MIXKOTE MKT 1

CEMENTITIOUS CRYSTALLIZATION WATERPROOFING BRUSH-ON SYSTEM

DESCRIPTION

MIXKOTE MKT1 *(also known as T1)* is a dry, specially formulated powder containing organic chemicals, crystallization and cementitious materials. When the dry organic and crystallization chemicals go into solution, the chemicals are drawn into the pores of the concrete, allowing **MIXKOTE MKT1** to reach chemically with the concrete by forming hydration crystals of which blocks the voids, micro-cracks and the interstices within the concrete mass. Pre-saturation or subsequent re-wetting of the surface will cause deeper diffusion of the organic chemicals and formation of crystals of greater depth.

ADVANTAGES

- Stop water movement in concrete
- Waterproofs micro-cracked surfaces and concrete mass
- Waterproofing effectiveness increases with time
- Waterproofing protection penetrates well below surface
- Protects concrete against aggressive chemicals
- Protection is not destroyed by surface abrasion or wear
- Crystal penetration withstands significant hydrostatic pressure
- Treatment can be applied to either the inside or outside of the concrete surface
- Non-toxic and is safe for use in domestic water tanks & containment structures
- Inhibits shrinkage and cracking

RECOMMENDED USES:

- Basement slabs & walls
- Underground vaults
- R.C. Water tanks
- Sewerage & water treatment plants
- Dams
- Pre-cast elements
- Swimming Pools
- Tunnels & subway systems
- Concrete walls, floors, patios, roofs & block walls

TECHNICAL AND PHYSICAL PROPERTIES

Colour	**GREY (CEMENT COLOUR)**
Bulk Density	**1.48**
pH (When Mixed)	**13**
Water Penetration Test (BS EN 12390-8-2009)	**Untreated (Without MIXKOTE MKT 1): 52 mm Treated (With MIXKOTE MKT 1): 19 mm**
Toxicity Test (BS 6920:Part 1:2000) and SPAN Cert	**Non-toxic**
Water Vapor Transmission (ASTM E 96:94)	**1.7 g/hour.m^2**
Flexural Strength (28 D) (ASTM C 348-86)	**5.05 N/mm^2**
Compressive Strength (28 D) (ASTM C 109)	**57.5 N/mm^2**
Tensile Strength (28 D) (ASTM C190-85)	**2.42 N/mm^2**
Water Permeability Test under 10 bars (Coefficient of permeability, k in m/sec)	**0.27 x 10-11**
Hydrostatic Pressure Resistance Test (ASTM C 1306:08)	**No water leakage observed at 45 psi water pressure**

TYPE

WATER PROOFING

ADVANTAGES

HIGH TENSILE · WATER RESISTANT · NON TOXIC

COVERAGE (PER COAT)

0.8 kg/m^2

COATINGS

2 coats (min)

COMPONENT

1 PART

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APPLICATION PROCEDURES

1. Surface Preparation

Substrate surface to be treated must be clean and free of laitance, dirt, film, paint, coating or other foreign matter. If surface is power floated to smooth, the concrete should be lightly sandblasted, water-blasted or etched with mild acid. Honeycombs should be hacked off to expose the concrete. All chipping and loose particles should be removed, clean surface with water before repairing. Ensure all concrete surfaces are hosed down with water as moistures must be present in the capillaries prior to the application of **MIXKOTE MKT 1**. New concrete must be at least three days old before it should be treated.

2. Structural Repair

Rout out cracks, faulty construction joints and other structural defects to a depth of 35 mm and a width of 15 mm. Apply a coat of **MIXKOTE MKT1** by brush and allow to dry for 10 minutes. Fill cavity by tightly compress **MIXKOTE MKT1** into the groove by hammer and wood block. **MIXKOTE MKT1** is prepared by mixing six parts of powder to one part of water to a dry and lumpy consistency.

3. Damp Concrete

MIXKOTE MKT1 requires a saturated substrate and a damp surface. Saturate the concrete surface with clean water prior to the application of **MIXKOTE MKT1**. This is to ensure the proper curing of the treatment and growth of the crystalline formation deep into the pores of the concrete. Remove excess or ponding water before the application. If concrete surface dries out before application, it must be re-wetted.

4. Mixing

Mix **MIXKOTE MKT1** powder with clean water to a creamy consistency in the following procedures:

For Brush Application	5 parts powder to 2 parts water
For Spray Application	5 parts powder to 3 parts water (it varies with different type of equipment)

Do not mix **MIXKOTE MKT1** material that can be applied in 30 minutes. Do not add water once the mix starts to harden. Protect hands with rubber gloves.

5. Applying Mixkote

Apply **MIXKOTE MKT1** with a stiff nylon bustle brush, push broom or specialized spray equipment. The coating must be uniformly applied and should be just under 1.25 mm. A second coat is applied generally with mixing of **MIXKOTE MKT1**. It should be applied after the first coat has reached an initial set but while it is still 'green' (less than 48 hours). Light pre-watering between coats may be required due to drying. The **MIXKOTE MKT1** treatment must be done under 'no-rain' conditions. It has to be protected with polythene sheet if rain is anticipated.

For spraying method, **MIXKOTE MKT 1** should be mixed with water by mechanical stirring method to ensure no lumps are present. The applicator must ensure the first spray pattern to be consistent from left to right vice versa. The pressure of air compressor should be adjusted sufficiently but not with excess air pressure as too much air pressure will bounce **MIXKOTE MKT 1** off the concrete. First coat should be allowed to dry overnight or thoroughly before the second coat is applied. Pre-wet the concrete surface again as mentioned above and continue with the spraying of second coat. Ensure all spraying patterns remain consistent.

6. Curing

A light spray of clean water is necessary for the curing of **MIXKOTE MKT1**. Curing shall begin as soon as the **MIXKOTE MKT1** has set to the point where it will not be damaged by fine spray of water. Under normal conditions, it is enough to spray **MIXKOTE MKT1** - treated surfaces three times per day for two days. In hot climates, spraying may be required more frequently.

For concrete structures that holds liquids (eg: reservoirs, swimming pools, tanks, etc.), **MIXKOTE MKT1** should be cured for three days and allowed to set for 7 days before filling the structure with liquid.

For more instructions, alternative methods or information concerning the compatibility of the **MIXKOTE MKT1** treatment with other products or technologies, please contact the Technical Department of CHEMIND INDUSTRIES SDN. BHD.

COVERAGE

Brush-on Method (total thickness of approximately 1.2 mm):

1. First Coat : 0.70 – 0.80 kg/m^2
2. Second Coat : 0.70 – 0.80 kg/m^2

Spray-on Method:

1. First Coat : 0.80 – 1.0 kg/m^2
2. Second Coat : 0.80 – 1.0 kg/m^2

PACKAGING

MIXKOTE MKT1 is available in either 25 kg bags or 25 kg pails. Customizable packaging is available for large projects.

STORAGE

MIXKOTE MKT1 must be stored at dry and cool place with a minimum temperature of 10°C. Shelf-life is one year when stored under proper conditions.

Made In Malaysia

SCOPE OF REGISTRATION AND STANDARDS

Manufacture of Waterproofing materials. Compliance SIRIM testing. Compliance with ASTM technical standards and AS 3740 - 2004 Australia Standard.

SIRIM

ASTM INTERNATIONAL Standards Worldwide

CHEMIND AUSTRALIAN TECHNOLOGY

CHEMIND

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