
DESCRIPTION

Premera MI Seal (medium viscosity bonding agent, and coating) is a two-component, high-strength epoxy adhesive and coating that is ideal for coating of new and old concrete, bonding fresh to hardened concrete, bonding to wet concrete or perfect for use in a variety of repair projects. Premera MI Seal may be used in temperatures between 40 °F and 100 °F (4 °C and 38 °C).

FEATURES

- Moisture insensitive allowing installation and curing in damp environments
- Self-leveling medium viscosity
- High modulus
- Available in cartridges and bulk
- Available in two versions. Regular pot life and extended pot life
- High strength formula
- NSF/ANSI 61 & 372 Drinking water certified
- Approved for ASTM C881-15, AASHTO M235. Type I, II, IV & V Grade 2 Class B

TYPICAL USES

- As a skim coat
- As the main coating in potable water tanks
- As a vapor barrier primer in coating systems
- Bonding hardened concrete to hardened concrete
- Bonding fresh concrete to hardened concrete and steel
- Coating and sealing interior or exterior slabs
- Durable, chemical resistant industrial coating
- Mortar repair for spalled concrete when mixed with dried silica sand or aggregate
- Gravity feed medium to large horizontal cracks

COLORS

Part A (Resin): White, Part B (Hardener): Dark Gray, Mixed: Gray.
Red basecoat available in 4-gallon kits only.

PACKAGING

102 oz. (3 L) kits. (12 cartridges in 1 case)

4-gallon (15 L) kits.

2-gallon (7.6 L) kits.

COVERAGE

Bonding Agent: 1 gallon covers approximately 80 ft² (7.4 m²) at a thickness of 20 mils.

Adhesive: 1 gallon yields 231 in³ (3.8 L).

Grout/ Mortar Repair: 1 gallon mixed with one equal part dried silica sand yields approximately 450 in³ (7.4 L) of grout.

NOTE: Coverage may vary slightly according to surface temperature, surface texture and sand gradation.

STORAGE

Twenty-four months in factory delivered, unopened bulk containers.

Twelve months in factory delivered, unopened cartridges.

Keep away from extreme heat, freezing, and moisture. Store at temperatures between 40 °F and 95 °F (4 °C and 35 °C).

TECHNICAL DATA (All values @ 77 °F / 25 °C)	US	Metric
Solids by volume (ASTM D2697)	100%	100%
Specific gravity of materials (ASTM D792)	A: 9.18, B: 15.7 lbs./gal	A: 1.19, B: 1.89 kg/ liter
Viscosity at 77 °F/25 °C (ASTM C881)	5,600 cP	
Shelf life @ 77 °F /25 °C	12-24 Months	12-24 Months
Compressive yield strength (ASTM D695) - 7 days	11,360 psi	78 MPa
Compressive modulus (ASTM D695) - 7 days	438,400 psi	3,023 MPa
Tensile strength (ASTM D638)	5,010 psi	34.5 MPa
Tensile elongation (ASTM D638)	6%	
Bond strength. Hardened to hardened concrete (ASTM C882) – 2 days	2,250 psi	15.5 MPa
Bond strength. Hardened to hardened concrete (ASTM C882) – 14 days	2,900 psi	20 MPa
Bond strength. Fresh to hardened concrete (ASTM C882) – 14 days	1,880 psi	13 MPa
Bond strength. Fresh concrete to steel (ASTM C882) – 14 days	1,040 psi	7.2 MPa
Heat deflection temperature (ASTM D648) – 7 days	134 °F	57 °C
Water absorption -14 days (ASTM D570)	0.11	
Linear coefficient of shrinkage (ASTM D2566)	0.00006	
PROCESSING PROPERTIES (Under standard lab conditions)		
Mix Ratio V/V	1:1	
Gel time	43 minutes	
Pot life	37 minutes	

Tack free time	3 hours 25 minutes
Full cure time	24 hours
<i>Properties and values are highly dependent on equipment, spray gun, mix chamber temperature, pressure and related parameters. Variations are possible and expected. Values included above are per NCSI standard lab practices & methodology at various dry film thicknesses.</i>	

SURFACE PREPARATION

To obtain optimum bonding, remove all dirt, oil, debris, wax, grease, dust, paint or coating, and any loose concrete or rocks from the surface area where the application of the bonding adhesive will be applied

Concrete surface must be cleaned and profiled or roughened prior to application.

Mechanical Preparation - Use a scarifier, shot-blaster, bush-hammer or other equipment that will produce a profiled or roughened surface, then thoroughly remove all dust and debris produced.

Chemical Preparation (Acid Etching) - While wearing safety goggles, gloves and other recommended personal protective equipment (see Safety Data Sheet), use an acid mixture such as water/baking soda or water/ammonia to etch into the concrete surface, followed by a clean water rinse to remove all chemical acid mixture as well as the debris obtained from etching.

Surface may be damp (or dry) however, there should be no standing water.

APPLICATION:

Installation Instructions are available within this Technical Data Sheet (TDS). Due to occasional updates and revisions, always verify that you are using the most current version of the Installation Instruction. In order to achieve maximum results, proper installation is imperative.

CARTRIDGE PREPARATION:

When the work environment or substrate falls below 70 °F (21 °C) condition the product to 70 - 75 °F (21 - 24 °C) prior to use. Cold product may become too thick. Product that is too warm will react much faster than normal.

1. Check the expiration date on the cartridge to ensure it is not expired. Do not use expired product! Remove the protective cap from the adhesive cartridge and insert the cartridge into the recommended dispensing tool. Before attaching mixing nozzle, balance the cartridge by dispensing a small amount of material until both components are flowing evenly. For a cleaner environment, hand mix the two components and allow waste to cure prior to disposal in accordance with local regulations.
2. After the cartridge has been balanced, confirm the internal mixing element is in place and screw on the proper Adhesives Technology mixing nozzle to the cartridge. Do not modify mixing nozzle prior to dispensing adhesive.
3. Dispense the initial amount of material from the mixing nozzle into a disposable container according to local regulations. The product should be a uniform light gray color with no streaks. NOTE: The adhesive must be properly mixed in order to perform as published. CAUTION: When changing cartridges, never re-use nozzles. A new nozzle should be used with each new cartridge and steps 1 - 3 should be repeated accordingly.

BULK MIXING INSTRUCTIONS:

When the work environment or substrate falls below 70 °F (21 °C) condition the product to 70 -75 °F (21- 24 °C) prior to use.

NOTE: Thoroughly stir each component separately with a Jiffy mixing paddle or similar before mixing Part A and Part B together.

1. Pour the total contents of Part “B” (hardener) into the Part “A” pail (resin) OR proportion equal parts by volume of both Part “A” and Part “B” into a clean pail. Be sure that the components are mixed at an exact 1:1 ratio by volume.
2. Mix thoroughly with a low speed drill (400 – 600 rpm) with a Jiffy mixing paddle or similar. Carefully scrape the sides and the bottom of the container while mixing. Keep the paddle below the surface of the material to avoid entrapping air. Proper mixing will take at least 3 minutes and when well mixed the material will be free of streaks or lumps.
3. Mix only the amount of material that can be used before the pot life expires.
4. If aggregate is to be used, add the aggregate to the epoxy mix after part A and part B have been premixed together, then place immediately. NOTE: If mixing with sand, a 1:1 ratio is optimal. For grouting/mortar: Add up to 1-1/2 parts of kiln dried sand to 1 part mixed Premera MI Seal. Maximum thickness 1.5 inches (38.1 mm) per lift.

COATING APPLICATION:

To use Premera MI Seal as a coating adhesive, apply the single first coat using a clean roller. If a second coating is desired, apply second coat while the first coat is still slightly tacky. Silica sand, 20 to 50 mesh, may be used to create a slip-resistant surface. Broadcast the silica sand throughout the surface, then backroll into the surface to embed the sand.

BONDING AGENT APPLICATION:

Bonding Fresh Concrete to Hardened Concrete or Steel: Using a brush or roller, apply an even coat of the mixed Premera MI Seal epoxy to the clean and prepared concrete or steel surface. While the epoxy is still tacky, place fresh concrete over the top of the mixed epoxy.

Bonding Hardened Concrete to Hardened Concrete: Using a brush or roller, apply an even coat of the mixed Premera MI Seal epoxy to both concrete surfaces and be sure to fill all gaps between the connecting concrete surfaces.

SPALL REPAIR:

An extensive range of spall repairs may be made using Premera MI Seal family. NOTE: For spall repairs that are near a crack or expansion joint, it is recommended that a joint filler be used to treat the joint prior to repairing the spall. To prepare the surface for spall repair, cut into the sound concrete using a grinder with a diamond blade or tuck point diamond grinding wheel. The entire spall depth should be consistent to avoid a feathered edge effect. Prepare the area to be repaired as noted above under Surface Preparation. Premera MI Seal family may be extended with the addition of silica sand. The recommended optimal ratio is 1:1 sand to Premera MI Seal for optimum compressive strength. Other mix ratios may be used such as 1.5:1 and 2:1. However, it is recommended not to exceed a 2:1 mix ratio. After final cleaning, pour or dispense mixed neat or sand mixture of Premera MI Seal into the repair area and smooth out with a trowel to create a smooth surface.

PICK-PROOF SEALANT:

Premera MI Seal is formulated for medium cracks. For best results, cut a V shaped groove to open up the crack using an abrasive or diamond blade. Use wire brush to abrade and then blow out the crack to remove all dust, dirt, grease, wax, oil or any other contaminants. Pour or dispense the Premera MI Seal into the crack and fill the entire area. Repeat application if necessary to completely fill crack.

EQUIPMENT CLEAN UP

Always wear appropriate protective equipment such as safety glasses and gloves. Clean uncured materials from tools and equipment with mild solvent. Cured material can only be removed mechanically.

LIMITATIONS

- Do not thin with solvents, as this may affect cure
- Not recommended for any anchoring and doweling application where there may be a sustained tensile load, including overhead applications

WARRANTIES AND DISCLAIMERS

Nukote Coating Systems International, a Nevada, USA Corporation warrants that this product shall conform to the technical specifications published in the product literature. The quality and fitness of the product is dependent upon the proper mixture and application of the components by the applicator. Nukote Coating Systems has no role in the application of the finished polymer other than to manufacture and supply its two components. It is vital that the person applying this product understands the product and is fully trained and certified in the use of plural component equipment and application of plural component materials. There are no warranties that extend beyond the description on the face of this instrument, except when provided in writing, directly by Nukote Coating Systems International and executed under seal by a company officer.