

Mahaproof Crystalline - 707

In Depth Crystallization Concrete Protection

Description

Mahaproof Crystalline - 707 is a unique chemical treated product for the waterproofing, protection and repair of concrete. Mahaproof crystalline- 707 CONCENTRATE is the most chemically active product. When mixed with water, this light grey powder is applied as a cementitious slurry coat to above-grade or below grade concrete. MAHASEAL CRYSTALLINE 707 prevents the penetration of water and other liquids from any direction by causing a catalytic reaction that produces a nonsoluble crystalline formation within the pores and capillary tracts of concrete and cement-based materials.

Features / Advantages

- Resists extreme hydrostatic pressure.
- Becomes an integral part of the substrate.
- Can seal hairline cracks up to 0.4 mm.
- Allows concrete to breathe.
- Highly resistant to aggressive chemicals.
- Non-toxic.
- Does not require a dry surface.
- Cannot puncture, tear or come apart at the seams.
- No costly surface priming or levelling prior to application.
- Does not require sealing, lapping and finishing of seams at corners, edges or between membranes.
- Can be applied to the positive or the negative side of the concrete surface.
- Does not require protection during backfilling or during placement of steel, wire mesh or other materials.
- Less costly to apply than most other methods.
- Not subject to deterioration.
- Permanent.

Typical application

- Reservoirs
- Sewage and Water Treatment Plants
- Underground Vaults
- Secondary Containment Structures
- Foundations
- Tunnels and Subway Systems
- Swimming Pools
- Parking Structures

Technical Information

Sr.No.	Properties	Results
1	Appearance	Grey crystalline powder
2	Maximum aggregate size (mm)	0.6
3	Powder density (gm/ cc)	1.55 ± 0.10
4	Pot life after mixing (approx. minutes, 20 °C)	> 30 min
5	Waterproofing pressure (ATM)	> 10
6	Adhesion on concrete (Mpa)	> 2
7	Suitability for contact with drinking water (British Standard 6920 and RD 140/2003)	Approved

Methods of Application

Surface Preparation

Concrete surfaces to be treated must be clean and free of laitance, dirt, film, paint, coating or other foreign matter. Surfaces must also have an open capillary system to provide "tooth and suction" for the Mahaproof Crystalline - 707 treatment. If surface is too smooth (e.g. where steel forms are used) or covered with excess form oil or other foreign matter, the concrete should be lightly sandblasted, water blasted, or etched with muriatic (HCL) acid.

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Structural Repair

Rout out cracks, faulty construction joints and other structural defects to a depth of 1.5 in. (37 mm) and a width of 1 in. (25 mm). Apply a brush coat of **Mahaproof Crystalline - 707** as described in steps 5 & 6 and allow to dry for 10 minutes. Fill cavity by tightly compressing **Mahaproof Crystalline - 707** into the groove with pneumatic packing tool or with hammer and wood block.

NOTE:

1. Against a direct flow of water (leakage) or where there is excess moisture due to seepage, use Plugging compound then followed by a brush coat of **Mahaproof Crystalline - 707** Concentrate. (Refer to **Mahaproof Crystalline - 707** Specifications and Applications Manual for full details.)
2. For expansion joints or chronic moving cracks, flexible materials such as expansion joint sealants should be used.

Wetting Concrete

Mahaproof Crystalline - 707 requires a saturated substrate and a damp surface. Concrete surfaces must be thoroughly saturated with clean water prior to the application so as to aid the proper curing of the treatment and to ensure the growth of the crystalline formation deep within the pores of the concrete. Remove excess surface water before the application. If concrete surface dries out before application, it must be re-wetted.

Mixing For Slurry Coat

- Mix **Mahaproof Crystalline - 707** with clean water to a creamy consistency in the following proportions:
- For Brush Application
- 1.8 to 2.0 Kg/SqMt (5 parts powder to 2 parts water)
- For Spray Application
- 1.2 Kg/SqMt (5 parts powder to 3 parts water, ratio may vary with equipment type)
- Do not mix more **Mahaproof Crystalline - 707** material than can be applied in 20 minutes. Do not add water once mix starts to harden. Protect hands with rubber gloves.

Applying Mahaseal Crystalline 707

Apply **Mahaproof Crystalline - 707** with a semi-stiff nylon bristle brush, push broom (for large horizontal surfaces) or specialized spray equipment. The coating must be uniformly applied and should be just under 1/16 in. (1.25 mm). When a second coat (**Mahaproof Crystalline - 707**) is required, 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 **Mahaproof Crystalline - 707** treatment must not be applied under rainy conditions or when ambient temperature is below 4°C.

Curing

A misty fog spray of clean water must be used for curing the **Mahaproof Crystalline - 707** treatment. Curing should begin as soon as the **Mahaproof Crystalline - 707** has set to the point where it will not be damaged by a fine spray of water. Under normal conditions, it is sufficient to spray **Mahaproof Crystalline - 707**-treated surfaces three times per day for two to three days. In hot or arid climates, spraying may be required more frequently. During the curing period, the coating must be protected from rainfall, frost, wind, the puddling of water and temperatures below 2°C for a period of not less than 48 hours after application. If plastic sheeting is used as protection, it must be raised off the **Mahaproof Crystalline - 707** to allow the coating to breathe.

NOTE:

- For concrete structures that hold liquids (e.g. reservoirs, swimming pools, tanks, etc.), **Mahaproof Crystalline - 707** should be cured for three days and allowed to set for 12 days before filling with water.
- Protection screed if required can be applied once **Mahaproof Crystalline - 707** has set.



Packing

25kg



Storage and Shelf life

Store in a cool dry place under shed away from heat. Shelf life is One year in original unopened conditions.



Consumption

1.8 to 2.0 kg/m². It may vary and depends upon surface undulations and other detailing.



Cleaning of Tools & Equipments

Tools and equipment should be cleaned with water or suitable solvent immediately after use.

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Ecology, Health and Safety

Health & Safety instructions, all chemicals should not come in contact with skin and eyes or be swallowed. Protective gloves and goggles should be worn. If contact with skin occurs, wash well with soap and water.

Eye contamination should be washed thoroughly with clean water and medical advice sought.

If swallowed seek medical attention immediately. Do not induce vomiting.

Disclaimer

The technical data contained herein is based on our present knowledge and experience and we cannot be held liable for any errors, inaccuracies, omissions or editorial failings that result from technological changes or research between the date of issue of this document and the date the product is acquired. Before using the product, the user should carry out any necessary tests in order to ensure that the product is suitable for the intended application. Moreover, all users should contact the seller or the manufacturer of the product for additional technical information concerning its use if they think that the information in their possession needs to be clarified in any way, whether for normal use or a specific application of our product.

Our guarantee applies within the context of the statutory regulations and provisions in force, current professional standards and in accordance with the stipulations set out in our general sales conditions.

The information detailed in the present technical data sheet is given by way of indication and is not exhaustive. The same applies to any information provided verbally by telephone to any prospective or existing customer.

Mahafix[™]
WATERPROOFING SPECIALIST



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