



## Penetrating CMW Crystal Matrix Waterproofer

### Product: Penetrating CMW

**Penetrating CMW** is a water based reactive and non-reactive crystal matrix growth waterproofing material used to treat concrete slabs and provide long-term waterproofing and strength increase.

The product is a clear, low viscosity liquid that penetrates concrete and masonry building materials providing protection, strengthening and preservation.

**CMW** becomes an integral part of the concrete, completely waterproofing and dramatically increasing the compressive strength of the concrete structure. The product solidifies the various component parts of the concrete into one solid mass via the development of its crystal growth thus increasing density and making the concrete permanently waterproof, tougher and harder. The CMW will reduce hydroscopic pressure, provide better bonding for coatings and increase the hardness in the range from 25% increase to 40% overall.

It seals against radon gas; eliminates sweating floors in basements and garages; stops efflorescence and dusting; and protects against deterioration.

### CMW Performance & Protection

CMW incorporates a reactive silicate and non-silicate based multifunctional (“stand-alone”) crystal growth matrix that also reacts with hydroxides (portlandites) and tri-calcium silicate components within the pore matrix structure of the concrete. This reaction creates a calcium-silicate hydrophilic particle grain with a non-diluent property that will absorb penetrating liquids and substantially hinder and eliminate the passage of liquids through the concrete structure.

### Hydrostatic Pressure

This crystal growth action provides waterproofing even under hydrostatic head pressure and eliminates vapor pressure assisting as an adhesive promoter and protecting surface applied coatings such as deck coatings, urethane coatings, epoxy coatings and vinyl floor coatings from the effects of capillary moisture or vapor pressure.

### Penetrating CMW

- Eliminates hairline cracks and curing cracking in new concrete
- Assists in providing a uniform cure on new concrete via chemical reaction
- Provides a complete moisture barrier
- Deeply penetrates concrete, forming an efficient pore block within the concrete structure
- Provides surface waterproofing and structural waterproofing through the whole concrete slab
- Neutralizes alkali during the reaction delivering it to the surface for removal
- Protects surface coatings from capillary rise of moisture and vapor pressure
- Seals against radon gas and eliminates sweating floors in basements and garages
- Acts as an adhesion promoter for surface applied coatings/paints
- Used in joints to stop water pressure from damaging joint materials
- CMW does not change the exterior of the concrete in appearance and the surface will take color stain (acid stain)

### Technical Data

#### Shelf Life – 18 Months in Unopened Containers

Property	Test Method	Required Property
Bonding	ASTM C3359	28% Increase
Weathering	ASTM G-23	no effect
Freeze Thaw	ASTM C-666	no effect
Curing	ASTM C-309	no effect
Hardness	Abraser CS-17	Wheel, 1000g., 1000 revolutions
Hardening	ASTM C-42	40% increase @ 14 days
Specific Gravity		1.06
Freeze Temperature		25°C
Boiling Point		214°F

Product Data Sheet



## Penetrating CMW Crystal Matrix Waterproofer

### Application

Do not apply where surface and ambient temperatures are below 35°F or above 100°F, or when the temperature will fall below 35°F within 48 hours after application.

### New Concrete

Mix the product before using. For new concrete, apply Penetrating CMW immediately following the finishing operation or as soon as the surface may be walked on.

Apply to the surface at the recommended application rate (200 sq.ft./gallon) and keep the surface of the concrete wet for a minimum of 30 minutes.

As the CMW begins to dry and is absorbed into the surface, lightly apply a mist of water over the surface.

After the 30 minutes, and when dry-out of the surface begins, flush the surface with water and squeegee until no water stands on the surface.

Continue to dry the surface with squeegeeing to remove any standing or remaining product.

Exterior applications may use a broom method to finish the surface. No squeegeeing is needed, however, excess product should be removed no longer than 45 minutes after application.

### Old Concrete

For old concrete, make sure that the surface is free of dust, dirt, oils, coatings or any contaminants. Wash the surface with clean water to remove any debris and dust. Allow the surface to dry before the application is made.

Pre-wet the surface of the concrete until saturated. Remove excess water from the surface with a squeegee and allow the surface to dry for 2 hours approximately.

Mix the product before using. Apply to the surface at the recommended rate (200 sq.ft./gallon) making sure that the surface is completely wet. Keep the surface wet for 30 minutes by misting as necessary.

After 45 minutes squeegee or broom any excess materials from the surface. Wait 2 hours and flush the surface with water and squeegee to a surface-dry condition.

### Methods of Application

Use spray, brush or roller to completely saturate the concrete surface. Low-pressure sprayers are best. Use a squeegee for finishing and dry-out.

Penetrating CMW is non-flammable and non-toxic and is easy to use on new or old concrete for complete waterproofing.

Training is quick and unskilled workers may apply the product. Wear impervious gloves (neoprene or rubber), coveralls and goggles when appropriate. Water should be available to wash eyes and/or skin.

### Shelf Life & Storage

No known limit to shelf life. Keep from freezing and store between 35°F and 100°F. Keep container sealed and avoid prolonged exposure to direct sunlight. Always agitate drum or container before use.

### Precautions

Protect glass, aluminum, wood, porcelain, glazed tiles and painted finishes from over-spray. Avoid mineral and organic acids, coagulated by brine. Do not store in aluminum container.

### Limitations

Crystal Matrix is not suitable for sealing working/volatile cracks as a result of structural defects or caused by mechanical damage.

**Packaging**      1 gallon Pails  
                          5 gallon Pails  
                          55 gallon Drums

Product Data Sheet