



MR. EXPERT MWR MASONRY WATER REPELLENT

DATA SHEET

DESCRIPTION:

Water repellent for masonry surfaces (**Mr. Expert MWR**) is Silicone Based water dilutable solution having slightly yellowish appearance used for imparting a colorless water repellent surface finish to mineral construction material without significantly reducing water vapor permeability.

- It is also used to provide a barrier against rising damp and the treatment remains effective for 10 to 20 years.
- **Mr. Expert MWR** provides its water repellent properties by reaction with atmospheric carbon dioxide, the active substance formed are polymethylsilicic acid.
- As a surface treatment in applications that utilize its ability to impart a water repellent surface and reduce water absorption.
- For use on bricks, sandstone, limestone, Cement and ceramics

WHY USE A SILICONATE?

Rain water penetrating the exposed masonry surface dissolves the soluble salts and eventually deposits them on the surface causing stains. This condition, called efflorescence, spoils the beauty of the facade.

The main problems with exposed concrete surface are:

- Patchy appearance due to different degree of compaction; i.e. different degree of absorbency.
- Visibility of hairline cracks due to concentration of dirt deposition; moss growth.
- Water entering the masonry when allowed to freeze, increases in volume due to the formation of ice often resulting in cracks and spalling.
- Corrosion of the reinforced steel rods.
- Capillary action of small pores absorb water deep in to the walls. In the case of glazed tiled surface water can get into the masonry through the mortar joints causing damp interior walls. During the laying of floor tiles, water soluble salts migrate into the tiles from the mortar used.

Treatment with potassium methylsiliconate prevents efflorescence of salts absorbed and makes cleaning of the tiled floor easier. Low fired clay products such as roof tiles, bricks, unglazed floor tiles absorb water and the soluble salts are transported to the surface, disfiguring the product.

A continuous cycle of dissolving and crystallization of the water soluble salts over a period of time leads to the disintegration of the clay product. In low fired clay products containing lime that has not been sufficiently pulverized, the CaO/MgO particles which are not transformed into silicates during firing react

With water and undergo considerable expansion causing pitting.

Damage caused to the wet substrate/ clay product due to growth of moss, lichen and algae is also a common problem spoiling the beauty of the facade.

All the above phenomena are observed only if the masonry surface remains wet. They will be eliminated if one can prevent or at least reduce water absorption. Water resistance is an important factor in concrete and masonry construction for safety, health and comfort of building occupants.

FEATURES

- Imparts water repellency to a wide variety of substances.
- Coverage on normal Concrete: 600 sq. ft.

BENEFITS

- Reduces water absorption into the substrate, thus reducing spilling due to freeze-thaw and Efflorescence, thereby increasing the life of the substrate
- Colorless and non-yellowing protection preserves the natural appearance of the substrate
- Penetrating and breathable
- Low VOC
- Nonflammable

Application

- Surface treatment for concrete
- Making manufactured and natural stones water repellent
- Making aerated concrete water repellent
- Low - fired clay products immediately after they have been made : e.g., roof tiles, facing bricks, floor tiles, and flower pots.
- Injection into buildings just above ground level to form a damp course
- Additive for clays, ceramics, starches, latex paints
- Primer for emulsion paints and plasters
- Mixed with sodium silicate for use as a binder in pigmented PAINTS

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications.

Viscosity cps	Max 100
Solid content %	40
Specific Gravity	1.25
Flash Point, open cup °C	>93
pH	13
Solvent	Water
Toxicity	Non Toxic
Application Temp. Range °C	10-50
Pot life	12 hrs

Dilution :

Mr. Expert MWR should be diluted with ordinary tap water before use, however, high mineral content water should be avoided as it may cause precipitation.

The quantity of diluted SSWR usually required for different substrates are:

SUBSTRATE COVERAGE DILUTION

As Admixture/Integral component: Add 0.50% to 0.75% SSWR by weight of Cement. % may vary for specific application.

Unpainted plastered surface	1:10 to 1:15
Glazed tiles :	1:10

Strongly absorbent bricks: 1:20 to 1:30

Concrete : 1:10

Note: The use of higher concentration than required may result in formation of white residue on surface. User should test the concentration to be applied on substrate prior to use

USABLE LIFE AND STORAGE

When stored between 5°C (41F) and 35°C (95F) in the original unopened containers, **Mr. Expert MWR** Has a usable life of 12 Months from the date of manufacture. The SS WR is unaffected by freeze/thaw cycles. If the product freezes, it should be stored at room temperature to thaw, and then remixed before use.

HANDLING PRECAUTIONS

Mr. Expert MWR Water Repellent is an alkaline material and should be handled with the same care as solutions of caustic soda. If misting should occur while spraying in an open area, avoid inhalation; a respirator is recommended.

Local exhaust is recommended if spray or mist is created in an enclosed area. Swallowing large amounts may cause serious injury. Avoid contact with eyes, skin and clothing. In case of skin contact, wash immediately. In case of eye contact, flush immediately with water for at least 15 minutes and obtain prompt medical attention.

Application Precautions

- Always test the concentration on a small sample of the material to determine the suitability of your specific use.
- Surfaces to receive the water soluble silicone should be lightly dampened immediately prior to application.
- This water-soluble silicone does not wet surfaces that have been previously treated with silicone or another water repellent treatment.
- When spraying **Mr. Expert MWR** water Repellent, great care should be taken to protect nearby vegetation or articles from overspray. The material is very caustic. It will damage or kill vegetation and will stain or etch glass, plastic, aluminum and most metals. If contact does occur, wash immediately with water.

HOW TO USE - As a Surface Treatment

Mr. Expert MWR water repellent is diluted to a concentration of 3 percent solids or less prior to application. To prepare a 5 percent solution, mix 1 liters of **Mr. Expert MWR** Water Repellent, as supplied, with 7 liters of water.

Do not use concentrations higher than 5 percent solids unless prior testing indicates a necessity. The use of higher concentrations than required may result in the formation of a white residue on the surface. Users should test the concentration to be applied on the substrate prior to use. After application of the silicone solution, allow the treated surface to dry for at least 24 hours to develop maximum water Repellency.

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