

Product Index

Waterproofing & Damproofing



All kinds of products are produced in Germany, Taiwan and American... etc. If you use these high quality products, you will not worry about water leading problem forever.

RESIN PRODUCTS

- MICSIL 3702** 2K Cementitious Acrylic Modified Flexible Coating (excellent elongation)
- MICSIL 3703** 2K Cementitious Acrylic Modified Flexible Coating
- MICSIL 6707** 2K Cementitious Acrylic Modified Flexible Coating (excellent tensile strength)
- MICSIL 4001** Acrylic Polymer for Bonding And Sealing

WATER REPELLENT PRODUCTS

- MICSIL 777D** Solvent-Based Water Repellent / silane and siloxane
- SILRES BS 16** Water-Based Water Repellent / potassium methyl silicate
- MICSIL 1322** Water-Based Water Repellent / silane and siloxane
- SILRES BS CREME C** Water-Based Water Repellent / silane
- SILRES BS OH100** Water-Based Water Repellent / ethyl silicate

ASPHALT PRODUCTS

- KARNAK#100** Non-Fibered Emulsion Asphalt Coating
- KARNAK#920** Fibered Emulsion Asphalt Coating (trowel grade)
- KARNAK#19** Solvent-Based Rubber Reinforced Asphalt (wet/dry)
- MICSIL 720H** Water-Based Rubberized Asphalt Coating

INJECTION PRODUCTS

- MICSIL PU2000** Hydrophobic Polyurethane Injection Resin / MDI base
- MICSIL PU5000** Hydrophilic Polyurethane Injection Resin / MDI base
- MICSIL PU9000** 2K Rigid Sealing Injection Resin / MDI base
- MICSIL PU9000PLUS** 2K Rigid Sealing Injection Resin (fast reacting) / MDI base
- ARC SEAL H501** Hydrophilic Polyurethane Injection Resin / TDI base
- DU2000** 2K Injection Pump

INSULATING PRODUCTS

- KARNAK#97** Fibered Aluminum Roof Coating
- COAT PC200** Waterproof and Thermo-Shield Paint
- COAT PT301** Non-stick Anti-Graffiti Coating (for **COAT PC200**)

[Http://www.carytrad.com.tw/e](http://www.carytrad.com.tw/e)

Product Index

Waterproofing & Damproofing



Cary Trading has over 30 years experience in the coatings industry. Cary Trading continued expanding its operations to become a World-Wide leader in the technological field of advanced waterproofing, heat insulation and other products used within the construction trades.

CRYSTALLINE PRODUCTS

DRYCON 2K Cementitious Crystalline Waterproofing Kit

HENKEL CERESIT CR68 One Component, Crystalline Capillary Waterproofing Powder

CHEM-CRETE CCC100 Water-based, Crystalline Capillary Waterproofing Liquid

WATERPROOFING COATING PRODUCTS

MICSIL 170 Acrylic Co-polymer Elastomeric Waterproof Coating

MICSIL TH075W Solvent-Based Silicone Acrylic Coating for Tile Surface

MICSIL 540C Cement Based Waterproof Coating

OTHER PRODUCTS

MICSIL 1000 Rapid Setting Polymer Modified Waterproof Plug

LUCKY 707 Silicone Sealant, Mildew Resistant

SPC 201 Coating Remover

[Http://www.carytrad.com.tw/e](http://www.carytrad.com.tw/e)

Acrylic-Modified, Portland Cement-based Flexible Waterproofing Membrane MICSIL 3702 KIT

DESCRIPTION

MICSIL 3702 KIT is an acrylic-modified, Portland cement-based flexible waterproofing membrane for concrete and masonry. Use it above or below grade on interior or exterior surfaces.



FEATURES AND BENEFITS

- Crack-bridging – high reliability even if cracks occur in the substrate afterwards.
- Waterproof and frost resistant – multi-purpose use indoors and outdoors.
- Crack-free curing – the coating does not crack or crumble.
- Secure bond – no primer or bonding agent required.
- Good chemical resistance.
- Mortars exhibit outstanding pot life under high temperature conditions.
- Plastic, workable – easy to apply by brush or trowel.
- Resistant to ageing – insensitive to influences by the environment.
- Two part – easy to mix as both components are available in the appropriate mixing ratio.
- Separating properties, reduces tensions – can be applied to cement screeds as soon as they are walkable and then be tiled.

RECOMMENDED FOR

- Indoor and outdoor use
- Walls and floors
- Crack-bridging waterproofing under ceramic coverings in showers or rooms with floor drains, swimming pools, health spas, salt-water spas up to a head of water of 15 meters against pressurised water from the inside.
- Crack-bridging waterproofing in above and below ground situations, in new and old buildings.
- Waterproofing of external basement walls, wet rooms and retaining walls.
- Flexible waterproofing under tiles on cantilever balcony slabs or terraces.

PHYSICAL PROPERTIES

Liquid component :

Acrylic-Modified, Portland Cement-based Flexible Waterproofing Membrane MICSIL 3702 KIT

Color	White, milky liquid
Solids Content, %	54±1
Viscosity, cps.	5000±2000
PH	8.5±1
Tg, °C	-5
Specific Gravity	1.06

Powder component :

Fine aggregate and hydraulic cement and other proprietary additives; asbestos free.

Working time	Approximately 40 minutes
Overcoating time	over 4 hours

COLOR

Gray

TECHNICAL DATA

REPORT	TEST METHOD	TEST RESULTS
Pull-off strength	ASTM D4541	12.24 kgf/cm ²
Tensile Strength	ASTM D412	11.4 kgf/cm ²
Elongation	ASTM D412	345 %
Tear strength	ASTM D624	10.5 kgf/cm
Water Vapor Transmission(24 hrs)	ASTM E96	6.67 g/m ²

COVERAGE RATE

Recommended rate of 430 ft² (40 m²) per MICSIL 3702 KIT in one application and the film of thickness is 1mm.

HOW TO APPLY

Surface Preparation

1. Substrates must be sound and level and the surface free from protrusions, large pores, honeycombs, gaping cracks, and ridges. Concrete substrates should be cured 28 days before MICSIL 3702 KIT application.

Acrylic-Modified, Portland Cement-based Flexible Waterproofing Membrane MICSIL 3702 KIT

2. Sandblast or waterblast substrates to remove all traces of water repellents, bitumen, form oils, grease, paint, and other foreign matter from substrate that could act as a bondbreaker.
3. Any edges must be rounded. Form coves with regular site-mixed mortar and round to a minimum radius of 1-1/2" (38 mm).

Mixing

1. MICSIL 3702 KIT is supplied in precisely proportioned units ready for mixing. When using MICSIL 3702 KIT in cooler climates or if a thicker consistency is desired, reduce the amount of MICSIL 3702 liquid in the mixture.
2. Slowly add MICSIL 3702 powder to MICSIL 3702 liquid while mixing with a 3/4 inch drill and mixing paddle.
3. Mix to a uniform, smooth, lump-free consistency. If a looser consistency is desired, add the remaining MICSIL 3702 liquid. Overmixing may entrap air.
4. Mix for 3 – 5 minutes while blending components and 1 – 2 minutes after all components have been blended.
5. The pot life of MICSIL 3703 KIT is approximately 40 minutes depending on ambient conditions.

APPLLCATION

1. The substrate must be saturated surface-dry with no standing water.
2. MICSIL 3702 KIT is applied only to the positive side (source of moisture) of the substrate in 1 or 2 void-free coats. Allow 4-6 hours before second coat. Thoroughly work the material into the substrate. Make sure the rounded edges are fully coated. MICSIL 3702 KIT should be applied by **brush, roller** or **spray**. (Place extra water in a mixing MICSIL 3702 KIT if you apply by spray).
3. Embed fiberglass tape wherever dissimilar materials join. Also treat surface cracks less than 1/8" (3 mm) wide and areas where underlayment panels meet.
4. Material that is too thick is subject to drying or shrinkage cracking. Be certain to cover all reinforcement material.

CARE OF TOOLS

Clean up of tools may be accomplished with water while coating is still wet. Dry coating may be cleaned with xylene. Take necessary precautions when handling flammable materials.

CAUTION

Read Material Safety Data Sheets before
Using this product.

Acrylic-Modified, Portland Cement-based Flexible Waterproofing Membrane MICSIL 3702 KIT

Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

PACKAGING

MICSIL 3702 KIT is supplied in a 40kg kit consisting of:

Liquid component – 20kg plastic container

Powder component – 20kg PE lined ;heavy duty bag

Acrylic-Modified, Portland Cement-based Flexible Waterproofing Membrane MICSIL 3703 KIT

DESCRIPTION

MICSIL 3703 KIT is an acrylic-modified, Portland cement-based flexible waterproofing membrane for concrete and masonry. Use it above or below grade on interior or exterior surfaces.



FEATURES AND BENEFITS

- Crack-bridging – high reliability even if cracks occur in the substrate afterwards.
- Waterproof and frost resistant – multi-purpose use indoors and outdoors.
- Crack-free curing – the coating does not crack or crumble.
- Secure bond – no primer or bonding agent required.
- Good chemical resistance.
- Mortars exhibit outstanding pot life under high temperature conditions.
- Plastic, workable – easy to apply by brush or trowel.
- Resistant to ageing – insensitive to influences by the environment.
- Two part – easy to mix as both components are available in the appropriate mixing ratio.
- Separating properties, reduces tensions – can be applied to cement screeds as soon as they are walkable and then be tiled.

RECOMMENDED FOR

- Indoor and outdoor use
- Walls and floors
- Crack-bridging waterproofing under ceramic coverings in showers or rooms with floor drains, swimming pools, health spas, salt-water spas up to a head of water of 15 metres against pressurised water from the inside.
- Crack-bridging waterproofing in above and below ground situations, in new and old buildings.
- Waterproofing of external basement walls, wet rooms and retaining walls.
- Flexible waterproofing under tiles on cantilever balcony slabs or terraces.

PHYSICAL PROPERTIES

Acrylic-Modified, Portland Cement-based Flexible Waterproofing Membrane MICSIL 3703 KIT

Liquid component :

Color	White, milky liquid
Solids Content, %	49±1
Viscosity, cps.	25000±10000
PH	8.5±1
Tg, °C	-10
Specific Gravity	1.06

Powder component :

Fine aggregate and hydraulic cement and other proprietary additives; asbestos free.

Working time	Approximately 40 minutes
Overcoating time	over 4 hours

COLOR

Gray

TECHNICAL DATA

REPORT	TEST METHOD	TEST RESULTS
Pull-off strength	ASTM D4541	12.24 kgf/cm ²
Tensile Strength	ASTM D412	28 kgf/cm ²
Elongation	ASTM D412	69 %
Tear strength	ASTM D624	14 kgf/cm
Water Vapor Transmission(24 hrs)	ASTM E96	6.67 g/m ²

COVERAGE RATE

Recommended rate of 430 ft² (40 m²) per MICSIL 3703 KIT in one application and the film of thickness is 1mm.

HOW TO APPLY

Surface Preparation

1. Substrates must be sound and level and the surface free from protrusions, large pores, honeycombs, gaping cracks, and ridges. Concrete substrates should be cured 28 days before

Acrylic-Modified, Portland Cement-based Flexible Waterproofing Membrane MICSIL 3703 KIT

MICSIL 3703 KIT application.

2. Sandblast or waterblast substrates to remove all traces of water repellents, bitumen, form oils, grease, paint, and other foreign matter from substrate that could act as a bondbreaker.
3. Any edges must be rounded. Form coves with regular site-mixed mortar and round to a minimum radius of 1-1/2" (12-25mm).

Mixing

1. MICSIL 3703 KIT is supplied in precisely proportioned units ready for mixing. When using MICSIL 3703 KIT in cooler climates or if a thicker consistency is desired, reduce the amount of MICSIL 3703 liquid in the mixture.
2. Slowly add MICSIL 3703 powder to MICSIL 3703 liquid while mixing with a 3/4 inch drill and mixing paddle.
3. Mix to a uniform, smooth, lump-free consistency. If a looser consistency is desired, add the remaining MICSIL 3703 liquid. Overmixing may entrap air.
4. Mix for 3 – 5 minutes while blending components and 1 – 2 minutes after all components have been blended.
5. The pot life of MICSIL 3703 KIT is approximately 40 minutes depending on ambient conditions.

APPLLCATION

1. The substrate must be saturated surface-dry with no standing water.
2. MICSIL 3703 KIT is applied only to the positive side (source of moisture) of the substrate in 1 or 2 void-free coats. Allow 4-6 hours before second coat. Thoroughly work the material into the substrate. Make sure the rounded edges are fully coated. MICSIL 3703 KIT should be applied by **brush, roller or spray**. (Place extra water in a mixing MICSIL 3703 KIT if you apply by spray).
3. Embed fiberglass tape wherever dissimilar materials join. Also treat surface cracks less than 1/8" (3 mm) wide and areas where underlayment panels meet.
4. Material that is too thick is subject to drying or shrinkage cracking. Be certain to cover all reinforcement material.

CARE OF TOOLS

Clean up of tools may be accomplished with water while coating is still wet. Dry coating may be cleaned with xylene. Take necessary precautions when handling flammable materials.

Read Material Safety Data Sheets before
Using this product.

Acrylic-Modified, Portland Cement-based Flexible Waterproofing Membrane MICSIL 3703 KIT

CAUTION

Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

PACKAGING

MICSIL 3703 KIT is supplied in a 40kg kit consisting of:

Liquid component – 20kg plastic container

Powder component – 20kg PE lined ;heavy duty bag

VAE-Modified, Portland Cement-based Flexible Waterproofing Membrane MICSIL 6707 KIT

DESCRIPTION

MICSIL 6707 KIT is an VAE(vinyl acetate and ethylene)-modified, Portland cement-based flexible waterproofing membrane for concrete and masonry. Use it above or below grade on interior or exterior surfaces.



FEATURES AND BENEFITS

- Crack-bridging – high reliability even if cracks occur in the substrate afterwards.
- Waterproof and frost resistant – multi-purpose use indoors and outdoors.
- Crack-free curing – the coating does not crack or crumble.
- Secure bond – no primer or bonding agent required.
- Good chemical resistance.
- Mortars exhibit outstanding pot life under high temperature conditions.
- Plastic, workable – easy to apply by brush or trowel.
- Resistant to ageing – insensitive to influences by the environment.
- Two part – easy to mix as both components are available in the appropriate mixing ratio.
- Separating properties, reduces tensions – can be applied to cement screeds as soon as they are walkable and then be tiled.

RECOMMENDED FOR

- Indoor and outdoor use
- Walls and floors
- Crack-bridging waterproofing under ceramic coverings in showers or rooms with floor drains, swimming pools, health spas, salt-water spas up to a head of water of 15 metres against pressurised water from the inside.
- Crack-bridging waterproofing in above and below ground situations, in new and old buildings.
- Waterproofing of external basement walls, wet rooms and retaining walls.
- Flexible waterproofing under tiles on cantilever balcony slabs or terraces.

PHYSICAL PROPERTIES

VAE-Modified, Portland Cement-based Flexible Waterproofing Membrane MICSIL 6707 KIT

Liquid component :

Color	White, milky liquid
Solids Content, %	54.5 ± 1
Viscosity, mPa.s.	1700 ± 400
PH	4 to 5.5
Protective colloid / emulsifier system	polyvinyl alcohol
tensile strength	16.4 kgf/cm ²
Elongation	557 %
Tear strength	8.49 kgf/cm

Powder component :

Fine aggregate and hydraulic cement and other proprietary additives; asbestos free.

Working time	Approximately 40 minutes
Overcoating time	4-6 hours

COLOR

Gray

COVERAGE RATE

Recommended rate of 430 ft² (40 m²) per MICSIL 6707 KIT in one application and the film of thickness is 1mm.

HOW TO APPLY

Surface Preparation

1. Substrates must be sound and level and the surface free from protrusions, large pores, honeycombs, gaping cracks, and ridges. Concrete substrates should be cured 28 days before MICSIL 6707 KIT application.
2. Sandblast or waterblast substrates to remove all traces of water repellents, bitumen, form oils, grease, paint, and other foreign matter from substrate that could act as a bondbreaker.
3. Any edges must be rounded. Form coves with regular site-mixed mortar and round to a minimum radius of 1-1/2" (12-25mm).

VAE-Modified, Portland Cement-based Flexible Waterproofing Membrane MICSIL 6707 KIT

Mixing

1. MICSIL 6707 KIT is supplied in precisely proportioned units ready for mixing. When using MICSIL 6707 KIT in cooler climates or if a thicker consistency is desired, reduce the amount of MICSIL 6707 liquid in the mixture.
2. Slowly add MICSIL 6707 powder to MICSIL 6707 liquid while mixing with a 3/4 inch drill and mixing paddle.
3. Mix to a uniform, smooth, lump-free consistency. If a looser consistency is desired, add the remaining MICSIL 6707 liquid. Overmixing may entrap air.
4. Mix for 3 – 5 minutes while blending components and 1 – 2 minutes after all components have been blended.
5. The pot life of MICSIL 6707 KIT is approximately 40 minutes depending on ambient conditions.

APPLLCATION

1. The substrate must be saturated surface-dry with no standing water.
2. MICSIL 6707 KIT is applied only to the positive side (source of moisture) of the substrate in 1 or 2 void-free coats. Allow 4-6 hours before second coat. Thoroughly work the material into the substrate. Make sure the rounded edges are fully coated. MICSIL 6707 KIT should be applied by **brush, roller** or **spray**. (Place extra water in a mixing MICSIL 6707 KIT if you apply by spray).
3. Embed fiberglass tape wherever dissimilar materials join. Also treat surface cracks less than 1/8" (3 mm) wide and areas where underlayment panels meet.
4. Material that is too thick is subject to drying or shrinkage cracking. Be certain to cover all reinforcement material.

CARE OF TOOLS

Clean up of tools may be accomplished with water while coating is still wet. Dry coating may be cleaned with xylene. Take necessary precautions when handling flammable materials.

CAUTION

Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

Read Material Safety Data Sheets before
Using this product.

VAE-Modified, Portland Cement-based Flexible Waterproofing Membrane MICSIL 6707 KIT

PACKAGING

MICSIL 6707 KIT is supplied in a 40kg kit consisting of:

Liquid component – 20kg plastic container

Powder component – 20kg PE lined ;heavy duty bag

Acrylic Polymer for Bonding And Sealing MICSIL 4001

DESCRIPTION

MICSIL 4001 is a formulated acrylic admixture used both as a primer for wet-to-dry cementitious systems and as an emulsion in the mixtures.



ADVANTAGES

- **High Bond Strength** – Provides excellent adhesion when used as a bonding agent for, or as an admixture in cement based mixes.
- **Resilient** – When used as an admixture, an acrylic lattice is formed throughout the mix, greatly reducing brittleness and enhancing resistance to damage by impact.
- **Enhanced Chemical Resistance** – The cementitious resin lattice within the render matrix greatly reduces ingress of chloride ions and other deleterious materials.
- **Water Resistance** – Combines low permeability with resin stability in continuously wet conditions when used in cement based mixes.
- **Versatile** – Easy to use with positive bond to a wide range of materials such as brick, stone, concrete, timber and most metals.
- **Product Stability** – Especially formulated for maximum performance under the alkaline conditions of cement mixes and unlike P.V.A systems, the bond film will not hydrolyse under wet conditions.
- **Delayed Bonding** – When used as a bonding agent, subsequent toppings may be applied immediately or up to 7days later.
- Eliminates the need for water curing.
-

RECOMMENDED FOR

- Repairs mortar in sewage and water treatment plants.
- Repairs to spalled and damaged concrete

As a structural bonding agent:

- New to old concrete
- Renders to brick or concrete walls
- Sealing walls, bathrooms and kitchen ceilings before painting

Acrylic Polymer for Bonding And Sealing MICSIL 4001

APPLICATION GUIDLINES

Addition Rate

Dilute 1 part MICSIL 4001 with 3 parts of clean potable water to use as a cement mortar or concrete additive.

Coverage

On smooth dense surfaces apply MICSIL 4001 diluted with equal parts of water in an even continuous film using brush, roller or airless spray gun.

- Coverage will be approximately 5m²/liter.

On rough absorbent surfaces or vertical surfaces, add to the diluted MICSIL 4001 a small quantity of Portland cement to thicken the mixture. Brush well into rough surfaces to ensure continuous coating. Avoid Ponding.

- Coverage will be approximately 3-4m²/litre.

Preparation

Concrete: Concrete should be strength consistent with service requirements. The surface must be clean of any dust, oils, and cement laitance etc. Blast cleaning may be used to expose clean firmly-bound aggregate. Mortar smears and/or lumps should be removed from brickwork.

Steel: An abrasive blast clean or grinding to uniform light grey colour free from all rust and mill scale.

Painted Surfaces: Quality oil based paints in sound condition may be rendered provided any gloss finish has been dulled using sandpaper to provide a better keying effect for adhesion to take place. It is always advisable to trial test for adhesion before work commences.

Plaster Surfaces: Remove all flaking paint and repair any surface damaged sections. For restoration of body plaster, drill fine holes and inject neat MICSIL 4001, this method may also be used to repair de-bonded sections.

Preparation continued :

Repair: Acid etching is not recommended as a surface preparation due to the potential corrosion of steel reinforcement. Use abrasive blast or mechanical scabbling and thoroughly remove all dust and loose materials.

Repair Mortars

Diluted (1:3) MICSIL 4001 may be used as a mixing liquid, in place of water, in all cement mixtures. Other admixtures should not be included unless trials indicate satisfactory performances.

Priming

For best results when using as a primer, mix with cement to form a slurry and apply to pre dampened surface.

Acrylic Polymer for Bonding And Sealing MICSIL 4001

Curing

Repair mortars using MICSIL 4001 should not be water cured. Excessive use of water can wash out acrylic emulsions and weaken the surface.

Note

If curing is required, the surface should be sprayed with MICSIL 4001 diluted with 1 to 3 parts of clean potable water.

PHYSICAL PROPERTIES

Color	White, milky liquid
Solids Content, %	49±1
Viscosity, cps.	50±30
PH	8.5±1
Tg, °C	15
Specific Gravity	1.06

TECHNICAL DATA

REPORT	TEST METHOD	TEST RESULTS
Flexural strength	CNS 10639	79.1 kgf/cm ²
Compressive strength	CNS 10639	241.9 kgf/cm ²
Bond strength	CNS 10639	17.3 kgf/cm ²
Absorption	CNS 10639	4.85%
Permeability	CNS 10639	62.8g

CARE OF TOOLS

Clean all tools and equipment with soapy water promptly after use.

CAUTION

Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

PACKAGING

Read Material Safety Data Sheets before
Using this product.

Acrylic Polymer for Bonding And Sealing
MICSIL 4001

Available in 5 gallon pails and 50 gallon drums.

Solvent-Based Water Repellent / silane and siloxane MICSIL 777D

DESCRIPTION

MICSIL 777D is a low viscosity silane-siloxane system, which penetrates deeply into porous substrates to allow for a bonded hydrophobic lining to the pores. This treatment significantly reduces absorption of water and waterborne salts but still allows the passage of water vapor. The solution does not produce any discoloration of the substrate and has excellent resistance to weathering. MICSIL 777D does not have odor and irritant component.



FEATURES AND BENEFITS

- Provides an invisible water repellent surface
- Maintains the texture and colour of the surface treated
- Reduces efflorescence and surface salts
- Reduces cleaning costs
- Acts as a damp-proof course
- Fungus growth resistance.
- Allows substrate to breathe.

RECOMMENDED FOR

- External waterproofing of concrete, concrete blocks, brickwork and stone
- Treatment of rising and salt damp
- Reduction of sand stone decay due to attack by salts and low pH precipitation
- Prevention of moss growth & dirt retention on pavers, walls and roofs
- Elimination of white salt spotting on brickwork

PHYSICAL PROPERTIES

Solids	5-8%
Appearance	Clear
Density	0.78 at 25°C
Corrosiveness	Non-corrosive
Flash point	40°C

Solvent-Based Water Repellent / silane and siloxane MICSIL 777D

APPLICATION GUIDLINES

Surface Preparation

Surfaces to be treated must be free of all traces of dirt and organic matter. Gaps and cracks must be repaired. Salt encrustations must be cleaned using mild acid.

Application For Surface Treatment

Use a low-pressure spray, achieving total saturation with a minimum of 2 coats, applied sequentially.

Note

Care should be taken not to spray on glass, painted surfaces and plant growth. MICSIL 777D should never be applied to damp substrates.

COVERAGE RATE

Depending on the substrate this will vary it could be as low as 3m² per liter for dense concrete and as high as 0.5 m² per liter for porous bricks. We recommend that a test area of 1-2 m² be carried out on site.

CAUTION

Vapor overexposure may cause respiratory irritation, central nervous system depression and allergic reaction. Provide sufficient ventilation to maintain vapor concentrations below recommended exposure limits. Avoid contact with skin, eyes and clothing. Wear protective rubber gloves and safety goggles when handling or dispensing materials. Wash contaminated clothing before reuse.

See MSDS for further information.

FIRST AID

1. **SKIN CONTACT** - Wipe off contaminated area and wash with soap and water.
2. **EYE CONTACT** - Immediately flush eyes with large amounts of water for 10 minutes. Get medical attention.
3. **INHALATION** - Move to fresh air if symptoms occur. If breathing is difficult, seek medical attention.
4. **INGESTION** - Seek immediate medical attention.

CLEAN-UP

Use solvent to clean equipment. Use soap and water to remove from skin.

Solvent-Based Water Repellent / silane and siloxane
MICSIL 777D

STORAGE

MICSIL 777D should be stored at room temperature (min 10°C and max 35°C), kept dry and out of direct sunlight. If these conditions are maintained and the product packaging is unopened, then a shelf life of 1 year can be expected.

PACKAGING

MICSIL 777D is supplied in a 30 liter drum.

Water-Based Water Repellent / potassium methyl silicate SILRES BS 16

DESCRIPTION

SILRES BS 16 is an aqueous solution of potassium methyl silicate and is used in diluted form for impregnation mineral construction materials to make them water-repellent.

SILRES BS 16 develops its water-repellent properties by reaction with atmospheric carbon dioxide (CO₂). The active substance formed from the silicone masonry water repellent is polymethylsilicic acid. As with all silicates, however,

SILRES BS 16 can cause a white deposit on the surface of colored construction materials.



FEATURES AND BENEFITS

- Provides an invisible water repellent surface
- Reduces efflorescence and surface salts
- Acts as a damp-proof course
- Fungus growth resistance.
- Allows substrate to breathe.
- Absorbent resistance prevents dusting.
- Reduces cleaning costs

RECOMMENDED FOR

Imparting water repellency to :

- Low-fired clay products immediately after they have been made: e. g. roof tiles, facing bricks, floor tiles, flower pots
- Aerated concrete
- Gypsum and gypsum-based plasterboards
- Light fillers, such as perlite, vermiculites and aerated concrete granules
- Insulating materials

PROCESSING

Diluted with water SILRES BS 16 is used for impregnating the surface of masonry materials when a suitable means of achieving an adequate, uniform coating, e. g. dipping, is available. Application is careful for some kinds of outside walls since the unsuitable application will give rise to white spots.

Water-Based Water Repellent / potassium methyl silicate SILRES BS 16

We recommend that a test area of 1-2m² be carried out on site

PHYSICAL PROPERTIES

Appearance	clear to hazy, colourless
Solids content (1g / 1h / 150°C), approx.	54%
Active substance content, approx.	34%
K ₂ O equivalent, approx.	20%
Solvent	water
Density at 25°C, approx.	1.4 g/cm ³
PH, approx.	13
Flash point	non-flammable

APPLICATION GUIDELINES

Surface Preparation

Surfaces to be treated must be free of all traces of dirt and organic matter. Gaps and cracks must be repaired. Salt encrustations must be cleaned using mild acid.

Application For Surface Treatment

Use a low-pressure spray, achieving total saturation with a minimum of 2 coats, applied sequentially.

Note

Care should be taken not to spray on glass, painted surfaces and plant growth.

DILUTION

SILRES BS 16 is supplied as a concentrate and is diluted with water before use. Ordinary tap water may be used. It is best to add the SILRES BS 16 masonry water repellent to the water with vigorous stirring. SILRES BS 16 is used diluted with water in a ratio of 1:9 to 1:20.

COVERAGE RATE

Depending on the substrate the diluted SILRES BS 16 will vary it could be as low as 3m² per liter for dense concrete and as high as 0.5 m² per liter for porous bricks.

CAUTION

SILRES BS 16 is strongly alkaline and corrosive both as a concentrate and in its diluted form. Any splashes on the skin should be washed off with plenty of water. If any of the product gets into eyes,

Read Material Safety Data Sheets before
Using this product.

Water-Based Water Repellent / potassium methyl siliconate SILRES BS 16

wash them immediately with plenty of water and seek medical advice because of the effect of the corrosive alkali. Clothing wetted with SILRES BS 16 must be taken off immediately.

CLEAN-UP

Use water to clean application equipment and tools, immediately following use.

STORAGE

Two year shelf life when stored in cool, dry place in unopened drums. Agitate or stir the bucket or drum before using.

PACKAGING

SILRES BS 16 is supplied in a 30 liter drum.

Water-Based Water Repellent / silane and siloxane MICSIL 1322

DESCRIPTION

MICSIL 1322 is a solventless silicone microemulsion concentrate based on silanes and siloxanes that is diluted with water to yield microemulsions. The dilute, aqueous solution of MICSIL 1322 serves as a high-quality, general-purpose water repellent for impregnating and priming mineral and even alkaline substrates.

MICSIL 1322 is colorless, non-staining, non-film forming and will not yellow. MICSIL 1322 forms a barrier within the masonry substrate, protecting from weathering and helps keep treated surfaces cleaner by resisting the entrance of air-borne dirt, acid rain, smog, industrial pollutants and most other atmospheric chemicals. MICSIL 1322 can be used in above grade and on grade applications to protect against moisture penetration helping to prevent corrosion of steel reinforcing within the concrete substrate. MICSIL 1322 eliminates efflorescence, and reduces spalling from freeze/thaw cycles.



FEATURES AND BENEFITS

- Water-free and solventless silicone concentrate
- Spontaneously miscible with water, i.e. without the need for sophisticated mixing devices
- Dilute with drinking water
- Silicone microemulsions which have been activated with water must be used on the day of preparation
- Can be applied to tile surface. Non-staining and non-yellowing.
- Allows substrate to breathe.
- Abrasion resistance prevents dusting.
- Fungus growth resistance.

APPLICATION

Diluted with water, MICSIL 1322 is used as a general-purpose water repellent for absorbent, mineral and even alkaline substrates, such as natural stone, brick, concentrate and sand-lime brick, as well as for mineral paints and stuccos.

MICSIL 1322 is also suitable as a primer for dispersion-based paints and plasters, silicone resin paints and plasters, concrete coatings, and as a water repellent for the in-plant treatment of lightweight aggregates and clay building materials, aerated concrete, sand-lime brick, fibrous cement and mineral

Water-Based Water Repellent / silane and siloxane MICSIL 1322

fibers.

APPLICATION GUIDLINES

Surface Preparation

Surfaces to be treated must be free of all traces of dirt and organic matter. Gaps and cracks must be repaired. Salt encrustations must be cleaned using mild acid.

Application For Surface Treatment

Use a low-pressure spray, achieving total saturation with a minimum of 2 coats, applied sequentially.

Note

Care should be taken not to spray on glass, painted surfaces and plant growth.

PROCESSING

MICSIL 1322 which has been diluted with water should be used on the day of dilution, i. e. only dilute as much product as can be used on the same day.

The dilution should be liberally applied in at least two coats, wet on wet, to the surface of the building material. It should not be applied under pressure or as an aerosol. Application by flooding is especially recommended. The construction material to be treated should look dry.

Before applying MICSIL 1322, be sure to cover windows and other non-absorbent surfaces properly because the product cures so quickly that it will be extremely difficult, if not impossible, to remove after a few days. Wipe off any splashes on window panes immediately using soapy water or, if necessary, an organic solvent.

We recommend that a test area of 1-2m² be carried out on site

DILUTION

Drinking water is suitable for the dilution of MICSIL 1322. When adding water to MICSIL 1322, briefly stir the mixture. Fine-particle opalescent microemulsions will result, whose appearance will not change even after their pot life has expired.

In general, good results will be obtained if MICSIL 1322 is used diluted with water in a ratio of 1:9 to 1:14.

PHYSICAL PROPERTIES

Appearance	clear
Colour	yellowish to reddish

Water-Based Water Repellent / silane and siloxane MICSIL 1322

Silane / siloxane content	approx. 100%
Density at 25°C	0.95 – 0.97 g/cm ³
Viscosity, dynamic at 25°C	1 – 10mPa,s
Flash point	25°C

COVERAGE RATE

Depending on the substrate the diluted MICSIL1322 will vary it could be as low as 3m² per liter for dense concrete and as high as 0.5 m² per liter for porous bricks.

CLEAN-UP

Use water to clean application equipment and tools, immediately following use.

STORAGE

Two year shelf life when stored in cool, dry place in unopened drums. Agitate or stir the bucket or drum before using.

PACKAGING

MICSIL 1322 is supplied in a 20 liter drum.

Water-Based Water Repellent / silane SILRES BS CRÈME C

DESCRIPTION

SILRES BS CREME C is an aqueous, solventless, creamy, silane-based water repellent. It is a high quality specialty product for impregnating both normal and reinforced concrete.



FEATURES AND BENEFITS

- Dramatic reduction in chloride and water absorption
- Comprehensive protection against frost / road salt attack
- Optimum resistance to alkalis
- Good depth of penetration
- Provides good adhesion for paints
- Solventless, aqueous and environmentally compatible
- Low volatility
- Thixotropic and may so be applied without loss of material

SILRES BS CREME C is a unique impregnating agent because it is thixotropic. It has an outstanding ability to impregnate high-quality concrete and reinforced concrete. Unlike conventional liquid products, SILRES BS CREME C can be applied in just one coat of the desired thickness (at the very most, two coats). The silane active ingredient penetrates the substrate within 30 minutes to several hours, the exact time depending on the porosity and thus quality of the concrete. On reaction with the substrate, it releases ethanol and is converted into a polymeric silicone resin. A creamy layer forms initially, but this then disappears completely. As the active ingredient is the same as in conventional liquid impregnating agents, impregnation with SILRES BS CREME C does not clog the pores or capillaries, nor does it affect its ability to "breathe".

SILRES BS CREME C is designed to penetrate deeply into concrete so as to afford optimum protection against absorption of water and pollutants as well as freeze / thaw cycles. This effect should not be confused with the "beading" effect imparted by impregnating agents that is often referred to as water repellency. Beading is only a surface effect, and it plays a secondary role in protecting the substrate. Concrete treated with SILRES BS CREME C has initially only a moderate beading effect, but this increases after the surface has been wetted.

APPLICATION

SILRES BS CREME C is recommended particularly for impregnating and priming concrete and

Water-Based Water Repellent / silane SILRES BS CRÈME C

reinforced concrete used in building bridges, roads and buildings. In principle, SILRES BS CREME C may be used on any alkaline substrate that has been treated previously with concentrated or undiluted impregnating agents, such as alkoxy silanes.

PROCESSING

SILRES BS CREME C is best applied to the concrete by the airless technique, undiluted and in the desired thickness. Brushes, lambskin rollers or spatulas may be used for smaller areas.

Up to 300g/m² may be applied in one operation to vertical surfaces and roofs, without loss of material. The exact amount depends on the absorbency of the substrate. If the substrate is of high quality and hence not very absorbent, do not apply more than roughly 200g/m² in one operation, as it may take several hours to penetrate completely. At higher application rates, the impregnating agent might liquefy at the top of the concrete and it might start to run off. A second coat of SILRES BS CREME C may be applied at any time, but is usually unnecessary.

To ensure that the cement sets properly, it is best to wait at least two weeks, and preferably four, before impregnating it. Remove coarse particles and dust from new unsoiled surfaces with a brush or compressed air. Use superheated steam to clean weathered surfaces that are heavily soiled with oil or abraded rubber, etc., prior to treatment.

Only impregnate concrete that has a uniformly dry surface with no damp patches. Should it suddenly start to rain, stop treatment and cover the impregnated areas.

SILRES BS CREME C should not get into direct contact with bitumen.

PHYSICAL PROPERTIES

Appearance	white or yellowish creme
Active substance	approx. 80 wt. %
Density	approx. 0,9 g/cm ³
Flash point	74 °C

STORAGE

One year shelf life when stored in cool, dry place in unopened drums. Agitate or stir the bucket or drum before using.

PACKAGING

SILRES BS CRÈME C is 18 KG pail or 180 KG drum.

Water-Based Water Repellent / ethyl silicate SILRES BS OH100

DESCRIPTION

SILRES BS OH 100 is a solventless, ready-to-use product for the consolidation of construction materials.



FEATURES AND BENEFITS

- As a one-part system, it is to apply
- Its low-molecular weight ensures optimum penetration
- It dries to form a tack-free film, which does not attract dirt
- No by-products that are damaging to the construction material
- It forms a mineral binder that is compatible with the construction material
- The binder is acid-resistant and therefore resists rainwater
- It does not seal pores, and the construction material remains permeable to water vapor

MODE OF ACTION

SILRES BS OH 100 is based on ethyl silicate. When applied, it penetrates through the capillaries deep into the construction material. The neutral catalyst promotes the reaction between ethyl silicate and water from atmospheric humidity or the moisture in the capillary pores. A glass-like silica gel binder ($\text{SiO}_2 \cdot n\text{H}_2\text{O}$) is formed. The ethanol by product evaporates. Under standard conditions ($20^\circ\text{C} / 50\% \text{ r. h.}$), final hardness is reached after two weeks, i. e. when most of the ethyl silicate has been converted to silica gel.

The product does not contain any hydrophobic additives such as silanes or siloxanes. Before the reaction is complete, the treated surface may show slight beading, though this does not mean that it is water repellent.

APPLICATION

The main application of the product is to restore weather-damaged natural stone, stucco or frescos. It may also be used to treat other construction materials such as brick or terracotta.

Any absorbent mineral construction material can be treated with SILRES BS OH 100. By saturation with the product, their original strength and porosity can be practically restored.

PROCESSING

Preliminary test, test area

Water-Based Water Repellent / ethyl silicate SILRES BS OH100

Since the degree of damage to the construction materials will differ from case to case, the instructions below are only intended as general guidelines. For successful restoration, it is essential to:

- Determine the exact state of the substrate to be consolidated (binder, salt content, porosity, etc.)
- Decide what measures are necessary and estimate the material consumption
- Mark out a sufficiently large test area (this will also be used to determine the material consumption for the bill of quantities) and make an estimate of the success of the measures by visual assessment (by means of color changes) and by making physicochemical measurements
- Check that the measures have been taken and monitor material consumption
- Carry out thorough final tests

Condition of substrate

Buildings to be restored often have a thick layer of dirt (crust) on the surface. These areas should be cleaned by an extremely mild process, e. g. by spraying with cold or hot water or by steam cleaning. The stone is often already friable, and can no longer be cleaned without further damage being caused. This can be prevented by first consolidating the material with SILRES BS OH 100. Then the material can be cleaned and the main consolidation process carried out.

To enable SILRES BS OH 100 to penetrate through all the friable building material, the area must be air dry and absorbent. The treated area should be protected against rain for two to three days after treatment. The area should also be protected against direct sunlight, since heat will cause the product to evaporate before it has penetrated to a sufficient depth. The best temperatures for application are between 10 and 20 °C. Relative humidity should be greater than 40 %. Excessive heating of the surfaces can be prevented by shading them with awnings.

PHYSICAL PROPERTIES

Color	colorless to yellowish
Ethyl silicate content, approx.	approx. 100 wt. %
Density, at 25 °C, approx.	1.0 g/cm ³
Catalyst	neutral
Flash point	40 °C
Ignition temperature	230°C

APPLICATION METHOD

SILRES BS OH 100 may be applied by spraying, brushing or dipping, according to the object to be consolidated. Larger areas should be treated with spraying equipment, but smaller ones can be treated

Water-Based Water Repellent / ethyl silicate SILRES BS OH100

with a wash bottle. Portable objects such as sculptures can be treated by dipping or by means of compresses.

AMOUNT TO BE APPLIED

If restoration is to be successful, the product must penetrate to the sound core of the masonry, otherwise flaking off of the outer crust cannot be ruled out.

To achieve the required depth of penetration, apply SILRES BS OH 100 wet on wet to small areas (brick by brick, if necessary) until the construction material does not absorb any more of the product. If necessary, apply a second treatment no sooner than two to three weeks after the first. Again, make sure that the friable material is fully saturated.

If a second course of treatment is carried out before the binder is fully formed, the product will not be absorbed by the masonry and the surface will turn grey.

The amount of SILRES BS OH 100 needed for consolidation depends on the type of construction material. It may range from 0.5 to 15 l/m². For example, a brick that had weathered to a depth of 6 cm needed 5 l/m² of SILRES BS OH 100 in the first course of treatment and 3.5 l/m² in the second course carried out after three weeks. In another case, 2.7 l/m² was applied and was shown to have penetrated to a depth of 10 cm. Determine how much Stone Strengthener to apply by experimenting on a test area.

POST-TREATMENT

Discoloration of the surface by ethyl silicate can be prevented by washing it with a solvent such as white spirit as soon as it is fully saturated.

APPLICATION OF STONE SUBSTITUTE OR PAINT

When the SILRES BS OH 100 course has reacted completely, stone substitute or mineral silicate paint can be applied to the treated area. The consolidated surface can also be treated with silicone paint. SILRES BS OH 100 can also be applied to surfaces after they have been treated with stone substitute or mineral silicate paint, but only after an interval of four weeks.

WATER-REPELLENT TREATMENT

After restoration work, a water-repellent coat should be applied to protect against rainwater.

STORAGE

Read Material Safety Data Sheets before
Using this product.

Water-Based Water Repellent / ethyl silicate
SILRES BS OH100

SILRES BS OH 100 has a shelf life of at least 12 months when stored in the originally sealed containers at temperatures no exceeding 30 °C.

PACKAGING

SILRES BS OH100 is 30 KG metal pail.

Non-Fibered Emulsion Asphalt Coating KARNAK 100

DESCRIPTION

Karnak #100 Non-Fibered Emulsion Asphalt Coating is a general purpose Non-Fibered Emulsion Asphalt Coating prepared from an asphalt binder, carefully refined and emulsified in water by means of selected colloids. The asphalt emulsion thus produced is of heavy paint consistency. Karnak #100 Non-Fibered Emulsion Asphalt Coating is a tough, flexible black-asphalt compound especially designed to provide excellent protection to most roof surfaces against weathering.

Karnak #100 Non-Fibered Emulsion Asphalt Coating will not burn or support combustion in a liquid state. It has no odor or fumes, and resists the absorption of exterior moisture.



SPECIFICATIONS

ASTM D-1187 Type II

ASTM D-1227 Type III

SS-R-1781

MIL-R-3472A

SURFACE PREPARATION

All surfaces should be clean and free from oil, grease, rust, dirt and other foreign matter. Excess water should be removed, if possible, before application of Karnak #100 Non-Fibered Emulsion Asphalt Coating.

APPLICATION

Karnak #100 Non-Fibered Emulsion Asphalt Coating is easily applied by brush, roller or spray equipment.

BRUSH APPLICATION

Apply with a wide fiber brush at the rate of 3 to 4 gallons per 100 sq. ft.

SPRAY APPLICATION

Utilize a standard heavy duty spray pump using heavy duty guns and nozzles. Apply at the rate of 3 to 4 gallons per 100 sq. ft. Equipment manufacturer should be consulted for more complete information.

Non-Fibered Emulsion Asphalt Coating KARNAK 100

COVERAGE RATE

Apply at the rate of 3 to 4 gallons per 100 sq. ft.

PHYSICAL PROPERTIES

Weight per Gallon	8.5 lbs
Solids by weight	56%
Solids by Volume	58%
Color	Brown Wet-Black Dry
Permeability	0.5 Metric Perms
Dry Time	4 to 6 Hours
Service Temperature Range	-40°F to 180°F

CARE OF TOOLS

Tools and other equipment should be cleaned with water immediately after use. Dried material may be cleaned with mineral spirits. Take necessary precautions when handling combustible materials.

CAUTION

Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Keep out of reach of children. **Do not thin.** Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

COLD-PROCESS SYSTEMS AND COATINGS, EITHER EMULSION OR SOLVENT BASED, SHOULD ONLY BE INSTALLED ON DECKS WITH POSITIVE DRAINAGE.

PER NRCA, (NATIONAL ROOFING CONTRACTORS ASSOCIATION) "THE CRITERIA FOR JUDGING PROPER SLOPE FOR DRAINAGE IS THAT THERE BE NO EVIDENCE OF STANDING WATER ON THE DECK 48 HOURS AFTER IT STOPS RAINING."

PACKAGING

Available in 5 gallon pails and 55 gallon drums.

Fibered Emulsion Asphalt Coating(trowel grade)

KARNAK 920

DESCRIPTION

Karnak #920 Fibered Emulsion Asphalt Coating is a general purpose coating, manufactured with refined asphalt, clay emulsifiers, and selected non-asbestos fibers. The dried film cures to a tough, flexible, durable finish and will resist variations in temperature and weather. Karnak #920 Fibered Emulsion Asphalt Coating will not burn or support combustion in a liquid state. It has no odor or fumes, and resists the absorption of exterior moisture. Karnak #920 Fibered Emulsion Asphalt Coating may be applied to slightly damp surfaces.



USE

Karnak #920 Fibered Emulsion Asphalt Coating is a vapor retarder used as a protective coating, against dampness on the exterior face of interior above grade and exterior surfaces of concrete, metal and wood above or below grade. It may also be used to dampproof interior surfaces below grade in the absence of hydrostatic pressure. The emulsion may be utilized as an adhesive for styrofoam insulation prior to backfilling.

SPECIFICATIONS

ASTM D-1187 Type I
ASTM D 1227 Type II Class I
SS-R-1781
MIL-R-3472A

SURFACE PREPARATION

Surface should be free of oil, grease, dirt, laitance and loose material. Dry surfaces may be dampened with water before application. Repair all cracks and holes with #920 Fibered Emulsion Asphalt Coating and fiberglass membrane before applying the surface coating.

APPLICATION

Karnak #920 Fibered Emulsion Asphalt Coating is easily applied by trowel. Apply Karnak #920 Fibered Emulsion Asphalt Coating in one coat. If applying two, allow the first coat to dry. Coating should be continuous and free of pinholes or holidays. Cover all slots, joints and grooves and apply into all chases

Fibered Emulsion Asphalt Coating(trowel grade)

KARNAK 920

and corners.

APPLICATION

A. Above-grade dampproofing: (interior and exterior) :

Apply one coat of Karnak #920 Fibered Emulsion Asphalt Coating at a rate of 4 to 6 gallons per 100 sq. ft. If applying two coats, each coat should be 2 to 3 gallons per 100 sq. ft. (First coat must be allowed to dry prior to the application of the second coat).

B. Below-grade dampproofing: (exterior only) :

Apply one coat of Karnak #920 Fibered Emulsion Asphalt Coating at a rate of 4 to 6 gallons per 100 sq. ft. If applying two coats, each coat should be 2 to 3 gallons per 100 sq. ft. (First coat must be allowed to dry prior to the application of the second coat).

C. Fabric reinforced dampproofing :

Apply one coat of #920 Fibered Emulsion Asphalt Coating at a rate of 2 to 3 gallons per 100 sq. ft. Apply fiberglass Membrane over the wet coating, overlapping all edges. Smooth out all wrinkles, making sure there is no trapped air underneath the fabric. Proceed with second coat at a rate of 2 to 3 gallons per 100 sq. ft.

D. Polystyrene insulation adhesive :

Karnak #920 Fibered Emulsion Asphalt Coating is a water-based emulsion that is 100% compatible with Polystyrene insulation or protection board. As an adhesive, Karnak #920 Fibered Emulsion Asphalt Coating should be applied in 4" diameter dabs at an approximate rate of 1 quart per 100 square feet, and the insulation pressed firmly into it immediately.

Note: When more than two courses are required wall ties may be necessary.

COVERAGE RATE

Apply at 4 to 6 gallons per 100 square feet.

PHYSICAL PROPERTIES

Weight per Gallon	9.2 lbs
Solids by weight	59%
Solids by Volume	56%
Color	Brown Wet-Black Dry
Permeability	0.5 Metric Perms
Dry Time	24 to 48 hours @ 77°F · 50% Relative Humidity

Fibred Emulsion Asphalt Coating(trowel grade)

KARNAK 920

Service Temperature Range

-40°F to 180°F

CARE OF TOOLS

Equipment may be cleaned with water immediately after use. Dried coating may be cleaned with mineral spirits. Take necessary precautions when handling combustible material.

CAUTION

Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Keep out of reach of children. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

PACKAGING

Available in 5 gallon pails and 55 gallon drums.

Solvent-Based Rubberized Asphalt Coating KARNAK 19

DESCRIPTION

Karnak #19 Rubberized Asphalt Coating is the next generation asbestos-free flashing cement. Scientifically compounded with a selection of rubber reinforced asphalt, mineral fibers, and refined solvents. Karnak #19 Rubberized Asphalt Coating is manufactured to a heavy pliable consistency for ease of application by trowel. #19 Rubberized Asphalt Coating provides a durable elastomeric coating of greater strength, excellent adhesion and high resistance to water and weathering.



Karnak #19 Rubberized Asphalt Coating is composed of special chemical ingredients which give it a unique water displacement quality (Wet/Dry). Karnak #19 Rubberized Asphalt Coating dries to a tough, flexible, waterproof and corrosion proof rubber coating which gives maximum protection and excellent performance over wide ranges of temperature and weather conditions. Karnak #19 Rubberized Asphalt Coating is available in 3 consistencies: Summer, Semi and Winter.

FEATURES AND BENEFITS

- Rubberized – elastomeric
- Wet or dry application
- Improved low-temperature flexibility
- Improved water and weather resistance
- Will not shrink or crack
- Smooth, easy to apply rubber-like trowel consistency
- Excellent adhesion
- Excellent resistance to flow (sag) at high roof temperatures
- Ready to apply - no mixing required
- Greater strength
- Asbestos-Free
- VOC compliant
- ASTM compliant
- Sticks under water the first time
- Can be used with fiberglass membrane under water.

Solvent-Based Rubberized Asphalt Coating

KARNAK 19

PHYSICAL PROPERTIES

1. Consistency: A smooth rubber-like trowel consistency which will readily spread on and adhere to vertical and horizontal surfaces without sagging.
2. Character of Dried Film: Excellent adhesion to masonry, steel, cured concrete, shingles, asphalt roofing, skylight flashings and a variety of other surfaces.
3. Film Performance Characteristics: The dried film retains its elasticity and ductility so that the material will resist extreme variations in temperature and weather.
4. Sag Resistance: Excellent resistance to flow at high roof temperatures on vertical surfaces.
5. Homogenized: Thoroughly mixed and consistent throughout.

USE

Karnak #19 Rubberized Asphalt Coating is a general purpose asbestos-free flashing cement for repairing leaks in shingles, concrete, metal or asphalt roofs, flashings on walls, chimneys, flues, skylight flashings, downspouts and cornices.

Karnak #19 Rubberized Asphalt Coating is excellent for sealing cracks in concrete and brick, as a joint filler for precast roof slabs, for repair, patch and flashing detail on SBS modified membranes, and for general purpose use in maintenance of exposed buildings and structures.

SPECIFICATIONS

ASTM D-4586 Type I

ASTM D-3409

Fed Spec SS-C-153 Type 1 (Asbestos-Free)

SURFACE PREPARATION

All surfaces should be clean, dry and free from oil, grease, dust, dirt, loose paint or other foreign matter. Excess water should be removed, if possible, before application of Karnak #19 Rubberized Asphalt Coating.

APPLICATION

Spread Karnak #19 Rubberized Asphalt Coating to an average thickness of 1/8" (approximately 8

Solvent-Based Rubberized Asphalt Coating KARNAK 19

gallons per square) and press tightly into joints, seams or cracks.

TO REPAIR CRACKS, BREAKS AND BLISTERS

1. Spread Karnak #19 Rubberized Asphalt Coating over the damaged area at an average thickness of 1/8".
2. Embed Cotton, Glass or Polyester Membrane reinforcement in the Karnak #19 Rubberized Asphalt Coating.
3. Apply an additional coat of Karnak #19 Rubberized Asphalt Coating over the entire patch at an average thickness of 1/8".

CARE OF TOOLS

Tools and other equipment should be thoroughly cleaned with mineral spirits, taking necessary precautions when handling combustible materials.

CAUTION

Combustible Mixture: do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, **do not induce vomiting**. Call a physical immediately.

Keep out of reach of children. Keep container covered when not in use. **Do not thin**. Consult MSDS for further safety precautions. Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

PACKAGING

Available in 5 gallon pails

Water-Based Rubberized Asphalt Coating MICSIL 720H

DESCRIPTION

MICSIL 720H is made by water-based, high-concentrated integrated asphalt late by the polymerization of polymer resin having super extensibility, high viscosity, and super strong water proof ability. It has asphalt for the dipping-resisting ability and the advantages of not aging at high temperature as ordinary asphalt, and not becoming fragile at low temperature.



FEATURES AND BENEFITS

- It can be applied on wet floor, having air permeability ◦
- Aqueous, non-toxic, easy-to-apply, no need to add solvent, odorless.
- Strong adhesiveness, high permeability.
- Super strong expansibility, over 700%.
- Viscosity can be adjusted by add clean water.

USE

MICSIL 720H can be sued for the anti-moisture & waterproof construction for roof, basement, external wall, central court garden, etc.

SURFACE PREPARATION

All surfaces should clean without any oil, grease, dust, dirt or other adhesion-inhibiting materials. If there is any crack or hole, it is necessary to repair them at first. If the surface is cement, concrete or mortar, dry surfaces may be dampened with few water before application.

APPLICATION

Mechanically mix MICSIL 720H prior to application. MICSIL 720H should be applied by brush or roller. First coat must be allowed to dry(approx. 3 to 6 hours) prior to the application of the next coat. Apply only when temperature is 10°C and rising. The MICSIL 720H will have excellent water resistance after it dries.

COVERAGE RATE

Apply MICSIL 720H at a rate of 1 gallons per 3 m². This yields an approximate dry film thickness of 1.0

Water-Based Rubberized Asphalt Coating MICSIL 720H

mm. If you apply 3 layers, the thickness will achieve 1mm.

CARE OF TOOLS

Clean up of tools may be accomplished with water while coating is still wet. Dry coating may be cleaned with xylene. Take necessary precautions when handling flammable materials.

CAUTION

Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

PACKAGING

Available in 5 gallon pails.

Hydrophobic Polyurethane Injection Resin / MDI BASE MICSIL PU2000

DESCRIPTION

MICSIL PU2000 is a hydrophobic polyurethane that, when makes contact with water, is designed to fill large voids in rock fissures, gravel layers, joints, and cracks in concrete structures and for the cut-off of gushing water. Depending on the temperature and amount of accelerator (**MICSIL CAT201**) used, the grout quickly cures to a rigid, closed cell polyurethane foam that is resistant to most organic solvents, mild acids, alkali, petroleum and micro-organisms.



FEATURES AND BENEFITS

- No V.O.C.'s
- Single component (no catalyst required)
- Contains no solvents, environmentally safe
- Very tough foam
- Free foam expansion up to 25-30 times its liquid volume
- Medium viscosity

RECOMMENDED FOR

- Sealing larger volume leaks thru concrete cracks and fissures
- Filling voids
- Stabilizing soil or gravel
- Tunneling applications

PHYSICAL PROPERTIES

Solids	100%
Appearance	Amber coloured liquid
Viscosity at 25°C	550 mPas
Specific Gravity at 25°C	1.14 at 25°C
Corrosiveness	Non-corrosive
Cure time	3 to 14 minutes
Flash point	>180°C

Hydrophobic Polyurethane Injection Resin / MDI BASE

MICSIL PU2000

APPLICATION GUIDLINES

MICSIL PU2000 is a complete system for void filling and leak sealing in concrete or masonry structures and sandy soils. Adaptable reaction times are possible by varying the catalyst(**MICSIL CAT201**) ratio from 2% to 10%. Reaction with the water results in the formation of a semi-flexible polyurethane foam which is hydrophobic and chemically resistant. The reaction time can be set from 3 to 6 minutes. The premixed resin can be pumped by means of a single component injection pump that is equipped for high pressure.

CAUTION

Always make sure that the material is homogeneous, shake well before use. It is recommended that the material be conditioned to appropriate temperatures for at least 12 hours prior to application.

FIRST AID

1. **SKIN CONTACT** - Wipe off contaminated area and wash with soap and water.
2. **EYE CONTACT** - Immediately flush eyes with large amounts of water for 10 minutes. Get medical attention.
3. **INHALATION** - Move to fresh air if symptoms occur. If breathing is difficult, seek medical attention.
4. **INGESTION** - Seek immediate medical attention.

CLEAN-UP

Use solvent to clean equipment. Use soap and water to remove from skin.

STORAGE

Materials must be stored in dry conditions below 80°F (26°C). Optimal storage conditions are between 40°F and 80°F (4° and 26°C). Under proper conditions, the shelf life is twelve(12) months in unopened, damage-free containers.

PROTECT FROM MOISTURE. DO NOT ALLOW PRODUCT TO FREEZE.

PACKAGING

MICSIL PU2000 is supplied in a 20kg metal drum

Hydrophilic Polyurethane Injection Resin / MDI BASE MICSIL PU5000

DESCRIPTION

MICSIL PU5000 is a hydrophilic polyurethane designed to react with water and form a water impermeable gel mass. MICSIL PU5000 is a colorless, nonflammable liquid. When it comes into contact with water, the grout begins to foam or gel, and depending on the temperature and amount of water present, quickly cures to a flexible, impermeable foam or gel mass unaffected by mildly corrosive environments.



FEATURES AND BENEFITS

- Non-flammable
- Contains no volatile solvents, , environmentally safe
- Can be injected through remote internal pipe packer equipment
- Single Component (no catalyst required)
- Extremely Flexible
- Free Foam Expansion up to 8-10 times its liquid volume

RECOMMENDED FOR

- Stopping infiltration into manholes (brick or concrete).
- Sealing of pipe joints using commercial packer equipment.
- Stabilization of soil
- Potable water tanks and storage
- Curtain wall grouting below grade structures

PHYSICAL PROPERTIES

Appearance	light yellow liquid
Solids	100%
Viscosity at 21°C	600 mPas
Specific Gravity at 21°C	1.12
Corrosiveness	Non-corrosive
Cure time	3 to 6 minutes
Flash point	> 110°C

Hydrophilic Polyurethane Injection Resin / MDI BASE

MICSIL PU5000

APPLICATION GUIDLINES

MICSIL PU5000 is a hydrophilic polyurethane prepolymer liquid for hydrophilic polymer resin type water stopping. It can be injected directly into a leaking crack, fracture or Joint. After injection has taken place, the MICSIL PU5000 will foam to expand and fill the void, forming a tight, impermeable elastomeric seal, stopping the water flow.

CAUTION

MICSIL PU5000 should only be used as directed. We always recommend that the Health & Safety Data Sheet is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection.

FIRST AID

1. **SKIN CONTACT** - Wipe off contaminated area and wash with soap and water.
2. **EYE CONTACT** - Immediately flush eyes with large amounts of water for 10 minutes. Get medical attention.
3. **INHALATION** - Move to fresh air if symptoms occur. If breathing is difficult, seek medical attention.
4. **INGESTION** - Seek immediate medical attention.

CLEAN-UP

Use solvent to clean equipment. Use soap and water to remove from skin.

STORAGE

Materials must be stored in dry conditions below 80°F (26°C). Optimal storage conditions are between 40°F and 80°F (4° and 26°C). Under proper conditions, the shelf life is twelve (12) months in unopened, damage-free containers.

PROTECT FROM MOISTURE. DO NOT ALLOW PRODUCT TO FREEZE.

PACKAGING

MICSIL PU5000 is supplied in a 20kg metal drum.

Hydrophobic Polyurethane Injection Resin / MDI BASE

MICSIL PU9000

DESCRIPTION

MICSIL PU9000 is based on a polyol component (part A) and a polymeric MDI(part B). When mixed, hydrophobic polyurethane is formed which is tough, rigid and resistant to a wide range of chemicals. **MICSIL PU9000** reacts rapidly enabling the product to cut off large water leaks.



FEATURES AND BENEFITS

- Rapid reaction
- High foam strength
- Good bond strength
- Medium viscosity
- Solvent free, environmentally safe

RECOMMENDED FOR

- Extreme water ingress
- Large voids
- Dry fissure grouting
- Foundation stabilisation

PHYSICAL PROPERTIES

	COMPONENT A	COMPONENT B
Appearance	Yellow clear liquid	Brown liquid
Specific gravity at 25°C	1.1	1.24
Viscosity, mPa s at 25.C	<1000 mPa.s	275

TECHNICAL DATA

	DRY	IN CONTACT WITH WATER (A : B : WATER = 1 : 1 : 0.2)
Mix ratio (volume A : B)	1 : 1	1 : 1
Reaction times(25°C)	120 sec	140 sec
Expansion factor	1	3-5

Hydrophobic Polyurethane Injection Resin / MDI BASE

MICSIL PU9000

Compressive strength

80 Nmm²

3 Nmm²

APPLICATION GUIDLINES

MICSIL PU9000 is a dual component material mixed at a ratio of 1:1 by volume. When the material has cured it forms a rigid polyurethane resin. However, the material will react when combined with water to form a rigid foam. The reaction and foaming times will vary depending upon temperature and the quantity of water encountered. Please contact our technical department should you require any further information regarding suitability or application of this product.

MIXING

2K piston injection pump(DU2000)

Due to the speed of the reaction, the material must be applied with a 2K piston injection pump set at a ratio of 1:1 by volume.

CAUTION

MICSIL PU9000 should only be used as directed. We always recommend that the Health & Safety Data Sheet is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection.

FIRST AID

1. **SKIN CONTACT** - Wipe off contaminated area and wash with soap and water.
2. **EYE CONTACT** - Immediately flush eyes with large amounts of water for 10 minutes. Get medical attention.
3. **INHALATION** - Move to fresh air if symptoms occur. If breathing is difficult, seek medical attention.
4. **INGESTION** - Seek immediate medical attention.

CLEAN-UP

Use solvent to clean equipment. Use soap and water to remove from skin.

STORAGE

Materials must be stored in dry conditions below 80°F (26°C). Optimal storage conditions are between 40°F and 80°F (4° and 26°C). Under proper conditions, the shelf life is twelve (12) months in

Read Material Safety Data Sheets before
Using this product.

Hydrophobic Polyurethane Injection Resin / MDI BASE MICSIL PU9000

unopened, damage-free containers.

PROTECT FROM MOISTURE. DO NOT ALLOW PRODUCT TO FREEZE.

PACKAGING

MICSIL PU9000 is supplied in 40kg packs.

Hydrophobic Polyurethane accelerated Injection Resin / MDI BASE

MICSIL PU9000 PLUS

DESCRIPTION

MICSIL PU9000PLUS is based on a polyol component (part A) and a polymeric MDI(part B). When mixed, hydrophobic polyurethane is formed which is tough, rigid and resistant to a wide range of chemicals. **MICSIL PU9000PLUS** reacts rapidly enabling the product to cut off large water leaks.



FEATURES AND BENEFITS

- High compressive strength
- High bond strength
- Rapid reaction for fast water cut off
- Solvent free, environmentally safe

RECOMMENDED FOR

- Extreme water ingress
- Filling large voids
- Stabilisation of concrete slabs
- Ground consolidation
- Wet or dry fissure grouting

PHYSICAL PROPERTIES

	COMPONENT A	COMPONENT B
Appearance	Yellow clear liquid	Brown liquid
Specific gravity at 25°C	1.1	1.24
Viscosity, mPa s at 25.C	<1000 mPa.s	275
Shelf life	1 year unopened	1 year unopened

TECHNICAL DATA

	DRY	IN CONTACT WITH WATER (A : B : WATER = 1 : 1 : 0.2)
Mix ratio (volume A : B)	1 : 1	1 : 1

Hydrophobic Polyurethane accelerated Injection Resin / MDI BASE

MICSIL PU9000 PLUS

Reaction times(25°C)	60 sec	70 sec
Expansion factor	1	12-15
Compressive strength	70 Nmm ²	2 Nmm ²

APPLICATION GUIDLINES

MICSIL PU9000PLUS is a dual component material mixed at a ratio of 1:1 by volume. When the material has cured it forms a rigid polyurethane resin. However, the material will react when combined with water to form a rigid foam. The reaction and foaming times will vary depending upon temperature and the quantity of water encountered. Please contact our technical department should you require any further information regarding suitability or application of this product.

MIXING

2K piston injection pump(DU2000)

Due to the speed of the reaction, the material must be applied with a 2K piston injection pump set at a ratio of 1:1 by volume.

CAUTION

MICSIL PU9000PLUS should only be used as directed. We always recommend that the Health & Safety Data Sheet is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection.

FIRST AID

1. **SKIN CONTACT** - Wipe off contaminated area and wash with soap and water.
2. **EYE CONTACT** - Immediately flush eyes with large amounts of water for 10 minutes. Get medical attention.
3. **INHALATION** - Move to fresh air if symptoms occur. If breathing is difficult, seek medical attention.
4. **INGESTION** - Seek immediate medical attention.

CLEAN-UP

Use solvent to clean equipment. Use soap and water to remove from skin.

STORAGE

Materials must be stored in dry conditions below 80°F (26°C). Optimal storage conditions are

Read Material Safety Data Sheets before
Using this product.

Hydrophobic Polyurethane accelerated Injection Resin / MDI BASE

MICSIL PU9000 PLUS

between 40°F and 80°F (4° and 26°C). Under proper conditions, the shelf life is twelve (12) months in unopened, damage-free containers.

PROTECT FROM MOISTURE. DO NOT ALLOW PRODUCT TO FREEZE.

PACKAGING

MICSIL PU9000PLUS is supplied in 40kg packs.

Hydrophilic Polyurethane Injection Resin / TDI BASE

ARC SEAL H501

DESCRIPTION

ARC SEAL H501 is a hydrophilic polyurethane designed to form a flexible gasket or plug in joints or cracks in concrete. In its uncured form, ARC SEAL H501 is a orange, low viscosity liquid. When it comes into contact with water, the grout expands quickly and cures to a tough, flexible, adhesive, closed-cell foam that is essentially unaffected by mildly corrosive environments.



FEATURES AND BENEFITS

- Free foam expansion 5-8 times its liquid volume.
- Retains elasticity even under harsh conditions.
- Single component
- High elongation creates tight seal in moving cracks
- Low viscosity permits injection into tight cracks

RECOMMENDED FOR

- Sealing leaks through concrete cracks and joints.
- Saturating oakum rope or open cell backer rod to seal joints by the gasket method.

PHYSICAL PROPERTIES

Solids	85%
Viscosity at 25°C	250-350 cps
Color	Orange
Cure time	100-120 sec.(1 : 1 with water)
Expansion factor	5-8

APPLICATION GUIDLINES

ARC SEAL H501 is a hydrophilic polyurethane prepolymer liquid for hydrophilic polymer resin type water stopping. It can be injected directly into a leaking crack, fracture or Joint. After injection has taken place, the ARC SEAL H501 will foam to expand and fill the void, forming a tight, impermeable elastomeric seal, stopping the water flow.

ARC SEAL

TYE HAN Trading Co., Ltd. [Http://www.carytrad.com.tw/e](http://www.carytrad.com.tw/e)

8th Fl., 183, section 1, Tatung Road, Hsi-Chih, Taipei Hsien 221, Taiwan R.O.C.
Tel : 886-(0)2-2648-8226 FAX : 886-(02)-2648-9811

Hydrophilic Polyurethane Injection Resin / TDI BASE

ARC SEAL H501

CAUTION

Vapor overexposure may cause respiratory irritation, central nervous system depression and allergic reaction. Provide sufficient ventilation to maintain vapor concentrations below recommended exposure limits. Avoid contact with skin, eyes and clothing. Wear protective rubber gloves and safety goggles when handling or dispensing materials. Wash contaminated clothing before reuse.

See MSDS for further information.

FIRST AID

1. **SKIN CONTACT** - Wipe off contaminated area and wash with soap and water.
2. **EYE CONTACT** - Immediately flush eyes with large amounts of water for 10 minutes. Get medical attention.
3. **INHALATION** - Move to fresh air if symptoms occur. If breathing is difficult, seek medical attention.
4. **INGESTION** - Seek immediate medical attention.

CLEAN-UP

Use solvent to clean equipment. Use soap and water to remove from skin.

STORAGE

Materials must be stored in dry conditions below 80°F (26°C). Optimal storage conditions are between 40°F and 80°F (4° and 26°C). Under proper conditions, the shelf life is twelve (12) months in unopened, damage-free containers.

PROTECT FROM MOISTURE. DO NOT ALLOW PRODUCT TO FREEZE.

PACKAGING

ARC SEAL H501 is supplied in a 20kg metal drum.

ARC SEAL

8th Fl., 183, section 1, Tatung Road, Hsi-Chih, Taipei Hsien 221, Taiwan R.O.C.
Tel : 886-(0)2-2648-8226 FAX : 886-(02)-2648-9811

TYE HAN Trading Co., Ltd. [Http://www.carytrad.com.tw/e](http://www.carytrad.com.tw/e)

Fibered Aluminum Roofing Coating KARNAK 97

DESCRIPTION

Karnak #97 Fibered Aluminum Roof Coating is made of selected asphalts and pigment flakes of pure aluminum blended with refined solvents and reinforcing fibers for heavy duty service. When Karnak #97 Fibered Aluminum Roof Coating is applied to the roof, the aluminum flakes leaf to the surface providing a reflective metallic shield over the base of the coating.



USE

Karnak #97 Fibered Aluminum Roof Coating helps reduce indoor building temperatures. It's ideal for use on modified bitumen membranes, metal corrugated decks, steep asphalt that has aged for 90 days, or any Karnak emulsion coating that has been allowed to cure for 3-5 days.

SPECIFICATIONS

ASTM D-2824 Type III (Non-Asbestos) TT-C-498C (except Non-Asbestos)

ASTM D-3805 Metro-Dade Approved, UL Class "A" rated FM approved.

ADVANTAGES

The advantages of this metallic aluminum shield are twofold :

1. The asphaltic oils in the base coating are protected from harmful intense rays of the sun by the reflective properties of the aluminum. Most of the sun's rays are reflected by this aluminum shield, thereby preventing these oils from being "cooked" out of the base coating. The coating, therefore, retains its resilient characteristics and will not prematurely crack or dry out.
2. During the hot summer months, Karnak #97 Fibered Aluminum Roof Coating may help reduce indoor building temperatures and improve inside living and working conditions, by reflecting the sun's rays and reducing roof surface temperatures.

One coat of Karnak #97 Fibered Aluminum Roof Coating will extend the life of modified bitumen membrane, not only by limiting fire-spread, (as indicated by the U.L. Class "A" Rating) but its high aluminum content and excellent reflectivity afford solar protection and weather durability.

Fibred Aluminum Roofing Coating KARNAK 97

Modified Bitumen: Karnak #97 Fibred Aluminum Roof Coating is U.L. Class A rated over specified Modified Bitumen Systems, UL Listing #RI2I99(N).

SURFACE PREPARATION

Prepare all surfaces by sweeping clean of dust, dirt, oil and loose particles. Repair all cracks and blisters by spreading Karnak #19 over the damaged area, then embed Cotton, Glass or Poly-Mat reinforcement and apply another coat of Karnak #19 over the entire patch. New asphalt roof surfaces should weather a minimum of 90 days before being coated with Karnak #97 Fibred Aluminum Roof Coating. However, Karnak #97 Fibred Aluminum Roof Coating can be coated on roofs 3 to 5 days after Karnak asphalt emulsions have been applied. Badly weathered or alligatored asphalt surfaces should be primed with Karnak 100 prior to coating with 97 Fibred Aluminum Roof Coating. Allow emulsion primer to cure a minimum of 3-5 days before application of aluminum coating.

NOTE:

Discoloration will occur in areas where Karnak #19 is not allowed to dry a minimum of 60 days.

APPLICATION

Karnak #97 Fibred Aluminum Roof Coating should be spread uniformly over the roof surface. Care should be taken not to overwork the coating during application. This could have a damaging effect on the leafing of the aluminum. Pour the correct amount of aluminum coating to cover a given area and work it in one direction. Be sure to mechanically mix the aluminum coating thoroughly before using. Karnak #97 Fibred Aluminum Roof Coating can be applied with a soft roof brush, roller or spray.

COVERAGE

Apply at the rate of 1 to 1.5 gallons per 100 sq. ft.

CARE OF TOOLS

Equipment may be thoroughly cleaned after use with mineral spirits, taking the necessary precautions when handling combustible materials.

CAUTION

Do not use near open flame. Avoid breathing solvent fumes and prolonged contact with skin. Do not take internally. If swallowed, **do not induce vomiting**. Call a physician immediately. Keep out of reach

Read Material Safety Data Sheets before
Using this product.

Fibered Aluminum Roofing Coating KARNAK 97

of children. Keep container covered when not in use. **Do not thin.** Dispose of in an environmentally safe manner. Cover air intakes during application and while drying.

PACKAGING

Available in 1 gallon cans, 5 gallon pails and 55 gallon drums.

Waterproof and thermo-shield paint COAT PC200

DESCRIPTION

COAT PC200 waterproof and thermo-shield paint is produced from vacuum “microspheres” which has very low thermal conductivity, combined with the water resistance of acrylic resin which has good weatherability and other additives. Because this kind of vacuum “microspheres” only contains 7% of solid component and all the rest 93% is air, it is very effective in thermal insulation. This is unmatched by common paint produced by other manufacturers, which only use reflection of white color to insulate. In addition, because of the elasticity, weatherability, water resisting property of acrylic resin, it enables you to deal with waterproofing and thermal insulation at the same time, thus save your time and money.



USE

COAT PC200 is intended for use on the following areas,

- Dwelling house, factory, school, hospital, department store, warehouse, hotel, gymnasium, iron sheet house, container-house and wooden house.
- Oil storage tank, gas storage tank, oil field, animal industry, cold storage house, oil pipe, and insulating pipe.
- Bus, small bus, water craft, aircraft, and vending machines.
- House roof, wall, window, balcony, flower-stand, bathroom, corrugated asbestos roofing, cement board, baking finish roofing and tinned steel sheet.
- Excellent exterior protective coating for polyurethane layer, polymer cement and etc.

ADVANTAGES

- Very high radiant heat reflectivity and very low thermal conductivity to provide wonderful thermal insulation effect.
- Very good sound isolation effect to reduce the sound of raindrop outside.
- Good durability and weatherability.
- Excellent water resisting property to permit no other waterproof construction.
- Maintain good effects within the temperature range of -40°C~200°C.
- Water-based and environmental friendly. Contain no heavy metal and other hazardous substances.

ENVIRCOAT[®]

8th Fl., 183, section 1, Tatung Road, Hsi-Chih, Taipei Hsien 221, Taiwan R.O.C.
Tel : 886-(0)2-2648-8226 FAX : 886-(02)-2648-9811

TYE HAN Trading Co., Ltd. [Http://www.carytrad.com.tw/envircoat_e](http://www.carytrad.com.tw/envircoat_e)

Waterproof and thermo-shield paint COAT PC200

- Good adherence to cement, wood, metal and etc. substrates.

STANDARD COLOR CHART

White

SURFACE PREPARATION

All surfaces should clean without any oil, grease, dust, dirt or other adhesion-inhibiting materials. If there is any crack or hole, it is necessary to repair them at first. If the surface is cement, concrete or mortar, dry surfaces may be dampened with few water before application.

APPLICATION

Mechanically mix COAT PC200 prior to application. COAT PC200 should be applied by **brush, spray** or **roller**. First coat must be allowed to dry (approx. 2 to 4 hours) prior to the application of the next coat. Approximately 2.0 liter of clean water for every pail if you apply with spray. **Apply only when temperature is 10°C and rising. The COAT PC200 will have excellent water resistance after it dries. If the COAT PC200 has other excellent property (as elongation, adhesion, tensility... etc.), please test after 3 days of applying.**

PHYSICAL PROPERTIES

Color	White
Solids by weight (105°C x 3hrs)	55-58%
Viscosity (20°C)	100-120 KU
PH (25°C)	7.50 ~ 8.50
Penetration rate of water vapor	40.8(g/m/24hrs)
Tensile strength	27(kgf/cm ²)
Elongation rate	62%
Adhesion	No peeling off
Solar reflectivity	95.85%
Thermal conductivity	0.1017W/m.k

ENVIRCOAT[®]

8th Fl., 183, section 1, Tatung Road, Hsi-Chih, Taipei Hsien 221, Taiwan R.O.C.
Tel : 886-(0)2-2648-8226 FAX : 886-(02)-2648-9811

TYE HAN Trading Co., Ltd. [Http://www.carytrad.com.tw/envircoat_e](http://www.carytrad.com.tw/envircoat_e)

Waterproof and thermo-shield paint COAT PC200

COVERAGE RATE

COAT PC200 coverage rate will vary depending upon the surface to be coated and you want to achieve result. The rate of coverage is as follows:

A) The metal building:

Apply COAT PC200 at a rate of one gallon per 6 m². This yields an approximate dry film thickness of 0.5mm. If you apply 3 layers by sprayer, the thickness will achieve 0.5mm.

B) The roof of concrete building:

Apply COAT PC200 at a rate of one gallon per 3 m². This yields an approximate dry film thickness of 1.0 mm. If you apply 3 layers on roof, the thickness will achieve 1mm.

C) The vertical wall of concrete building:

Apply COAT PC200 at a rate of one gallon per 6 m². This yields an approximate dry film thickness of 0.5mm. If you apply 3 layers on wall, the thickness will achieve 0.5mm.

CARE OF TOOLS

Clean up of tools may be accomplished with water while coating is still wet. Dry coating may be cleaned with xylene. Take necessary precautions when handling flammable materials.

CAUTION

Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

PACKAGING

Available in 5 gallon pails.

※We suggest that COAT PT301 be applied on finished surface of COAT PC200. It will prevent dirt covering.

ENVIRCOAT[®]

8th Fl., 183, section 1, Tatung Road, Hsi-Chih, Taipei Hsien 221, Taiwan R.O.C.
Tel : 886-(0)2-2648-8226 FAX : 886-(02)-2648-9811

TYE HAN Trading Co., Ltd. [Http://www.carytrad.com.tw/envircoat_e](http://www.carytrad.com.tw/envircoat_e)

Non-stick Anti-Graffiti Coating COAT PT301

DESCRIPTION

COAT PT301 is a special modified water-based polyurethane coating that is non-hazardous with low VOC content. This unique formulation provides a soft and durable clear gloss finish that also seals the surface and provides easy removal of graffiti. Can be applied on all poured concrete, masonry, stucco, drywall, brick, metal and wood surfaces. It is applied in 1 or 2 coats depending on the porosity of the substrate.



USE

For industrial, commercial and residential use on surfaces of metal, masonry, wood, poured concrete, stucco, brick, block and paint ..

ADVANTAGES

- Outstanding Hydrophobic and Oleophobic surface properties
- High end anti-stick and release properties
- Flexible, non-stick and outstanding impact and abrasion resistance
- Highly resistant to attack by micro-organisms, hydrocarbons, chemical products and UV radiation
- Its complex vehicle gives excellent durability and adhesion with interior and exterior use
- Provides protection and penetration of water

STANDARD COLOR CHART

Clear to hazy, Dries Clear

APPLICATION

Method: Brush, Roll or Spray

Estimated Dry Time: To Touch 30 minutes; Fully Cures in 24 Hours

PHYSICAL PROPERTIES

Color	Clear to hazy
Gloss	Slight Sheen
Solids by weight (105°C x 3hrs)	20%

ENVIRCOAT[®]

8th Fl., 183, section 1, Tatung Road, Hsi-Chih, Taipei Hsien 221, Taiwan R.O.C.
Tel : 886-(0)2-2648-8226 FAX : 886-(02)-2648-9811

TYE HAN Trading Co., Ltd. [Http://www.carytrad.com.tw/e](http://www.carytrad.com.tw/e)

Non-stick Anti-Graffiti Coating COAT PT301

Flash Point > 94 °C

COVERAGE RATE

200-400 sq.ft./gal depending on porosity of substrate

CARE OF TOOLS

Clean up of tools may be accomplished with water while coating is still wet. Dry coating may be cleaned with xylene. Take necessary precautions when handling flammable materials.

CAUTION

Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

PACKAGING

Available in 5 gallon pails.



The right of the board was coated COAT PT301, the left was not coated.

ENVIRCOAT[®]

8th Fl., 183, section 1, Tatung Road, Hsi-Chih, Taipei Hsien 221, Taiwan R.O.C.
Tel : 886-(0)2-2648-8226 FAX : 886-(02)-2648-9811

TYE HAN Trading Co., Ltd. [Http://www.carytrad.com.tw/e](http://www.carytrad.com.tw/e)

2K Cementitious Crystalline Waterproofing Kit DRYCON

DESCRIPTION

DRYCON is a waterproofing kit, containing portland cement, finely graded mineral fillers, and chemical additives. The contents of the kit are mixed with a measured amount of liquid to produce a creamy paste, or slurry.

The slurry is brushed or sprayed into the surface of the masonry or concrete. The surface to be treated must be dampened so that the active chemicals in DRYCON will be drawn into the pores.

DRYCON is a prepackaged, chemically active cementitious composition designed to protect masonry or concrete from water induced chemical attack, and to stop the passage of water through the material. A two coat application of DRYCON is suitable for most interior below grade waterproofing applications. Two coats of DRYCON will withstand hydrostatic pressures up to 7 psi (16 ft. of water, 4.9 m), while three coats provide protection to 45 psi (103.8 ft, 31.6 m).

DRYCON is not a paint. Although DRYCON forms a decorative, non-flammable, inorganic surface for masonry or concrete, and although it is applied with a brush or spray machine, it is not a paint.



FEATURES AND BENEFITS

- Double waterproofing protection by chemically sealing the internal structure of the masonry or concrete as well as sealing the surface with a dense, watertight cement coating.
- Chemically interacts beneath the surface to neutralize salts that cause efflorescence.
- Cementitious material, offering indefinite life expectancy and superior adhesion characteristics.
- Integrates with the substrate and seals so effectively that seepage can be stopped through interior application, eliminating costly excavation and backfill operations.
- DRYCON reacts chemically with the soluble salts found in all cementitious building materials. DRYCON chemically combines with these salts to form insoluble crystals, thereby attacking efflorescence at its source.
- A second chemical reaction occurs between the DRYCON paste and additives, causing the paste to harden into a dense plaster. In this way, an additional water barrier is created as a coating at the surface of the masonry or concrete.
- Non-flammable and can be applied without specialized equipment or special skills.

RECOMMENDED FOR

2K Cementitious Crystalline Waterproofing Kit DRYCON

DRYCON is used to prevent seepage of water through masonry/concrete under pressure.

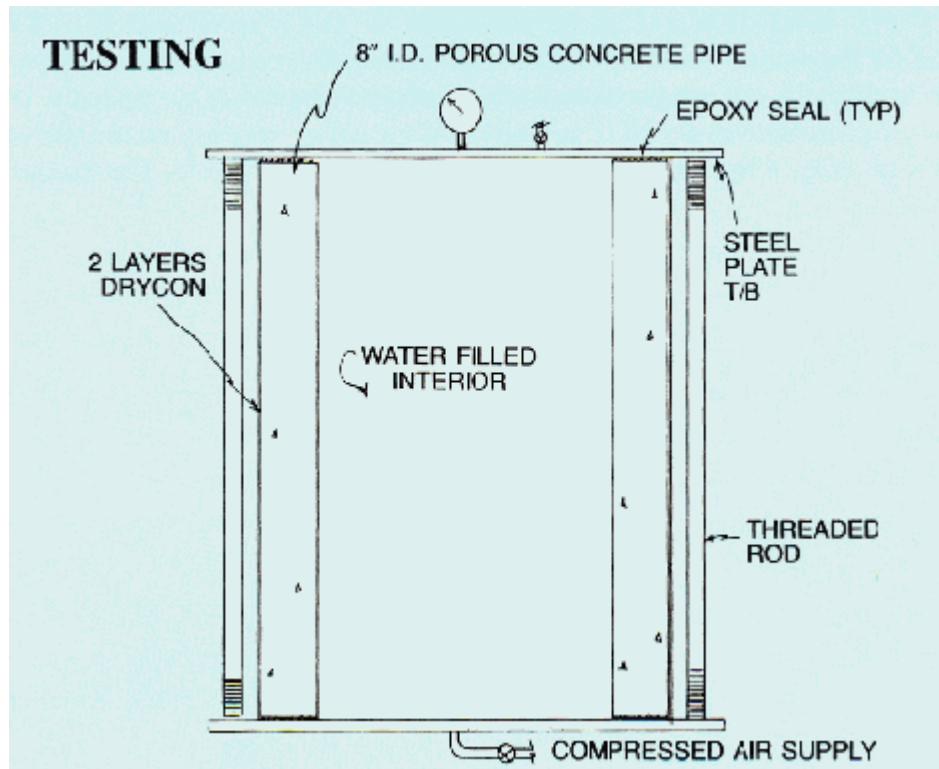
TECHNICAL DATA

DRYCON meets requirements for use in potable water applications: NSF Standard 61.

PHYSICAL PROPERTIES

Testing: DRYCON

has been tested by using a modified hydrostatic test method ASTM C 497. Porous pipe was lightly sandblasted to remove dirt and contamination. The pipe wall thickness was 1.5 inches (3.8 cm). Pipe was thoroughly dampened immediately prior to



application of the first DRYCON layer. DRYCON was brush applied to a thickness of 1/16 inch (1.6 mm). Material was mixed to slurry consistency and brushed firmly into the substrate. The second coat was applied 1/16 inch (1.6 mm) thick to pre-dampened pipe within 24 hours.

An epoxy gel sealant was applied to the bare ends of the coated pipe. This section was immediately set into the cell restraints and bolts tightened to firm pipe within. Assembly was allowed to cure for 72 hours at 65°F(18.3°C).

Water was introduced into the cell bottom and completely filled the pipe, so that water discharged from the top valve (vent). The air valve was then opened and increased to 10 psi (69.0 kPa) over one hour. Pressure was increased at the rate of 10 psi (69.0 kPa) per day thereafter.

Results: No leaks in DRYCON at 25 psi (172.4 kPa), seal failure in pressure cell. Additional ASTM C 497 testing indicates repairs to concrete pipe with no leakage to 30 psi (206.9 kPa) water pressure.

Yield: Coverage is an estimate only, actual coverage will vary depending upon surface roughness and

2K Cementitious Crystalline Waterproofing Kit DRYCON

porosity. First coat coverage is usually less than 100 square feet (9.3 m²) per kit, while the second coat is greater. Average coverage for the two coat process is 100 square feet (9.3 m²) per kit per coat of DRYCON.

APPLICATION GUIDLINES

Substrate Preparation

Surface to be repaired must be cleaned of any film, scale, loose material, oils, grease and any other foreign material that will prohibit bond. Surface preparation may be accomplished by accepted water blast, mechanical or chemical methods. If acid washing is used, surface must be repeatedly flushed with water to remove all trace of acid. Test with litmus paper to confirm neutral or alkaline conditions. Thoroughly wet surface then allow free water to run off.

DRYCON must be applied while surface is still damp. Failure to prepare surface will prevent successful development of material physical characteristics and will negate guarantee.

DRYCON must not be applied to surfaces from which water is seeping. Cracks, voids, sizable holes, and localized points of leakage must be sealed prior to treatment with DRYCON. Do not attempt to bridge cracks in excess of 1/16th inch width. Consult sales engineer or product application guide for other waterproofing system product(as : MICSIL 1000) recommendations and suggested repair procedures.

Mixing & Application Instructions

- Open DRYCON kit. Thoroughly shake enclosed plastic bag until solid matter has liquefied and emulsion is uniform. Mix the appropriate amount liquid of plastic bag with for powdered material in Kit (liquid : powder = 3.8 : 15).
- Slowly mix the powdered materials into liquid. Mix thoroughly to achieve a creamy slurry consistency.
- Apply slurry within one hour of mixing.
- Saturate surface with water immediately prior to application of DRYCON and allow excess water to run off. This is extremely important: DRYCON will not give desired result unless masonry surface is saturated with water.
- Apply DRYCON by brush working material into surface pores. If the DRYCON seems too thick for efficient application, add a small amount of water to the mix.
- Material may alternatively be spray applied (using peristaltic or dual diaphragm pumps), but must be worked into pores with a brush. Spraying tends to bridge pores and hairline cracks. DRYCON must be worked into the surface for proper result. Apply DRYCON at 1/16" (1.6 mm) thickness per

2K Cementitious Crystalline Waterproofing Kit DRYCON

coat.

- DRYCON treatment is normally a two-coat process. Second coat may be applied as soon as first coat has set, (usually about 1 1/2 hours). When unusually great hydrostatic pressures are anticipated, a third coat may be necessary. Two coats will prevent seepage up to 7 psi (16 ft. of water, 4.9 m). Three coats provide protection to 45 psi (103.8 ft. of water, 31.6 m).

Curing

Curing of DRYCON is not necessary in closed underground structures such as manholes and vaults unless strong drafts exist. DRYCON must be cured if exposed to strong sunlight, hot or windy conditions. Water mist periodically applied under draped poly or wet burlap will usually provide the best curing conditions.

CAUTION

Freshly mixed cement, mortar, grout, or concrete may cause minor skin irritation. Avoid direct contact where possible and wash exposed skin areas promptly with water. If any of the cementitious material gets into the eyes, rinse immediately and repeatedly with water. If irritation persists, obtain medical assistance.

CLEAN-UP

Cleanup must be done immediately due to the high bonding characteristics of DRYCON. Clean equipment with water.

STORAGE

One year in unopened bag. Requires dry storage.

PACKAGING

DRYCON is supplied in a 20.5kg drum kit consisting of:

Liquid component – 5.5kg plastic bag

Powder component – 15kg plastic bag

One Component Crystalline Capillary Waterproofing Powder HENKEL CERESIT CR68

DESCRIPTION

CERESIT CR68 is a one component, crystalline capillary waterproofing system composed of Portland cement, silica sand and many active chemicals. In the presence of moisture, the active chemicals in CERESIT CR68 penetrate concrete and react chemically with free lime to produce insoluble crystals. This crystalline growth reduces porosity by blocking capillaries and filling hairline non-structural cracks up to 1/10th inch (0.3mm) caused by shrinkage or expansion.



FIELDS OF APPLICATION

- Interior wall surfaces in parking garages.
- Sewage treatment and water treatment plants, water tanks, reservoirs, foundation, pipes, tunnels and manholes.
- Industrial plants, factory floors, slabs and office building.
- Swimming pools, elevator pits, basements and planters.
- Power plants and sub-stations.
- Roof decks, parking decks and retaining walls.

PRODUCT FEATURES

- One component requires only addition of water.
- Easy to use by brush, broom, squeegee or spray technique.
- Cost effective.
- Applied to moist or 'green' concrete, positive and/or negative side.
- Penetrates concrete, seals capillary tracts and hairline cracks.
- Waterproofing remains even if concrete surfaces are damaged.
- Protects concrete in-depth.
- Non-toxic.
- Resists strong hydrostatic pressure.
- Resists de-icing salts.
- Resists chemical attack of sewage and industrial wastes.

One Component Crystalline Capillary Waterproofing Powder HENKEL CERESIT CR68

- Exterior and interior applications.

PRODUCT ADVANTAGES

- CERESIT CR68 cannot puncture, tear, rupture or come apart at the seams (if it is not a moving structural cracks or joints)
- Low cost for material and application.
- Does not require absolute dry weather to be applied.
- Does not require a dry surface. In fact, a damp, moist surface is necessary.
- CERESIT CR68 can be applied on either side of a concrete surface, negative or positive (water pressure) side.
- Does not require costly surface priming or leveling prior to application.
- Does not require costly sealing, lapping and finishing of seams at corners, edges or between membranes.
- Does not require protection during back filling or during placement of steel, wire mesh or other materials.

APPLICATION DATA

Surface Preparation

New Concrete :

CERESIT CR68 to be applied to 'GREEN' concrete as soon as possible after forms are stripped, acid etch or water blast to remove oil, sand, laitance, etc. Surface must be left damp for application of CERESIT CR68. Thoroughly saturate with clean water. Construction joints, cold joints and non-leaking joints greater than 1/16 inch - 1.5 mm wide must be routed out to sound concrete. Clean all debris and loose concrete from leaking area. Saturate routed area with water and leave damp for application of CERESIT CR68.

Old Concrete :

Surfaces must be clean and sound. Remove all oil, dirt, laitance and other contaminants by water blasting or treating the surface with 10% solution of muriatic acid. Allow the acid to react for approximately 20-30 minutes, then wash surface thoroughly with clean water several times to ensure no acid residue remains on concrete surfaces. Water blasting is preferred for surface preparation

One Component Crystalline Capillary Waterproofing Powder HENKEL CERESIT CR68

because it mechanically cleans and roughens the surface, and is environmentally safer and leaves the surface saturated with water. Surfaces must be damp for application of CERESIT CR68 to insure proper migration of crystalline chemicals into the capillary voids in the concrete.

General Specification for Concrete Finish :

All surfaces to be waterproofed shall be examined for tie holes and structural defects such as honeycombing, rock pockets, faulty construction joints, cracks, etc...

Concrete surfaces shall have an open capillary system to provide tooth and suction and shall be clean; free from scale, excess from oil, laitance, curing compounds and any other foreign matter. Smooth surfaces caused by steel forms, etc. or surfaces covered with excess from oil and other contaminants shall be washed, lightly sand blasted, water blasted or acid etched with muriatic acid as required to provide a clean absorbent surface.

Horizontal surfaces shall not be troweled or power troweled and shall be left with a rough float finish or (preferably) a broom finish. If power troweling is required it shall be kept to a minimum. Vertical surfaces may have a sacked finish. A slurry coat of CERESIT CR68 should not be applied to horizontal concrete deck surfaces, which are less than 24 hours old.

Function of CERESIT CR68 :

CERESIT CR68 causes a set of catalytic reactions inside the concrete utilizing the constituents of the concrete itself; the by-product of these reactions being a nonsoluble crystalline growth throughout the pores and capillary tracts of concrete, thus rendering the concrete totally sealed against the penetration of water (or liquids) from any direction.

This crystalline growth is highly resistant to extreme water pressure from either side of the concrete and also to most aggressive chemicals. Since the process is catalytic, the crystalline structure can remain many years after the original application, to seal or re-seal many defects, which might occur in the concrete at a later period.

Mixing :

CERESIT CR68 should be mixed by volume with potable water. Material should be mixed in quantities, which can be applied within 30 minutes at approx. 77°F (24°C) from the time of mixing.

As the mixture thickens, it shall be stirred frequently, but no additional water should be added. Mix thoroughly with a slow speed drill equipped with mixing paddle.

Mixing For Brush Application :

Slurry Coat: Mix 25kg of CERESIT CR68 with 6.5 liters of potable water.

Mixing For Trowel Application :

One Component Crystalline Capillary Waterproofing Powder HENKEL CERESIT CR68

Slurry Coat: Mix 25kg of CERESIT CR68 with 5.8 liters of potable water.

Application :

CERESIT CR68 slurry coat may be applied using brush, broom or sprayer at the rate of 0.7 to 1.2 kg per square meter or 1.60 lbs. to 2.5 lbs. per sq. yd. Be sure to work slurry well into openings, rough surfaces, joints and routed out areas. Apply second coat, if required, when first coat has taken initial set. If first coat has dried out, moisten before applying second coat.

Curing :

All CERESIT CR68 application must be kept moist for a minimum of two days. After initial set moist cure, using continuous water spray is recommended. Treated surface should be fog sprayed 3-4 times daily for a two day period. For warmer climates, more frequent spraying may be required. It is important to keep the CERESIT CR68 moist to allow crystal formation to occur. Protect surfaces from foot traffic for 2 days or heavy traffic for 5 days. CERESIT CR68 must be protected from extreme weather conditions such as strong wind, freezing, high temperatures and rain for a period of not less than 2 days after application.

Back Filling :

Back filling cannot take place until thirty-six hours after application. If back filling takes place within 7 days after application, the back filling material must be moist so as not to draw moisture from CERESIT CR68 coating.

CLEAN-UP

All tools and equipment must be cleaned with clean water immediately after use.

STORAGE

12 months from date of manufacture if stored in unopened original packing in dry, frost-free conditions.

COVERAGE RATE

For concrete surface waterproofing conditions, apply a coat of CERESIT CR68 at 1 kg/m² and a second coat at 1 kg/m².

CAUTION

As with all construction chemical products, adequate precautions and care must be taken during usage and storage. Avoid direct contact with foodstuff, eyes, skin, and mouth. Keep away from children and animals. Any direct contact with skin, eyes, etc. should be washed thoroughly with clean running water

Read Material Safety Data Sheets before
Using this product.

One Component Crystalline Capillary Waterproofing Powder
HENKEL CERESIT CR68

and soap. Use proper safety wear, goggles, and mask, etc.

PACKAGING

25 KG/bag

Water-based, Crystalline Capillary Waterproofing Liquid CHEM-CRETE CCC100

DESCRIPTION

Chem-Crete CCC100 is a unique water based blend of catalyzed chemicals that permanently eliminate moisture transmission through concrete structures up to 10 lb. / 1000ft /24 Hours. The moisture blocking mechanism of Chem-Crete CCC100 occurs as a result of a crystallization process that takes place within the concrete capillaries, voids and pores. The Chem-Crete CCC100 produces water insoluble hydrophilic crystals. The affinity of the crystals to moisture is extremely high. In the presence of hydrostatic pressure or under wet conditions, the crystals absorb moisture and rapidly swell to block concrete pores and capillaries, preventing moisture penetration. The very low viscosity of Chem-Crete CCC100 allows it to penetrate deeply into a concrete substrate. The product protects preserves and waterproofs without any surface film formation or color change.



FIELDS OF APPLICATION

- Concrete floors.
- Foundations and slabs
- Slabs to receive carpet
- Industrial plants
- Slabs to receive tile
- Subway tunnels
- Mold abatement

PRODUCT FEATURES

- One component, easily applied by brush, roller, low pressure sprayer or airless sprayer.
- Low viscosity, excellent penetration into deep pores.
- Environmentally safe, non-toxic and odorless.
- Reduces freeze-thaw damage.
- Resists acid rain staining.
- Easy to Apply
- Ultra violet light and salt water spray exposure had no adverse effect on Chem-Crete CCC100 treated concrete.

Water-based, Crystalline Capillary Waterproofing Liquid CHEM-CRETE CCC100

- Decreases the surface moisture content in concrete for a better and longer lasting application of floor toppings and surface coatings.
- Eliminates silicate dusting.
- Creates permanent internal waterproofing.
- Treatable Substrates include: Concrete, concrete block, mortar, plaster, stucco, stone, exposed aggregate or any sand, aggregate combination and as a sealer/waterproofing for freshly placed concrete.

TECHNICAL DATA

Specific Gravity	1.07
Freeze Temperature	25°F (-4 °C)
Boiling Point	214 °F (101 °C)
Freeze Harm	Complete
For Cleaning	Water
Color	Clear
Odor	None
Toxicity	None
Flammability	None
Fumes During Treatment	None
Environmental Hazards	None
Thinners Required	None
Number Of Coats Required	Two coats
Drying Time At 77°F (25 °C)	2-3 hours

Applicable Standards

Meets or exceeds:

ASTM C-666 Freeze thaw testing

NCHP#244 "Soak Test" Rev.

ASTM D3359: 28% increase in epoxy adhesion or surface coating

Hardening Test ASTM C-42:

40% increase in compressive strength at 14 days over untreated samples. 35% increase at 28 days over untreated samples.

Weathering Test ASTM G-23: Ultraviolet light and water spray exposure had no adverse effect on

Water-based, Crystalline Capillary Waterproofing Liquid CHEM-CRETE CCC100

Chem-Crete CCC100 treated samples.

ASTM C-309 Curing type 1, class A

Curing Temperatures ATEC 25-01831

Penetration Test: Ink Test, 178mm depth

Permeability / Capillarity: 88.151.518

APPLICATION DATA

Methods of Application: Spray, roll or brush.

Tools Needed: Spray equipment, roller, brush, bristle broom or squeegee.

Surface Preparation: Surface must be clean, and free of paint, sealer, oil, adhesive, curing compound, form release agent and/or anything that will not allow Chem-Crete CCC100 to penetrate the substrate.

Areas which require cleaning must be cleaned by scrubbing, pressure washing or other methods to remove any surface dust, dirt or other contaminants. Chem-Crete CCC100 may be applied to damp surfaces as long as no standing water or puddles are present.

Coverage:

Two coat application required, approximately 200 ft² per gal. per coat (5 m² per liter) of Chem-Crete CCC100. Coverage depends on the temperature and porosity of the concrete.

Limitations:

Do not apply Chem-Crete CCC100 in the following cases

When temperature falls below 40°F (5°C)

To areas previously treated with curing or sealing agents unless these coating have been removed by chemical or mechanical means.

CLEAN-UP

Clean all equipment, tools with fresh clean water immediately after use.

STORAGE

Two year shelf life when stored in cool, dry place in unopened drums. Always agitate or stir the bucket or drum before using. **Do not allow product to freeze.**

CAUTION

As with all construction chemical products, adequate precautions and care must be taken during usage

Read Material Safety Data Sheets before
Using this product.

Water-based, Crystalline Capillary Waterproofing Liquid CHEM-CRETE CCC100

and storage. Avoid direct contact with foodstuff, eyes, skin, and mouth. Any direct contact with skin, eyes, etc. should be washed thoroughly with clean running water. Always wear protective goggles and gloves. In case of eye contact, flush for 15 minutes with warm water. **Keep out of reach of children.**

PACKAGING

5 gal pail and 55 gal drum

Acrylic Co-polymer Elastomeric Waterproof Coating MICSIL 170

DESCRIPTION

MICSIL 170 is an acrylic co-polymer elastomeric emulsion exterior protective coating. MICSIL 170 provides excellent protection, waterproofing, appearance, color stability, weatherability and flexibility



USE

MICSIL 170 can be applied to all types of construction surface; such as concrete, masonry, concrete block, wood, brick, plaster, gypsum board, stucco. The tough and flexible film, on the surface of structure, is water resistant, has strong retention, excellent adhesion, very low water permeability and has an expected life expectancy of over 20 years based on accelerated weathering tests.

SURFACE PREPARATION

All surfaces should clean without any oil, grease, dust, dirt or other adhesion-inhibiting materials. If there is any crack or hole, it is necessary to repair them at first. If the surface is cement, concrete or mortar, dry surfaces may be dampened with few water before application.

APPLICATION

Mechanically mix MICSIL 170 prior to application. MICSIL 170 should be applied by **brush, spray** or **roller**. First coat must be allowed to dry(approx. 3 to 6 hours) prior to the application of the next coat. Approximately 1 to 2 liter of clean water for every pail if you apply with spray. **Apply only when temperature is 10°C and rising. The MICSIL 170 will have excellent water resistance after it dries. If the MICSIL 170 has other excellent property (as elongation, adhesion, tensility... etc.), please test after 3 days of applying.**

PHYSICAL PROPERTIES

Color	White, Grey
Solids by weight (105°C x 3hrs)	55-58%
Tear strength	27 kg/cm
Adhesion strength	10 kgf/cm ²
Elongation	388%
Tensile strength	54 kgf/cm ²
PH (25°C)	7.50 ~ 8.50

Acrylic Co-polymer Elastomeric Waterproof Coating MICSIL 170

Weathering	Excellent
Permeance	0.5 Metric Perms

COVERAGE RATE

MICSIL 170 coverage rate will vary depending upon the surface to be coated and you want to achieve result. The rate of coverage is as follows:

A) The roof of concrete building:

Apply MICSIL 170 at a rate of one gallon per 3 m². This yields an approximate dry film thickness of 1.0 mm. If you apply 3 layers on roof, the thickness will achieve 1mm.

B) The vertical wall of concrete building:

Apply MICSIL 170 at a rate of one gallon per 6 m².. This yields an approximate dry film thickness of 0.5mm. If you apply 3 layers on wall, the thickness will achieve 0.5mm.

CARE OF TOOLS

Clean up of tools may be accomplished with water while coating is still wet. Dry coating may be cleaned with xylene. Take necessary precautions when handling flammable materials.

CAUTION

Do not apply when rain is imminent. Protect from freezing. Coating must be dried before exposure to water. Store in a heated room and keep container covered when not in use. Do not thin. Avoid prolonged contact with skin. Dispose of in an environmentally safe manner.

PACKAGING

Available in 5 gallon pails.

Solvent-Based Silicone Acrylic Coating For Tile MICSIL TH075W

DESCRIPTION

MICSIL TH075W is One-Component Solvent-based Clear Waterproofing paint is a clear exterior wall coating made of high-polymer polymerization such as yellowing resistant solvent-based silicone and acrylic. The coating penetrates well and has a glossy finish, enabling it to form a continuous seamless clear membrane over the wall surface with water and leakage proofing properties.



FEATURES AND BENEFITS

- Flexible coating, high gloss finish.
- Excellent resistance to alkalinity, acid and climate.
- Excellent adhesion to stone, tile, metal, glass surfaces.
- Very low water permeability
- Reduces efflorescence and surface salts

RECOMMENDED FOR

Clear waterproofing and maintenance treatment for stone, tile walls etc.

PHYSICAL PROPERTIES

Solids	33±1%
Appearance	Clear
Flash point	29°C

TECHNICAL DATA

REPORT	TEST METHOD	TEST RESULTS
Water vapor transmission	ASTM E96	0.282 Perms
Adhesion	CNS 10757	100/100(not scaling off)
Bending radius(diameter 6mm)	CNS 10757	No crack, no peel off

APPLICATION GUIDLINES

Surface Preparation

Surfaces to be treated must be free of all traces of dirt and organic matter. Gaps and cracks must be

Solvent-Based Silicone Acrylic Coating For Tile

MICSIL TH075W

repaired. Salt encrustations must be cleaned using mild acid.

Application For Surface Treatment

Apply a minimum of two coats with brush or roller. First coat must be allowed to dry prior to the application of the next coat.

Note

MICSIL TH075W should never be applied to damp substrates.

COVERAGE RATE

Depending on the substrate this will vary it could be as low as 3m² per kg for dense concrete and as high as 0.5 m² per kg for porous bricks. We recommend that a test area of 1-2 m² be carried out on site.

CAUTION

Vapor overexposure may cause respiratory irritation, central nervous system depression and allergic reaction. Provide sufficient ventilation to maintain vapor concentrations below recommended exposure limits. Avoid contact with skin, eyes and clothing. Wear protective rubber gloves and safety goggles when handling or dispensing materials. Wash contaminated clothing before reuse.

See MSDS for further information.

FIRST AID

1. **SKIN CONTACT** - Wipe off contaminated area and wash with soap and water.
2. **EYE CONTACT** - Immediately flush eyes with large amounts of water for 10 minutes. Get medical attention.
3. **INHALATION** - Move to fresh air if symptoms occur. If breathing is difficult, seek medical attention.
4. **INGESTION** - Seek immediate medical attention.

CLEAN-UP

Use solvent to clean equipment. Use soap and water to remove from skin.

STORAGE

MICSIL TH075W should be stored at room temperature (min 10°C and max 35°C), kept dry and out of direct sunlight. If these conditions are maintained and the product packaging is unopened, then a shelf life of 1 year can be expected.

Read Material Safety Data Sheets before
Using this product.

Solvent-Based Silicone Acrylic Coating For Tile
MICSIL TH075W

PACKAGING

MICSIL TH075W is supplied in a 15kg metal drum.

Cement based waterproof Coating MICSIL 540C

DESCRIPTION

MICSIL 540C is a ready-to-mix hydraulic water repellent micro-mortar for the protection of masonry and concrete structures. MICSIL 540C is a brush applied, Portland cement based waterproofing for concrete and masonry. MICSIL 540C is formulated similar to concrete, and becomes an integral part of the wall when properly applied. It fills and seals the pores and voids of the surface, is full breathing, and decorates as is protects.



FEATURES AND BENEFITS

- Grey, dry-polymer-modified coating.
- Easy to use. One-component powder mixes easily with water.
- Excellent adhesion, flexural strength, durability and freeze/thaw.
- Waterproof and weatherproof.
- Allows substrate to breathe.
- Non-toxic suitable for clean water.
- Ideal for interior or exterior, above or below grade.
- Fills and seals pores and voids to correct surface irregularities.
- Becomes part of the wall when fully cured.

RECOMMENDED FOR

- Basement walls
- Foundation and retaining walls
- Concrete planters and walls
- Concrete and Cinder Block
- Brick
- Stucco
- Sea walls and piers

PHYSICAL PROPERTIES

Powder composition	special cements, mineral filler and admixtures
Colour	grey
Density	ca. 1.3

Cement based waterproof Coating MICSIL 540C

Particle size	0-0.5mm
Pot life	20min @ 25°C

APPLICATION GUIDLINES

Substrate Preparation

- The substrate must be clean, sound, dust-free and without any traces of oil. All loose parts must be raked out.
- Render honeycombing and bubbles, fill cracks and hollow joints.
- Make achamfer at floor/wall/ceiling re-entrant angles.
- Soak the surface several hours prior to application when possible.

Product Preparation

- Mix 25kg of MICSIL 540C with 7-9 liters of potable water.
- Machine mix until evenly distributed.
- For smooth, dense surfaces or for stronger adhesion and denseness, use MICSIL 4001 along with water as mixing liquid for mixing with MICSIL 540C.
- Stop mixing; allow material to "Fatten" for 3 minutes.
- When "fattened", remix, and if necessary, add more mixing liquid to brushing consistency.

Application

- Apply a minimum of two cross coats with a medium brush or smoothing trowel.
- Drying time between coats: 8 - 24 hours.
- Dampen the first coat prior to application of the second coat.
- Clean tools with water immediately after use.

COVERAGE RATE

For ordinary wall waterproofing conditions, apply a coat of MICSIL 540C at 1 kg/m² and a second coat at 1 kg/m².

CAUTION

- Do not apply to frozen or frost filled surfaces or when temperature is below 5°C or expected to fall below 5°C in 24 hours.
- Do not use on traffic bearing surfaces.
- Do not fill open cisterns, tanks, pools, etc. with water at least for 7 days. When using MICSIL 540C in enclosed tanks or reservoirs, make sure that adequate ventilation is available during application

Cement based waterproof Coating MICSIL 540C

and the total curing period.

CLEAN-UP

Clean all mixing and application equipment with water immediately after use. MICSIL 540C is a cementitious product containing an acrylic additive. Removal becomes extremely difficult if it is allowed to dry on the surface.

STORAGE

12 months from date of manufacture if stored in unopened original packing in dry, frost-free conditions.

PACKAGING

25 KG bucket

Rapid Setting Polymer Modified Waterproof Plug MICSIL 1000

DESCRIPTION

MICSIL 1000 is a fast setting, hydraulic compound that instantly stops running water or seepage through masonry surfaces. It actually becomes harder and more resistant when subjected to constant water pressure. MICSIL 1000 is a non-shrink material that expands slightly and sets in about 1 - 3 minutes depending on the temperature of the mixing water and the surface to which it is applied. Lower temperatures will retard the set time and higher temperatures will accelerate the set.



FEATURES AND BENEFITS

- Stops running water instantly
- Sets under water
- Non-shrink, non-metallic
- Exceptional durability
- High structural strength
- Lasts as long as the structure to which it is applied
- Easy to use – no special skills or tools required
- Polymer modified

RECOMMENDED FOR

- Water cut-off
- Waterproof joint and crack surface sealant.
- Pipe joints.
- Emergency repairs
- Sealing cable and pipe entries
- Pointing in wet conditions

TECHNICAL DATA

REPORT	TEST METHOD	TEST RESULTS
Compressive strength(3 hr)	ASTM C109	292 kgf/cm ²
Compressive strength(1 day)	ASTM C109	367 kgf/cm ²
Compressive strength(3 days)	ASTM C109	567 kgf/cm ²

Rapid Setting Polymer Modified Waterproof Plug

MICSIL 1000

Compressive strength(7 days)	ASTM C109	790 kgf/cm ²
Compressive strength(14 days)	ASTM C109	776 kgf/cm ²
Compressive strength(28 days)	ASTM C109	777 kgf/cm ²
Water absorption rate	CNS 488	9.43%
Expansion rate(7 days)	ASTM C490	0.0318%
Expansion rate(14 days)	ASTM C490	0.0664%
Expansion rate(28 days)	ASTM C490	0.0846%

APPLICATION GUIDLINES

Mix MICSIL 1000 with clean water only. Add just enough water to form a putty consistency. Do not use more MICSIL 1000 than can be placed in 2 minutes, whilst allowing for only a 30 second mixing period. Place with minimum working or rubbing. Force into the crack or hole by pushing firmly; use maximum pressure. Keep damp for at least 15 minutes to help curing.

Always dovetail cut or cut square; do not use a V-cut.(The picture are as follows :) Open the crack or hole by cutting to a minimum depth and width of 20mm. Flush away all cuttings and dust.



Dovetail cut



V-cut

- **To seal floor / wall joints**

Cut out crack at least 20mm wide and deep, cutting back into wall slightly. Flush away all cuttings and dust. Force into the prepared crack with a round tool and smooth out. Form fillet at junction.

- **To seal flowing water**

Cut out crack or hole to a minimum depth and width of 20mm. Dovetail cut if possible. Start at top and force MICSIL 1000 into the crack. At points of greater pressure, do not place into opening immediately. Hold in hand or on a trowel until slight warmth or drying occurs. Then press firmly into opening. Do not remove trowel or hand too soon. After stopping active water, patch evenly with surrounding wall surfaces.

- **To repair leaking mortar joints and cracks in masonry walls or cracks in concrete walls**

Cut out defective mortar joints or cracks to a minimum width and depth of 20mm. Dovetail cut if possible. Force into the crack and keep damp for at least 15 minutes.

- **For holes, blister patches, honeycombing another construction faults in concrete walls**

Remove all tie wires, wood or steel separators by cutting back from the surface to a depth of 25mm. Mix the consistency of mortar and fill all holes, blisters, patches, honeycomb and other construction

Rapid Setting Polymer Modified Waterproof Plug

MICSIL 1000

faults, flush with surrounding surfaces. Scratch the finished surface for later applications.

- **For anchoring bolts or metal posts in concrete or masonry**

Drill a hole deep enough to properly secure bolt or post and large enough so there is at least 13mm on all sides of bolt or post. Fill hole with MICSIL 1000 and tamp so that entire hole is full. Immediately centre bolt or post over hole and force into the MICSIL 1000 and tamp firmly around bolt or post; keep moist for 15 minutes. Apply no pressure to bolt or post for 6 hours.

- **Above normal temperatures**

From 20°C-35°C MICSIL 1000 begins to set very quickly. Material should not be heated above 21°C and mixing water over 35°C should never be used, otherwise set begins immediately and structural strength will be weakened, unless MICSIL 1000 is placed within 30-60 seconds after mixing. In extreme heat, use ice water for mixing to slow down the setting action.

- **Limitations**

Very cold or very hot water weather will retard or accelerate MICSIL 1000 setting time.

CAUTION

MICSIL 1000 is high alkaline. Avoid contact with skin or eyes. Protect hands with rubber gloves when handling dry powder or wet mixture. If skin comes into contact with MICSIL 1000, wash immediately and thoroughly with water 15 minutes. If discomfort continues, seek prompt medical attention. Wear eye protection. If dry powder or wet mixture gets into eyes, flush immediately and thoroughly with water and seek medical aid. Wear a suitable mask where there is potential for generating dust. If MICSIL 1000 is ingested, do not induce vomiting; have affected person drink two glasses of water and obtain immediate medical attention.

STORAGE

MICASIL 1000 should be stored at room temperature (min 10°C and max 35°C), kept dry and out of direct sunlight. If these conditions are maintained and the product packaging is unopened, then a shelf life of 1 year can be expected.

PACKAGING

MICSIL 1000 is supplied in a 20kg pail.

Silicone Sealant, Mildew Resistant LUCKY 707

DESCRIPTION

LUCKY-707 is one component RTV1, 100%silicone sealant of neutral cure system. This product has excellent adhesion most building substrates, such like ceramic tile, glass, FRP, Aluminum profile, also excellent resistance to water, weathering, heat. Especially, this material contains high grade anti-fungal agent to resist mould attack.



APPLICATION

Sealing for around shower booth, bathtub, wash basins and kitchen work top.

COLOR

White, clear

PHYSICAL PROPERTIES

Appearance	soft paste
Specific gravity	1.01
Tack free time	Max.15min
Slump	Non-slump type
Hardness (shore A)	18-22
Elongation	400-500%
Self life	12month (under the unopened container)