



DRYCON SM / SMF Crystalline Waterproofing

Waterproof structural repair mortars designed for pneumatic installation

DRYCON SM / SMF – Product Data Sheet

Sprayable Waterproof Repair Mortars

Description:

DRYCON SM and DRYCON SMF are prepackaged, Portland cement mortars supplied in kit form for application by conventional spray equipment. DRYCON SM/SMF technology is based on the DRYCON coating system which has been used successfully since the early 1970's, yet includes current technology to produce the highest quality mortar for spray application in thick sections. DRYCON SM/SMF may also be applied using manual methods. DRYCON SM/SMF is designed for negative side waterproofing and is also suitable for positive side applications.

DRYCON SMF has the physical characteristics of **DRYCON SM** but includes specially designed nylon fibers. **DRYCON SMF** is a repair mortar for applications requiring additional tensile strength or where shrinkage crack control is warranted.

Uses:

A structural repair mortar for above or below grade concrete and masonry structures. May be applied to horizontal, vertical or overhead surfaces.

Repairs to water and wastewater treatment facilities, manholes, tunnels, utility vaults, elevator pits, marine structures, basement walls, dams, bridges, silos, commercial, industrial and parking structures.

Advantages:

No VOC's – Inorganic waterbased system
A high quality non-shrink mortar for spray or trowel application
Traffic bearing in 24 hours, resistant to de-icing salts
Includes lightweight aggregate, well suited for overhead or vertical repairs
Very low permeability mortar is breathable yet impermeable to water
Superior flow and adhesion properties provide excellent workability
DRYCON – SM/SMF provides outstanding protection to reinforcing steel

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TECHNICAL DATA

Shelf Life: One year in unopened container. Requires dry storage at above freezing temperatures.

Color: Concrete Gray

Physical Properties:

Compressive Strength: ASTM C 109	1 Day 2,160 psi (14.9 MPa) 7 Days 4,360 psi (30.1 MPa) 28 Days 5,500 psi (37.9 MPa)
Slant Shear Bond Strength: ASTM C 882 (No epoxy used)	28 Days 2,460 psi (17.0 MPa)
Flexural Strength: ASTM C 78	7 Days 650 psi (4.5 MPa) 28 Days 680 psi (4.7 MPa)
Flexural Strength: ASTM C 348	28 Days 785 psi (5.4 MPa) 56 Days 845 psi (5.8 MPa)
Splitting Tensile Strength: ASTM C 496	7 Days 345 psi (2.4 MPa) 28 Days 415 psi (2.9 MPa)
Length Change: ASTM C 157	0.00 Percent change (Moist Cure)
Final Set: Vicat Needle	6 Hours

Yield: Approximately 0.47 cubic feet per 50 pound kit (22.7 Kg)

Mixing ratio: **Drycon-SM/SMF** Powder – 50 pounds (22.7 Kg)
Liquid Inorganic Admixture – 16 ounces (0.47L)
Potable Water – 4 quarts (3.8L) Maximum

Working Time: 45 Minutes at 70°F (21°C)

If chemical resistance is required, recoat with **IPAGARD Epoxy Liner Kit** after 24 hours. Consult with our Engineering Department to determine the suitability of **IPAGARD** for a particular chemical resistance application.

Surface Preparation:

Remove all loose material, scale, oils, greases or any other surface contamination. Seal all active water infiltration using "**OCTOPLUG PLUS**" or "**IPANEX R**" methods. Substrate should be saturated surface damp with no free water on the surface. In situations where substrate integrity is poor due to poor quality mortar or hydrogen sulfide environment, finish surface preparation with an application of "**DURIPAL**" liquid surface conditioner. Open thin cracks to 1 inch deep by 3/4 inch wide and undercut edges to provide mechanical key for **DRYCON-SM/SMF** mortar. This mortar is intended for use in static crack situations.

Mixing and Application Instructions:

Wear appropriate skin, respiratory and eye protection per MSDS instructions. Use mechanical mortar mixer or electric drill motor and mixing paddle. Pour 4 quarts (3.8L) potable water into mixing container. Shake 16 ounce (0.47L) container of liquid inorganic admixture included in kit until uniform. Pour liquid admixture into mixing container. Mix liquids in container. Slowly add contents of 50 pound (22.7 Kg) bag of **DRYCON SM/SMF** powder. Continue mixing until uniform in consistency. Let sit several minutes, then mix again for one minute.

Placing:

Apply **DRYCON SM/SMF** Mortar using gloved hand, trowel or spray equipment (peristaltic or dual diaphragm pumps). When applying by spray, place up to one inch lifts at a time and then double back after several minutes to build thick sections. Spray directly into voids and properly prepared cracks. Follow spray application with flat or pool trowel to level surface. A heavy masons brush may also be used to provide a roughened texture.

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Curing:

Curing of **DRYCON SM/SMF** should be accomplished using the latest ACI standards for cement based construction materials.

Clean-up:

Cleanup must be done immediately due to the high bonding characteristics of **DRYCON SM/SMF**. Clean equipment with water. In case of spills, powder component should be placed in closed container and placed in landfill. Liquid inorganic admixture spills should be placed in container with absorbents, make effort to reclaim as much of spilled product as possible. Contaminated absorbent must be placed in plastic pails and disposed of at a licensed hazardous waste facility.

Packaging:

DRYCON SM and **DRYCON SMF** are packaged in 50 lb bags as a kit, and each kit includes a plastic pint container of IPA Systems' **IPANEX** inorganic copolymer admixture.

Limitations:

May only be applied at temperatures between 40°F (4.4°C) and 100°F (37.8°C). Minimum application thickness is ½ inch (12.7 mm). Keep liquid inorganic admixture from freezing. Surfaces may be damp, but free of surface water.

CAUTION – FOR INDUSTRIAL USE ONLY:

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 get into the eyes, rinse immediately and repeatedly with water. If irritation persists, obtain medical assistance.

WARRANTY

This product is warranted and guaranteed to be of good quality. Manufacturer, as its sole and exclusive liability hereunder, will replace material if proved defective. THIS WARRANTY AND GUARANTEE ARE EXPRESSLY IN LIEU OF ALL OTHERS, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND MAY NOT BE EXTENDED BY REPRESENTATIVES OR ANY PERSONS, WRITTEN SALES INFORMATION, OR DRAWINGS IN ANY MANNER WHATSOEVER.

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