

TECHNICAL DATA BULLETIN

OKON PLUGGER WATER REPELLENT SEALER

PRODUCT OVERVIEW

OKON PLUGGER is water base, low VOC, acrylic micro-emulsion specifically designed to protect both new and existing porous concrete surfaces. Its special blend of 100% acrylic resin and unique water-repellent provides multiple benefits especially important when protecting very porous CMU:

- The acrylic resin reduces the pore size of the substrate thereby reducing the capillary action that draws water into the substrate.
- The proprietary water repellent lowers the surface tensions and further counteracts the capillary pull.

PRODUCT FEATURES

- ⊙ Water based Acrylic Micro-Emulsions
- ⊙ Non-yellowing
- ⊙ Recoatable
- ⊙ Paintable
- ⊙ Resist high alkalinity
- ⊙ Resist chloride salts
- ⊙ Resist blushing

USE AREA

- Exterior
- New or existing
- Vertical
- CMU – porous

SURFACE PREPARATION

OKON PLUGGER can be applied to most *porous* concrete surfaces that are unsealed, clean (free of dirt, waxes and oils) and sound. New concrete must be cured for 28 days prior to coating. Unsealed: PLUGGER must be able to penetrate surface. Test the openness of the substrate by sprinkling with water. If the surface turns dark with the water PLUGGER can be applied. Clean: Clean surface using oil-free, compressed air to remove loose and foreign matter that could interfere with application or performance of coating. Pressure wash surface to remove dust, sand or other foreign matter. Allow pressure washed surfaces to dry three days prior to coating. Remove exterior mildew with JOMAX® or equivalent. Remove efflorescence with sulfamic or dilute muriatic acid. Spot cleaning with acid may cause uneven porosity and blotchy appearance. Rinse the surface thoroughly after chemical cleaning. Un-rinsed acid salts may cause whitish-blotches to appear. Surface can be slightly damp at time of application Sound: Surface of concrete and mortar joints must be hard and firm - not loose or sandy. The surface is un-sound if it can be scraped or gouged with a flat screw driver. Unsound mortar or deteriorated concrete should be removed and repaired prior to coating. Cracks and joints must be sealed with flexible sealant. Parapet walls must be capped and the backside sealed with a waterproofing membrane.

COVERAGE RATE/GALLON

	1st Coat	2nd Coat ¹
CMU-fluted	25-40	75-100
CMU-split face	35-50	80-120
CMU-smooth	50-75	80-120
Stucco-rough/cracked	75-100	150-300

The rate of application will vary depending on:

- The weight of the block – A minimum of two coats are required to adequately seal lightweight and some medium weight block.
- The block mix - Integral ad-mixtures like W.R. Grace Dry-Block®, help the block drain and are required in
- Light-weight block to receive a 5-year Warranty.
- The total surface area to be covered is greatly affected by the face-style and mortar joints of the block. Split face block has approximately 30% more surface area than smooth block and fluted block can have two to four times more surface area than the two-dimensional surface area.

TECHNICAL DATA

Reduction in Water Leakage (Wind Driven Rain) Split-Faced Concrete Masonry Wall	ASTM E 514	>90%
Water Resistance by Immersion	ASTM 870	PASS
Water Resistance to 100% R.H.	ASTM D2247	PASS
Water Resistance Using Fog	ASTM D1735	PASS
Water Resistance to Condensation	ASTM D4585	PASS
UV Resistance - QUV	1000 Hrs	Excellent.
Breathable	ASTM D1653	Yes
Water Absorption – max. after 24 hr.	ASTM C140	4%
Water Vapor Transmission (Perms)	ASTM E96	11.51
Durability – loss of water repellency	ASTM G53	<8%

PHYSICAL PROPERTIES

	Plugger
pH	9.0
Spec. Gravity	1.01
VOC	75
Weight per gallon (lbs)	8.4

APPLICATION

PLUGGER is best applied by airless spray. Use a small to medium size airless pump (.33 - .66 gpm) at 500 psi and a .031”-.035” tip. Protect adjacent and underlying surfaces from over spray and rundown. The surface temperature at time of application and for four hours after application is very important. Application to cold (<50°F) or to hot surfaces (>100°F) will reduce the durability of the material. Surfaces temperatures >100° F can be cooled by misting with water immediately prior to application. PLUGGER can be applied to damp but not wet surfaces. The surface is wet if moisture transfers to your hand when you touch it or if it glistens in appearance.

Vertical Surfaces: Apply from bottom of wall up using low pressure airless spray. Flood surface until material runs down 6 to 8 inches below spray pattern before being absorbed. Pick up runs or drips with a dry roller or brush. Overlap spray pattern to avoid holidays.

Horizontal Surfaces: PLUGGER should not be used on horizontal traffic areas. Horizontal surfaces like window sills or railings must be sloped for drainage. Flood surface with sufficient material so that surface remains wet for several minutes before material is absorbed. If surface pooling or puddling appears, back-roll, brush, wipe up, or broom away excess material.

Recoat: PLUGGER can be recoated after the initial coat is dry, clear and colorless.

POROSITY TEST

The porosity of a substrate can be measured using a RILEM tube per Test Method 11.4. The tube is attached to the substrate with putty and filled with water. The time it takes the water to drain from the tube indicates the porosity of the substrate and indicates whether additional applications of water repellent will be justified. The substrate must be dry when conducting the test. The RILEM tube can be used to measure the porosity of mortar joints but otherwise is not relevant on glazed brick or cast concrete. A RILEM tube test resulting in no water loss after 3 minutes is necessary in order for a project to qualify for a 5 Year Extended Warranty.

RILEM Test 11.4 Guideline

Condition	Water Loss (mL)	Rating (3 minute test)
Uncoated	5	Very porous
	2	Porous
	.5	Dense
Coated	3	Poor protection
	.5	Good protection
	0	Excellent protection

LIMITATIONS

PLUGGER does not form a water-proofing membrane and will not fill large pores, bridge cracks, seal inaccessible areas, ex. the under side of raked joints, or compensate for flawed construction. Exposed walls must be capped and the backside of parapet walls must be sealed with a waterproof membrane, flashing must be in place, and where codes allow, weep holes and drains installed and functioning.

Effective May 07.

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- For vertical and sloped horizontal, above-grade substrates only.
- Substrate temperatures must be > 50° F (10° C) and ≤ 100°F (38°C) during application.
- Not recommended for application over sealed, non-porous surfaces.
- PLUGGER is not designed to remedy or prevent water intrusion problems associated with poor workmanship or inadequate building design.
- Water-repellency alone may not prevent water damage caused by water intrusion through some light-weight or highly absorbent substrates.
- Application of PLUGGER may affect the sheen of the surface. A mock-up should always be performed and approved by property owner.

Fluted-block and block with raked mortar joints do not qualify for a 5-year warranty.

5-YEAR WATER REPELLENCY WARRANTY

Properly specified and applied applications of PLUGGER may qualify for a 5-Year Warranty. A RILEM™ tube test resulting in no water loss after 3 minutes is necessary in order for a project to qualify for a 5 Year Warranty. Two coats are generally required to achieve this performance standard. Not all substrates can achieve this standard regardless of the number of coats applied. Request OKON Warranty procedure for details.

WARRANTY

The manufacturer will replace this product if, within 60 days of the date of purchase, it is shown to be defective when used as directed. THE MANUFACTURER’S LIABILITY UNDER ANY WARRANTY, WHETHER EXPRESSED OR IMPLIED, IS LIMITED IN DURATION TO 60 DAYS AND IS LIMITED SOLELY TO REPLACEMENT OF THE PRODUCT AND DOES NOT INCLUDE LABOR OR OTHER CONSEQUENTIAL DAMAGES. Some states do not allow limitation on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages. So the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

PACKAGING CODES

Product No.	Package	Wtg.	UPC
OK950	Five	44	7 49505 95005 1
OK955	55-Drum	480	7 49505 95055 6



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