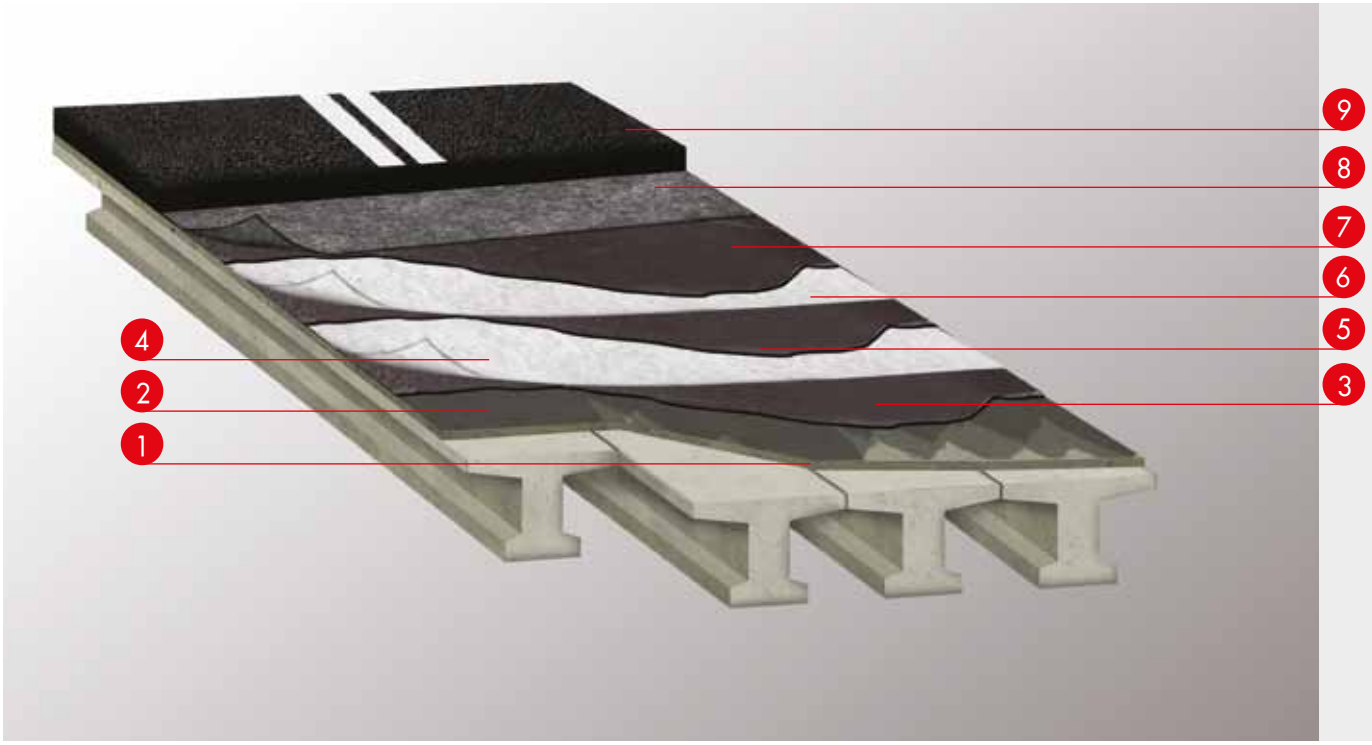




Bitumen Laying and DeadLock Details

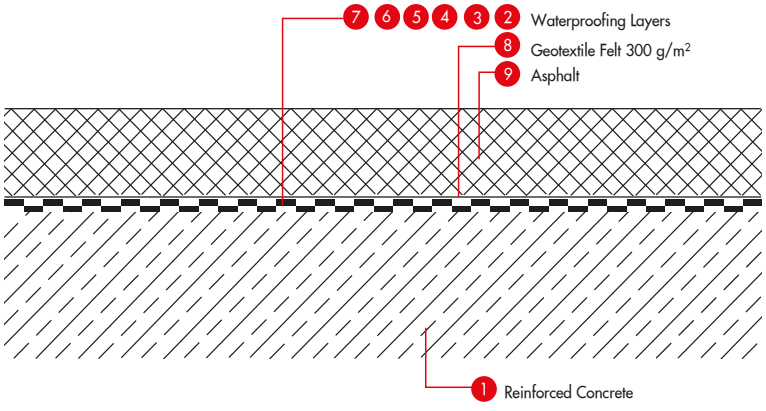
1. Lean Concrete
2. Bituminous Primer (İzola)
3. Bitumen Membrane (First Coat)
4. Bitumen Membrane (Second Coat)
5. 150 g/m² Geotextile Felt
6. Protective Concrete
7. Ground Partition
8. Em-80 T Repair Mortar
9. Locking Channel
10. Bituminous Primer (İzola)
11. Elastokote 2K (First Coat)
12. 75 g/m² Alkali Resistant Glass-Fiber Mesh
13. Elastokote 2K (Second Coat)
14. Em-Poxy 310 Fixing and Adhesive Mortar
15. Protective Leveling Concrete
16. Heat Insulation Plate
17. Puntodrain (HDPE Drainage Plate)
18. Aluminum Pressure Bar
19. Shingle Mastic KZ

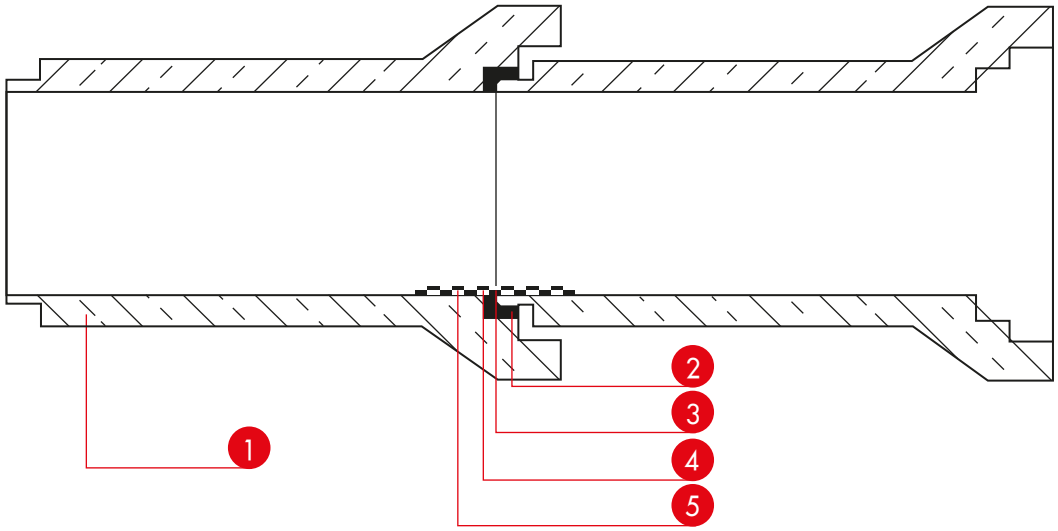




Insulation Detail of Precast Over Viaducts

1. Reinforced Concrete
2. Primer (Emilkote or İzola Export)
3. Emülzer® Plus (first coat)
4. Geotextile Felt 80 g/m²
5. Emülzer® Plus (second coat)
6. Geotextile Felt 80 g/m²
7. Emülzer® Plus (third coat)
8. Geotextile Felt 300 g/m²
9. Asphalt

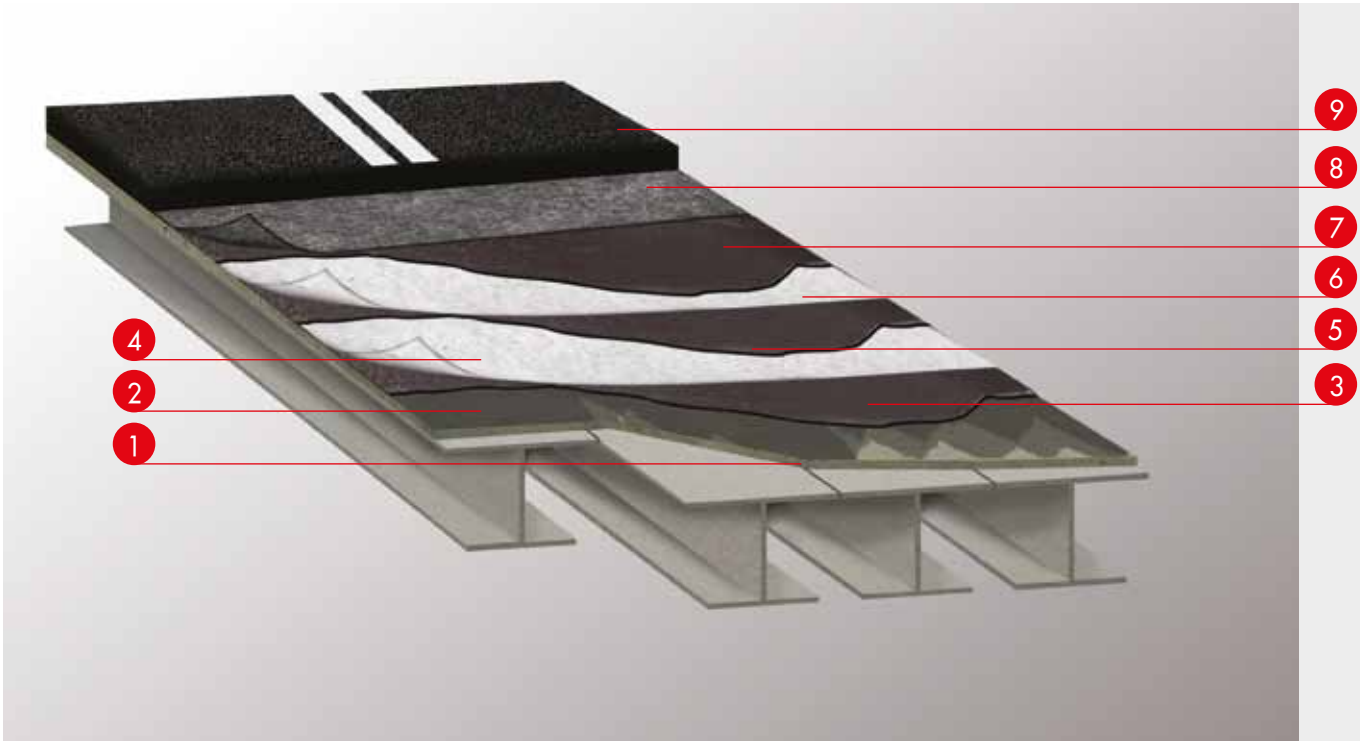




CE

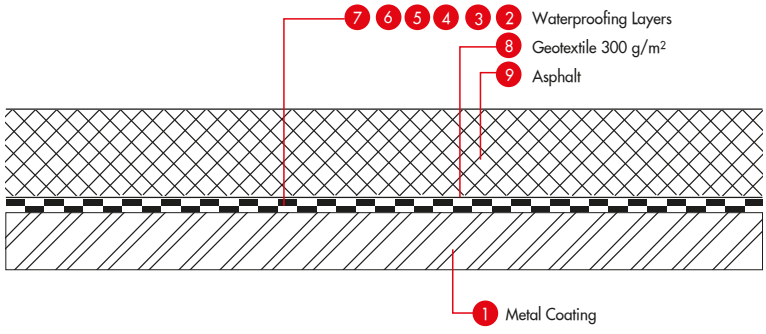
Concrete Pipe Detail

1. Concrete Pipe
2. HDM PU 2K (thixotropic)
3. HDM PU 2K (first coat)
4. Geotextile Strip
5. HDM PU 2K (second coat)



Detail of Steel Construction Viaduct

1. Metal Coating
2. Emülzer® C (Primer)
3. Emülzer® Plus (first coat)
4. Geotextile 80 g/m²
5. Emülzer® Plus (second coat)
6. Geotextile 80 g/m²
7. Emülzer Plus (third coat)
8. Geotextile 300 g/m²
9. Asphalt



CONSUMPTIONS

SHINGLE MASTIC KZ - BİTUMEN MASTİC SA - EMULSEAL PU MASTIC - PUR-WET HYBRID MASTIC

Joint Width	Consumption per meter	Performance of 310 ml Cartridge
5 x 5 mm	25 ml	12,8 m
6 x 6 mm	36 ml	8,9 m
7 x 7 mm	49 ml	6,5 m
8 x 8 mm	64 ml	6,0 m
9 x 9 mm	81 ml	3,9 m
10 x 10 mm	100 ml	3,2 m
12 x 10 mm	120 ml	2,1 m
15 x 10 mm	150 ml	1,8 m
18 x 10 mm	180 ml	1,7 m
20 x 10 mm	200 ml	1,6 m
22 x 12 mm	264 ml	1,2 m
25 x 12 mm	300 ml	1,1 m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TÜRK STANDARDLARINA UYGUNLUK BELGESİ
TURKISH STANDARDS INSTITUTION
CERTIFICATE OF CONFORMITY TO TURKISH STANDARDS
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ГОССТАНДАРТ РОССИИ
СЕРТИФИКАТ СООТВЕТСТВИЯ
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ОРГАН ПО СЕРТИФИКАЦИИ
ПРОДУКЦИЯ
СЕРТИФІКАТ ВІДПОВІДНОСТІ
AXA SİGORTA
ÜRÜN SORUMLULUK SİGORTA POLİÇESİ
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SERTİFİKA
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ISO 9001:2008
Üretimi ve Satışı
: 11336501
: 31.12.2013
Tarihi: 30.12.2016
МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
ДЕРЖАВНА САНІТАРНО-ЕПІДЕМІОЛОГІЧНА СЛУЖБА
ЗАТВЕРДЖУЮ
Висновок державної санітарно-епідеміологічної експертизи
Dedal
Attestation & Certification
CERTIFICATE
of Conformity of the Factory Production Control
1922 - CPR - 0245
In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction products
Surface protection systems for concrete - BEYAZCOAT-5010, EMÜLZER PU COAT II, EMÜLZER PURREADY, ELASTOKOTE 2K, ELASTOKOTE
produced by the manufacturer
EMÜLZER ASFALTEVİ TECRİT MADDELERİ SANAYİ ve TİCARET LTD. ŞTİ.
Cebeci Cad. No 73 34100 Küçükköy /İSTANBUL - TURKEY
and produced in the manufacturing plant
EMÜLZER ASFALTEVİ TECRİT MADDELERİ SANAYİ ve TİCARET LTD. ŞTİ.
Cebeci Cad. No 73 34100 Küçükköy /İSTANBUL - TURKEY
This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the standard
EN 1504-2:2004
under system 2+ were applied and that the factory production control fulfils all the prescribed requirements set out above.
This certificate was first issued on 09.10.2013 and will remain valid as long as the test methods and/or factory production control requirements included in the harmonised standard, used to assess the performance of the declared characteristics, do not change, and the product, and the manufacturing conditions in the plant are not modified significantly. The certificate is supported through annual surveillance audit and is reissued after each surveillance audit. This certificate should be reissued not later than 07.10.2015. The validity of this certificate can be verified in the CE register on www.dedal-bg.net.
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