# **MAK**PHALT

Protecting Nation's Infrastructure

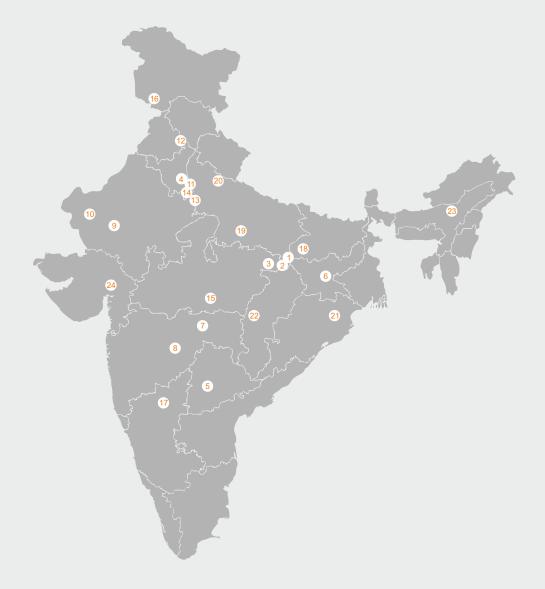


Your trusted partner for waterproofing materials,

Construction chemicals, Road construction chemicals and anticorrosive coatings.

At your service with quality, reliability and consistency.

## **KEY PROJECTS & SUPPLIES**



- 1. NTPC Rihand (UP)
- 2. NTPC Shaktinagar (UP)
- 3. NTPC Vindhayanagar (MP)
- 4. National Museum (New Delhi)
- 5. NGRI + CSIR Hyderabad (Andhra Pradesh)
- 6. BCCL (Jharkhand)
- 7. WCL (Maharasthra)
- 8. HAL (Maharasthra)
- 9. MES Jodhpur (Rajasthan)
- 10. MES Jaisalmer (Rajasthan)
- 11. NDMC (New Delhi)
- 12. MES (Chandigarh)

- 13. IOCL Mathura (UP)
- 14. Ibiza Town Krrish Shalimar (Haryana)
- 15. NTPC Gadarwara Bridge & Roof Co. (MP)
- 16. MES Jammu (J&K)
- 17. NTPC Kudgi Simplex Infrastructure (Karnataka)
- 18. NTPC Nabinagar (Bihar)
- 19. NTPC Unchahar (UP)
- 20. NTPC Tanda (UP)
- 21. NTPC Talcher (Orissa)
- 22. Bhilai Steel Plant (Chattisgarh)
- 23. MES Missamari (Assam)
- 24. MES Ahmedabad (Gujarat)









## About us

M.K. Petro Products India Pvt. Ltd. was founded in 1985 and over a journey of 32 years it has leap-frogged into a premier construction chemicals company. The following are the key contributing factors:

- Pioneers of bitumen based technology in North India during 1980's
- Developed variety of waterproofing, anticorrosive, road construction chemicals using state-of-the-art machinery and R&D unit
- Approved brand for waterproofing products in various government departments such as MES, NTPCs, PWD, CPWD, etc.
- Capability of customizing products based on customer needs
- Reliable and friendly pre and after sales service through experienced sales and technical team

### VISION

To be a globally recognized brand with enduring relationships with major stakeholders in the field of construction chemicals.

## Mission

Protecting the nation's infrastructure through superior quality with affordable products.

## Values

Strong customer relationship | Integrity and trust | Continuous innovation | Quality as a way of life | Sense of ownership in all activities

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## 1. APP Modified Bitumen Membranes

Mak Polyplast range of APP Modified bitumen membranes provide superior tensile strength while maintaining critical flexibility even in the coldest environments. Additionally with APP roofing membranes, contractors now have an efficient mode of application by heat welding in comparison to conventional bitumen roofing.

#### The main advantages of Mak Polyplast APP Membranes include:

Enhanced bitumen performance by increasing UV resistance | Increasing flexibility at low temperatures | Climate adaptability Improving flow resistance at high temperatures | Excellent weathering | Fire resistant properties

#### Mak Polyplast is used as a waterproofing membrane on the following structures

- ·Airport aprons & Ramp Areas. | Bridges & Tunnels | Inverted roofs & Parapets | Terrace, Balconies & Patios.
- ·Concrete Foundations & Footings | Basement & Pile Heads | Swimming Pools, Water Retaining Bodies & Tanks.

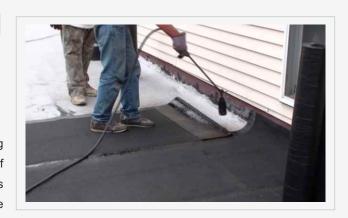
#### 1a. Mak Polyplast Superlay

#### Reinforcement:

160 GSM NON WOVEN POLYESTER MAT (CONFIRMS TO ASTM D-36, ASTM D-5 & ASTM D-5147)

#### Description

MAKPOLYPLAST SUPERLAY is a polymeric waterproofing membrane consisting of five layers. The Centre core consists of 160 gsm Non-Woven Polyester Mat. The Polyester Mat Film is the reinforcement barrier against water and moisture. The Centre Core is provided on both sides with SBS/APP polymer modified



bitumen with properties of high Softening point, Heat resistance and high Penetration making it ideal for Waterproofing purposes. The polymer-modified bitumen is protected on both sides with Thermo fusible High Molecular High Density Polyethylene Film. The polymeric Membrane has elongation exceeding 40% to absorb all Structural movements. It has a Very high tensile strength and cold resistivity to adapt to all contours.

#### 1b. Mak Polyplast Standard

#### Reinforcement:

45 GSM GLASS FIBER MAT (CONFORMS TO ASTM D-36, ASTM D-5 & ASTM D-5147)

#### **Description**

MAKPOLYPLAST STANDARD is a polymeric waterproofing membrane consisting of seven layers. The Centre Core incorporates 45 Gsm Fiber Glass Tissue lends mechanical Strength and dimensional stability to the product. The Fiber Glass Tissue acts as Reinforcement barrier against water and



moisture. The Centre Core is provided on both Sides with APP polymer modified bitumen with properties of high Softening point, Heat Resistance and high Penetration making it ideal for waterproofing purposes. The polymer Modified bitumen is protected on both sides with thermo-fusible High Molecular High Density Polyethylene Film. It has a high tensile strength and cold resistivity to adapt to all contours.

#### 1c. Mak Polyplast Superior

#### Reinforcement:

100 MICRON HMHDPE FILM

#### **Description**

MAKPOLYPLAST SUPERIOR is a polymeric waterproofing membrane consisting of five layers. The Centre core consists of 100 micron High Molecular High Density Polyethylene Film. The Polyethylene Film is the reinforcement barrier against water and moisture. The Centre Core is provided on both sides with SBS/APP polymer modified bitumen with properties of high



Softening point, Heat resistance and high Penetration making it ideal for waterproofing purposes. The polymer modified bitumen is protected on both side with thermo fusible High Molecular High Density Polyethylene Film. The polymeric membrane has elongation exceeding 300% to absorb all Structural movements. It has a very high tensile strength and cold resistivity to adapt to all contours.

#### 1d. Mak Polyplast Regular

#### Reinforcement:

20MICRON HMHDPE FILM

#### **Description**

MAKPOLYPLAST REGULAR is a polymeric waterproofing membrane consisting of five layers. The Centre core consists of 20 micron High Molecular High Density Polyethylene Film. The Polyethylene Film is the reinforcement barrier against water and moisture. The Centre Core is provided on both sides with APP polymer modified bitumen with properties of high Softening point,



Heat resistance and high Penetration making it ideal for waterproofing purposes. The polymer modified bitumen is protected on both sides with thermo-fusible High Molecular High Density Polyethylene Film. The polymeric membrane has elongation exceeding 300% to absorb all Structural movements. It has a very high tensile strength and cold resistivity to adapt to all contours.

#### 1e. Mak Polyplast SAM

#### **Description**

Mak POLYPLAST SAM SBS Modified Self-Adhesive membranes are produced with special multilayer design with or without a glass fiber or polyester reinforcement which is impregnated and coated on both sides with a uniquely formulated elastomeric bitumen compound, which provides high adhesive properties. Mak POLYPLAST SAM is an excellent general purpose water proofing membrane with a dimensionally stable, inert, rot proof 45-50 gsm glass fiber mat or non-woven polyester



mat reinforcement. This provides additional puncture resistance, tensile strength and tear resistance. The Membranes are covered on their top surface with a translucent polyethylene foil and on the underside with a siliconised release paper. This combination provides instant adhesion with high tear and puncture resistance and improved tensile strength. A top surfacing of polypropylene film is also available.

#### 1f. Mak Polyplast Mineral

#### Reinforcement:

SELF-ADHESIVE REINFORCED MEMBRANES WITH GLASS FIBRE AND NON-WOVEN POLYESTER (CONFORMS TO ASTM D-36, ASTM D-5 & ASTM D-5147)

#### Description

MAKPOLYPLAST MINERAL is a polymeric waterproofing membrane consisting of five layers. The Centre core consists of 160 gsm/sqm Non-Woven Polyester Mat. The Polyester Mat Film is the reinforcement barrier against water and moisture. The Centre Core is provided on both sides with SBS/APP polymer



modified bitumen with properties of high Softening point, Heat resistance and high Penetration making it ideal for waterproofing purposes. The polymer-modified bitumen is protected on one side with thermo fusible High Molecular High Density Polyethylene Film and UV-resistant mineral granules on the other side. The polymeric membrane has elongation exceeding 60% to absorb all Structural movements. It has a very high tensile strength and cold resistivity to adapt to all contours.

#### 1d. Makpolyplast Superlay-al

#### Reinforcement:

ALUMINUM FOIL TOPPED APP MEMBRANE (CONFORMS TO ASTM D-36, ASTM D-5 & ASTM D-5147)

#### Description

MAKPOLYPLAST SUPERLAY-AL is a polymeric waterproofing membrane consisting of five layers. The Centre core consists of 160 gsm/sqm Non-Woven Polyester Mat. The Polyester Mat Film is the reinforcement barrier against water and moisture. The Centre Core is provided on both sides with SBS/APP polymer



modified bitumen with properties of high Softening point, Heat resistance and high Penetration making it ideal for waterproofing purposes. The polymer-modified bitumen is protected on one side with thermo fusible High Molecular High Density Polyethylene Film and UV-resistant mineral granules on the other side. The polymeric membrane has elongation exceeding 60% to absorb all Structural movements. It has a very high tensile strength and cold resistivity to adapt to all contours.



## 2. Bituminous Compounds and Primers

#### 2a. Mak Bond: COLD BITUMEN

#### **Description**

MAK BOND is a cold applied adhesive for fixing roofing felts and other insulating material on various surfaces. Mak Bond is recommended where the use of hot bitumen is either difficult or prohibited.

Mak Bond is manufactured from select grades of bitumen, suitably blended with other raw Materials, to achieve creamy appearance in semi liquid consistency.



#### **Recommended Applications:**

·Makbond is ready to use and is recommended for sticking roofing felts on concrete, masonry, timber, asbestos, tiles and metal surface. Mak Bond is ideal for sticking waterproofing felts to roofs of railway coaches and buses.

#### 2b. Mak Kote: WATER-BASED INSULATION & WATERPROOFING COMPOUND

#### Description

In application where heating of Bitumen at site is not possible, and where handicaps of wet surfaces have to be overcome, waterproofing can be done by using Mak Kote. The application of this product forms a tough surface within 24 hours (depending upon climatic conditions) and renders adequate protection against moisture and accidental damage. Because of its plasticity, it can resist cracking caused by movements or temperature changes. It is an ideal and economic method of



providing long term protection to exposed insulation besides preventing steam losses. Mak Kote gives a coating, which when set, is impermeable to water and remains unaffected by attacks of industrial fumes, salty atmosphere etc. it resists low temperature cracking and also does not crack under the influence of strong sunlight. It is an emulsion of selected grade of Bitumen with Fibre and Fillers.

#### **Special Characteristics:**

An outstanding quality of Mak Kote Emulsion is the drying from inside so that the evaporation of moisture is outward:

- Continuous, jointless surface over entire insulation.
- Impervious to moisture and perfectly weatherproof.
- Highly resistant to acidic and alkaline corrosive influences.
- Non-inflammable, inert, odourless and taintless.
- Will not flow or creep at any surface temperatures normally encountered
- · Will not flake or crack under winter frost
- Insulation maintained permanently dry with a high degree of efficiency thus
- Ensuring that fuel and operating costs are kept at a minimum

#### 2c. Mak Primer: SOLVENT BASED PRIMER

#### Description

A low viscosity bituminous solution. It is highly penetrative and has good adhesion to most surfaces. Bituminous Primer for cold application complies to IS: 3384-1986 and BS 4147-1980.

#### Features;

- Excellent Adhesion Fast Curing Chemical Resistant
- Multipurpose Anticorrosive



#### 2d. Mak Plast: CAULKING COMPOUND

#### Description

Mak Plast is a cold applied bituminous compound consist of bitumen, resinous oils and suitable fillers to form a smooth and homogenous paste in compliance with IS: 1580-1989. It is available in putty form.

#### **Recommended Applications:**

Mak Plast is recommended for water proofing of porous masonry, concrete floors, wall and roof. Mak Plast is used for caulking purpose for cervices and vertical joints between plates, foldedsections, wood joints etc. Mak Plast can be applied with trowel or spatula.



#### 2e. Mak Mastic (Black Japan paint): ANTICORROSIVE BITUMEN PAINT

#### Conforms to IS: 9862

#### Description

Mak Mastic is a general purpose bituminous anticorrosive compound suitable for coating inside the water tanks, drums and other such applications. It does not have any harmful reaction with drinking water. It is lead free and resistant to acid, alkali etc. It is very effective against corrosion. The product coating protects the surface against moisture means acting as waterproofing agent. It is having good adhesive properties to the surface.



#### 2f. Mak MSRB: CONSTRUCTION ADHESIVE

#### **Description**

MAK M.S.R.B Compound is a bituminous adhesive in the form of an emulsion of brushing consistency. M.S.R.B Compound is recommended for the fixing of Expanded Polystyrene (Thermocole). Insulex Soft Boards and Fibreglass insulation slabs to all forms of structures where bituminous adhesive is advisable. It may be used to stick insulation sheets on to concrete, timber or metal and also to other Insulation sheets. It is suitable for use in cold storage too, to ensure good adhesion to walls and ceiling and may also be used for sticking Thermocole



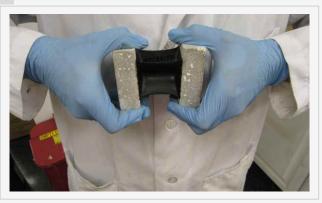
section used for the insulation of refrigeration pipe work. Special grades are available for fixing tiles, linoleum etc

#### 2g. Mak Sealing Compound: HOT APPLIED JOINT SEALANT

## HIGH RANGE POUR SEALING COMPOUND, GRADE-A&B, CONFORMS TO IS-1834/1984

#### **Description**

Joint Sealing Compound is heated to temperature which will permit easy pouring into the expansion joint above the joint filler. This temperature should be well below that at which the joint Sealing Compound undergoes decomposition and should not exceed temperature as specified against each grade of Sealing Compounds.



#### MAK SEALING COMPOUND: GRADE A - IS: 1834/1984:

It is ideal hot pour Sealing Compound especially rubberized to withstand cracking. Besides having good adhesion to concrete it is also durable and is not affected by temperature changes. It has working temperature of 175°C-185°C and a density of 1020kgs per cubic meter.

#### MAK SEALING COMPOUND: GRADE B - IS: 1834/1984.

It is unaffected by petrol spillage especially jet fuel. It is therefore recommended for use in garages, filling stations etc. where there is spillage of petrol, oil and grease. It has a working temperature of 155°C- 165°C and density of 1200kgs per cubic meter. On application of this product Mak Jet Primer is to be applied by brush or spray to ensure for proper adhesion. Care should be taken to see that primer has sufficiently dried prior to pouring of Mak Sealing Compound into the Joint.

#### 2h. Mak Silver: ALUMINUM PAINT

#### HIGH RANGE UV PROTECTED, CONFORMS TO IS-2339-1963

#### **Description**

MAK SILVER (Aluminium Paint) is a cold applied highly reflective bitumen base aluminum coating. It is used to protect and beautify smooth asphalt roofs from U.V Rays. It's also used to protect metal structure as it is an anti-rust and corrosion coating. It is also used on asphalt roofs, metal roofs, metal walls, masonry walls etc. to reflect sunrays in order to reduce air-conditioning costs in summer.



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## 3. Concrete Admixtures & Curing Compounds

#### 3a. Mak Plast LW: INTEGRAL WATERPROOFING COMPOUND.

#### **Description**

MAK PLAST LW is a ready to use aqueous solution of highly purified Lignosulphonate and a catalyst which promotes a more rapid and complete hydration of cement. This action helps in making the Concrete/ mortar more dense thereby reducing porosity and generating waterproofing properties.

#### Advantages:

- · Highly plasticized concrete/ mortar. · Economical, easy to use.
- · Reduces permeability and porosity. · Capillary absorption
- · Concrete containing MAK PLAST LW is resistant to water · Penetration either under conditions of hydrostatic pressure



The optimum dosage determined by site trails with a specific concrete mix which enables the effects of workability, strength gain and setting time to be measured.

- 0.3 0.6 liters/100kgs cementitious material, for flowing concrete.
- 0.6 0.8 liters/100kgs cementitious material, for high strength concrete

#### Area Of Application:

Basement Concrete | Underground structures | Terrace Concrete.

Can be added in cement mix for better results.

It is used in ready mix plants, blocks, concrete and all sorts of mortar where less porosity is of utmost importance.

It produces a plastic concrete that is more workable, easier to place and more finishable.

#### 3b. Mak Plast SP 110/120/130: PCE BASED SUPER-PLASTICIZER

CONFORMS TO IS: 9103-1999.

#### Description

MAK PLAST SP-120 is a high performance super plasticizer based on specially designed Poly carboxylate ether. It is suitable for low and high grade concrete and intended for Applications where early strength characteristics and a soft plastic concrete is required.



#### 3c. Mak Plast SP 230: SNF BASED SUPERPLASTICIZER

CONFORMS TO IS: 9103:1999 AND BS: 5075

#### Description

MAK PLAST SP-230 is based on Sulphonated Naphthalene Polymers and supplied as a brown liquid instantly dispersible in water. MAK PLAST SP-230 has been specially formulated to give high water reductions up to 25% without loss of workability or toproduce high quality concrete of reduced permeability. MAK PLAST SP-230



#### 3d. Mak Cure 110/210: CURING COMPOUNDS FOR CONCRETE

#### Description

Mak Cure 110 is a low viscosity wax emulsion, water based concrete curing compound that complies to ASTM C309-90.

**Typical use**: For spraying on freshly cast concrete or newly exposed concrete surfaces after removal of form work, to form a temporary membrane which will retain sufficient moisture for effective curing to take place.



Mak Cure 210 is a high efficiency polymeric resin based film forming curing agent. Mak Cure 210 gives 90% or greater curing efficiency when tested as per BS 7542-1992.

**Typical use:** As a spray applied membrane to retain moisture in concrete for effective curing. Suitable for all general concrete application and of particular benefit for large area concrete surfaces such as airport runways, roads and bridge works.

#### 3e. Mak Crystal Seal Admix: CRYSTALLINE WATERPROOFING ADMIXTURE

#### Description

MAK CRYSTAL SEAL ADMIX is an integral waterproofing compound in powder form which acts by crystallization method to seal capillaries in concretes and mortars. It is a free flowing powder, composed of ordinary Portland cement, selected treated fillers and proprietary active chemical ingredients. In concrete the active ingredients of MAK CRYSTAL SEAL ADMIX react with the products of cement hydration in presence of moisture to activate catalytic reaction which produces non soluble crystalline formations which block the capillaries effectively and permanently.



#### Advantages:

- MAK CRYSTAL SEAL ADMIX becomes an integral part of the concrete and waterproofs it
- Once used as an integral water proofer MAK CRYSTAL SEAL ADMIX resists hydrostatic pressures from both positive and negative sides of the structure.
- This waterproofing system allows the concrete to breathe normally, thereby keeping the concrete healthy for ages.
- · Simple dosing into the concrete batching mixers as there is no separate application cost involved.
- MAK CRYSTAL SEAL ADMIX works by crystallization process. Unlike other integral water proofers this is not a mere
  plasticizing admixture hence it ensures good waterproofing success during concreting itself

#### Dosage:

The optimum dosage determined by site trails with a specific concrete mix which enables the effects of workability, strength gain and setting time to be measured.

• MAK CRYSTAL SEAL ADMIX is recommended to be added to the dry concrete mix at a dosage of 2% by weight of cement.

## 4. . Epoxy Flooring and Waterproofing

#### 4a. Mak Epoxy 708/709/710: EPOXY FLOORING SYSTEM

#### Description

Mak Epoxy 708/709/710 epoxy floor coating system comprising of an epoxy primer, an epoxy mortar and an epoxy colored self leveling top coat. The highly effective system is used for protective and decorative coating for concrete surface.

Being epoxy based system it resists abrasion and chemicals like acids, alkali, few solvents and even saturated solutions like bleach, sugar solution, urea, etc



Mak Epoxy 708 Primer is two part, solvent free, low viscosity epoxy resin.

MAK EPOXY 709 is a three part, economic, colored epoxy self levelling system. Suitable for use in hot and tropical conditions.

MAK EPOXY 710 is a three part epoxy, fine textured mortar for self-smoothing floor screeds in thin layers of 1.5 to 5 mm.

#### Benefits of epoxy coatings:

- · Seamless and easy to clean
- · Hard, durable, and wear resistant even with vehicular traffic
- · Attractive and customizable. Able to create any pattern or design using colour
- Low VOC content
- · Fast curing and customizable curing times for cold and hot applications
- · Cost effective. Large areas can be coated for a reasonable cost and overall long term solution

#### 4b. Mak CR Epoxy: CHEMICAL RESISTANT EPOXY (NON-COAL TAR BASED)

#### Description

Mak CR Epoxy is a high solids novolac epoxy coating for concrete, masonry or steel where chemical and thermal protection is required. Mak CR Epoxy is designed for service in harsh chemical

#### Advantages:

Excellent chemical resistance | High temperature performance Cures at low temperature | Excellent solvent resistance | Improved wear resistance



#### 4c. Mak CTR Epoxy: COAL TAR BASED EPOXY

#### Description

Mak CTR Epoxy is a high built DFT, two pack system, i.e. Resin and Hardener, mainly developed for its versatile use as anticorrosive coating in chemical Zones and coastal area. Since the hardener is incorporated into the coal -tar, the coating results in simple two-component system. NO PRIMER IS REQUIRED during application.

These two components are mixed before application in equal proportion by volume. Therefore, the process of weighting odd quantities of resin and Hardener is eliminated.





## 5. Sealants, Grouts and Powder Products

#### 5a. Mak ElastoSeal tape: EXPANSION JOINT TREATMENT TAPE

#### (SPECIALIZED TAPE FOR SEALING CONSTRUCTION JOINTS)

#### Description

MAK ELASTOSEAL TAPE joint sealing system consists of two Products. The MAK ELASTOSEAL TAPE is a highly elastic, rot-proof and chemically resistant sealing membrane.

MAK ELASTOCRYL EMB is used as a bond coat for fixing MAK ELASTOSEALTAPE on the substrate



#### Features:

- Durable
- · Long lasting elasticity even at low temperatures
- · Root resistance
- · Resistant to wide range of chemicals
- · Cost effective
- Can be tailor-made in different aesthetically appealing colours
- · Easy to apply
- · Can be applied horizontally, vertically or even overhead

#### 5b. Mak Polyseal: TWO PART POLYSULPHIDE SEALANT

#### (COMPLIES WITH DIN 18540, US FED. SPEC 77-S-00227E AND BRITISH STANDARD BS: 4254: 1983) Description

Mak Poly Seal is a two pack Polysulphide based Sealant with two available grades. After mixing two packs, the mixed material provides a strong and highly elastic sealant through cross linking process. Mak Poly Seal - Gun Grade, gun applied or non-sag type for vertical and inclined expansion contraction joints and Mak Poly Seal - Pour Grade- Pouring type for horizontal joints

#### **Special Features:**

- · Excellent adhesion to many substrates
- · High Movement Capability
- Good Chemical resistance
- Long Lasting elasticity
- Easy to pour on horizontal joints with Mak Poly Seal Pouring grade.



#### 5c. Mak Turbo Grout: NON SHRINK PLASTICIZED GROUTING ADMIXTURE

#### Description

MAK TURBO GROUT is an admixture for cementitious grouts where reduced water/cement ratio and positive expansions are require

#### **Uses & Advantages:**

MAK TURBO GROUT is used to increase cohesion in cement grouts (addition of sand is possible) and to develop non-shrink property. This product can be used for grouting of



• Pre-stressed cable ducts | Rock and soil anchoring | Pre-placed aggregates | Tunnel linings/ Concrete Slabs

#### **Application Process:**

Add directly to the cement/water mix in the mixer. Sand may be added as required.

The grout shall be placed within 20 minutes of mixing to gain the full benefit of the expansion process. Usual placing or pumping procedures shall be adopted ensuring a continuous operation.

Curing on completion of the grouting operation, any exposed areas which are not to be cut back should be thoroughly cured by means of water application or wet hessian.

#### Dosage:

0.4% to 1% by weight of cement. Minimum 200gm pouch to be mixed with one 50 kg bag of cement.

#### 5d. Mak MicroCon: MICRO-CONCRETE/REPAIR MORTAR

#### Description

MMAK MicroCON is a ready to use dry powder which requires only addition of clean water at site to produce a free flowing non shrink repair micro concrete. It is composed of good quality cement, properly selected aggregates & additives. It is used & designed for repairing of damaged reinforced concrete elements like columns, beams & structure where the areas are restricted or not easily accessible for proper placement of concrete using vibrator.

MICROCON has excellent flow ability, workability & proper particle size to reach small & congested reinforcement.



Specification Concrete meets the requirement of ASTM C 109: 99, ASTM C 307, BS 1881 Part 207

#### Areas of Application:

- Repair of damaged reinforced concrete elements like beams, columns, wall, etc. where access is restricted and compaction is not possible.
- For Jacketing of RCC columns to increase load-taking capacity (strengthening of a vertical members

#### Features & Benefits :

- Pumpable Can be pumped or poured into restricted locations.
- Flowable Flowable mortar hence does not require compaction.
- · Shrinkage compensation Controlled expansion system which compensates for shrinkage and settlement in the plastic state.
- · Strength Develops high initial and ultimate compressive strength.
- Moisture resistant Offers excellent resistance to moisture ingress.
- Durablity Makes repaired sections highly durable & compatible to parent concrete.



## 6. Liquid waterproofing coatings

#### 6a. Mak Elastothane EMB: PITCH MODIFIED POLYURETHANE BASED LIQUID WATERPROOFING

#### **CONFORMS TO ASTM C836**

#### **Description**

**Mak Elastothane EMB** is a liquid applied polyurethane modified bituminous elastomeric membrane coating. Mak Elastothane EMB when applied on a surface, gives a continuous monolithic film which is rubbery and elastic in nature. The film is self-curing and cures by reaction with atmospheric moisture.

**Mak Elastothane EMB** has good adhesion to a wide range of substrates such as concrete, brick, wood, slates, tiles, glass and metals etc. Unlike more traditional bitumen based products, Mak



**Elastothane EMB** is highly resistant to extreme weather conditions, and is not adversely affected by extreme temperature conditions. However the membrane formed must be protected with screed/tiles/china mosaic or a UV protection layer of Mak Silver Paint or Geotextile (min. 120gsm).

The dry film has elongation properties exceeding 800%.

#### 6b. Mak Elastothane EMW: POLYURETHANE BASED WHITE LIQUID WATERPROOFING

#### Description

Mak Elastothane EMW is a liquid applied polyurethane modified non-bituminous white elastomeric membrane coating. Mak Elastothane EMB when applied on a surface, gives a continuous monolithic film which is rubbery and elastic in nature. The film is self-curing and cures by reaction with atmospheric moisture.

The dry film has elongation properties exceeding 500%.



#### 6c. Mak Elastocryl EMB: ACRYLIC BITUMINOUS LIQUID WATERPROOFING

#### **Description**

Mak Elastocryl EMB is high performance water-proofer liquid that dries to form a tough and flexible impermeable coating. It is a blend of tropical grade bitumen emulsion with modification using pure acrylic polymer.

It is one of the most low cost liquid membrane waterproofi

It is one of the most low cost liquid membrane waterproofing systems.

The dry film has elongation properties exceeding 200-500%.



#### 6d. Mak Elastocryl EMW: ACRYLIC WHITE UV RESISTANT LIQUID WATERPROOFING

#### **Description**

Mak Elastocryl EMW is a single component, liquid applied, highly effective waterproofing system based on plasticized acrylic resin with U. V. resistant pigments. It cures on exposure to the atmosphere and forms an elastomeric white seamless membrane.

The dry film has elongation properties exceeding 200-500%.

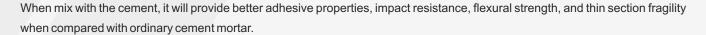


#### 6e. Mak Crete: ACRYLIC POLYMER FOR CEMENTITIOUS WATERPROOFING

#### Description

Mak Crete is an acrylic based polymer modified cementitious water proofing system. The MAK CRETE polymer, when mixed with cement will provide the unique solution to all problems related to water leakage and it protects from severe fungus, salt penetration, or environmental attack in the following structures.

- Roof Slab, Parapet, Terrace, Balconies.
- · Basements, Retaining Walls, Tunnels, Etc.
- · Bathroom and any floor to dampness
- · Against corrosion and salt attacks
- Water Tanks or swimming pools
- · General concrete repair



#### 6f. Mak Crete 2K: CEMENTITIOUS WATERPROOFING ACRYLIC POLYMER AND FILLER

#### **Description**

MAK Crete 2K is a pre – packed two component polymer modified cementitious coating, which can be easily mixed on site and applied with brush or roller. This coating cures to form elastomeric waterproofing membrane with excellent adhesion to cementitious surfaces.





#### 6g. Mak Crystal Seal: CRYSTALLINE WATERPROOFING COATING

#### Description

MAK CRYSTAL SEAL is a Dark Brown powder which is used in waterproofing of old and new concrete structures as a coating by mixing the powder with water. The product functions by the process of crystallization.



#### 6h. Mak ElastoCool: ACRYLIC INSULATION-CUM-WATERPROOFING PAINT

#### Description

Mak Elastocool is a ready to use, single component water based coating consisting of special polymers with extended polymeric chain to act as a thermal insulation as well as waterproofing coating.

It can be universally applied on many surfaces like wood, metals, cement, plastics, etc.

#### **Key Features & Benefits:**

- 100% water proofing
- Upto 85% heat proofing
- Anti rust on frsh metal surfaces
- High adhesion

The dry film has elongation properties exceeding 200%.





## 7. Underground Pipeline Anticorrosive Wrapping Tapes

#### 7a. Mak Polykote: BITUMEN/COAL TAR BASED PIPELINE WRAPPING TAPE

#### **Description**

**MAK POLYKOTE** is an Anti-Corrosive tape based on Bitumen or Coal tar pitch and specifically designed to comply with the requirements of IS: 10221 and IS: 15337. It is available in thicknesses ranging from 1mm to 4mm.

Its composition is such that its centre core provide superior strength and its bitumen or coal tar mix is prepared with special anticorrosive elements for long term protection of underground pipelines.



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## 8. Road repair & construction compounds

#### 8a. Mak Premix: POTHOLE REPAIR COMPOUND

#### Description

Mak Premix is an instant road repair compound which is manufactured with a blend of bitumen, aggregates and high grade polymers to ensure immediate bonding with existing surface. Repair of heavily trafficked road and airfield pavements using conventional materials and procedures is difficult, inconvenient to user and generally not very satisfactory. For such locations, ready to use patching materials to up- keep pavement traffic worthy, are essential.



#### Ready to use Mak Premix have various advantages such as:

- · Quality of mix is consistent
- · Patches are more stable
- Ready to use patching mix needs very little time for application at site (Environment Friendly)
- Pavement become traffic worthy soon after application no curing period is needed.
- Preparation of surface for repairs is minimal.
- Repair is possible in all adverse climates be it hot, cold, snow or rain.
- No wastage of materials and the manpower is needed minimum.
- A very common problem of urban areas is repair of utility cuts in the pavement. These mixes provide quick and efficient repair with least interference with traffic.

#### 8b. Mak CRMB: CRUMB RUBBER MODIFIED BITUMEN

#### **Description**

MAK CRMB is based on unique technology that enables homogeneity, stability and consistent properties of binder throughout the supply chain. To achieve this, special stabilizing additives are used and a special manufacturing process is adopted & result is a high performance bituminous binder with unique properties that are consistent. MAK Crumb Rubber Modified Bitumen is designed to maximize resistance to permanent deformation & reduce fatigue of asphalt mixtures that are used in the most demanding locations.



#### Typically we have developed products for a combination of the following needs:

- Superior Elastic Modulus of MAK CRMB helps control deformation under high pavement temperature & heavy loading conditions.
- Increase the fatigue life of pavement under repeated heavy loading conditions.
- · Helps in reduction of maintenance cost and is more cost effective on a life cycle cost basis.
- For use in thin surfacing and stone mastic asphalt (SMA) mixes.
- For use in drainage (porous) asphalt applications;
- · For Asphalt mixtures designed for high resistance to permanent deformation and high flexibility.

#### 8c. Mak PMB: POLYMER MODIFIED BITUMEN

#### Description

MAK Polymer Modified Bitumen is designed to maximize resistance to permanent deformation and reduce fatigue of asphalt mixtures that are used in the most demanding locations. The careful selection of additives greatly enhances binder performance, improving elasticity, reducing temperature susceptibility and improving adhesion. Pavements based on MAK Modified Bitumen have been shown to have a longer life with a better resistance to:



Rutting | Cracking | Stripping | Ageing | Thermal cracking

The careful selection of additives greatly enhances binder performance, improving elasticity, reducing temperature susceptibility and improving adhesion. Our product range is particularly suited to heavy traffic locations such as highways, main roads, airfields, roundabouts and bus lanes.

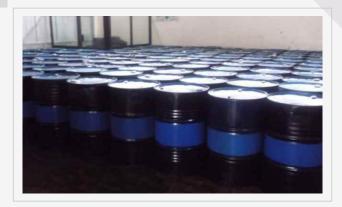
#### Typically we've developed products for a combination of the following needs:

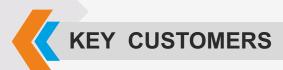
- Superior Elastic Modulus of MAK PMB helps control deformation under high pavement temperature and heavy loading conditions.
- Increases the fatigue life of pavement under repeated heavy loading conditions.
- Helps in reduction of maintenance cost and is more cost effective on a life cycle cost basis.
- For use in thin surfacing and stone mastic asphalt (SMA) mixes;
- For use in drainage (porous) asphalt applications;
- · For asphalt mixtures designed for high resistance to permanent deformation and high flexibility

#### 8b. Mak Blown Bitumen: 85/25 GRADE BITUMEN

#### Description

Oxidized bitumen 85/25 is a semi-solid oxidized grade of pure petroleum bitumen categorized in polycyclic aromatic hydrocarbons is normally used for different purposes in the construction business. Oxidized bitumen 85/25 is based on petroleum bitumen which is made by blowing bitumen 60/70 by very hot air. This product, utilized in the industrial sector, exhibits predominantly "solid" characteristics at ambient temperatures and provides SUPERIOR adhesive and waterproofing qualities when applied hot and allowed to cool than Oxidized Bitumen.













































# MAKEPHALT

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#### M.K. PETRO PRODUCTS INDIA PVT. LTD.

(An ISO 9001: 2008 Company)

Village Mujeri Road, Ballabgarh, Faridabad

Ph: 011- 40526477, +91-9711434766, +91 9560096816 contact@mkpetroproducts.com | www.makphalt.com