

MASTERSEAL® GP

Epoxy sealer

DESCRIPTION:

MASTERSEAL GP is a long established, high quality epoxy formulation for sealing concrete surfaces to prevent deterioration such as spalling, scaling, cracking and leaching. It effectively keeps out moisture carrying deicing or sea coast chlorides that cause spall-generating rebar corrosion; rain-borne acids which attack cement; and moisture which causes cracking, leaching, and freeze/thaw-caused scaling. Extensive independent tests show that MASTERSEAL GP prevents over 94% of the chlorides in salt-laden water from entering concrete. These results are equivalent to or in excess of much more expensive treatments such as polymer concrete or dense, low-slump concrete. The same sealing ability which so markedly reduces chloride infiltration will substantially protect concrete against all other water-borne damaging elements.

RECOMMENDED FOR:

- Bridge decks, highways and median barriers
- Parking garages
- Piers, beams and wing walls

FEATURES/BENEFITS:

- Low viscosity for high penetration
- Excellent sealing ability
- Cures on clean, dry surfaces in temperatures as low as 40 ° F (4 ° C)
- Authorized by USDA for use in federally inspected meat and poultry plants¹

¹ Authorized by USDA as a coating for application to structural surfaces or surfaces where there is a possibility of incidental food contact in federally inspected meat and poultry plants.

PACKAGING/ESTIMATING:

MASTERSEAL GP is packed in 10 and 100 U.S. gallon units (37.9 and 379 liter).

Coverage rates are 100 to 150 ft²/gallon (2.5 to 3.7 m²/liter), depending on conditions. Two coats are recommended in special applications only.

PERFORMANCE DATA¹:

Reduction of Water Absorption into Concrete <i>(Test Procedure, NCHRP study, 12-19A)</i>	91% minimum
Reduction of Chloride Content in Concrete Exposure Test <i>(Test Procedure, NCHRP study, 12-19A)</i>	94% minimum
Color (mixed)	Clear Amber
Ratio (by volume)	1:1 (Resin & Hardener)
Solids (by volume)	50% minimum
(by weight)	58% minimum
Viscosity (mixed)	15 to 40 cps
Pot Life	Approximately 2 hours One U.S. gal @ 75 °F (3.8 liters @ 24 °C)
Initial Cure Time	3 to 4 hours @ 75 °F (24 °C)
Shelf Life	18 months (minimum) if kept at normal room temperatures

¹ Properties listed in this bulletin are typical and descriptive of the product and may be used as a guide for determining suitability for particular applications.

APPLICATIONS:

Concrete Surfaces

New Concrete must be fully cured (28-day minimum). Remove grease, wax, oil contaminants and curing compounds by scrubbing with an industrial grade detergent or a degreasing compound, then follow with a mechanical cleaning. Remove weak, contaminated or deteriorated concrete by shot-blasting, bushhammering grit blasting, scarifying or other suitable mechanical means. Follow mechanical cleaning with vacuum cleaning. Acid-etching with 15% hydrochloric acid should only be used if there is no practical alternative. It must be followed by pressure washing, scrubbing and flushing with copious amounts of clean water. Check for removal of acid with moist pH paper. Reading should be greater than 10.

Steel Surfaces

Remove dirt, grease and oil with a suitable, industrial grade, cleaning and degreasing compound. Remove rust and mill scale by gritblasting. Blast steel to white metal. Follow gritblasting with vacuuming or oil-free, dry-air blast.

Thorough and complete mixing is vital for uniform and ultimate properties after cure. The temperature of MASTERSEAL GP must be above 50 °F (10 °C) for mixing. Stir Resin and Hardener separately before mixing them together. Mix Resin and Hardener 1:1 by volume for 3 minutes using a Jiffy* mixer (Jiffy Mixer Co., Irvine, CA), or equal, powered by a low speed (400 to 650 rpm) electric drill. If a Jiffy or Jiffy type mixer is not available, mix vigorously and thoroughly with paint stirrer or other means.

Apply MASTERSEAL GP at a surface temperature of 40 °F (4 °C) or above with squeegee roller or spray equipment to the clean, dry surface. Applications requiring a second coat can be made as soon as first coat becomes tack free (3 to 4 hours). To provide skid and wear resistance, broadcast silica sand over the final coat at 1 to 1-1/2 lb/yd² (0.45 to 0.81 kg/m²).

Mixed epoxy is much easier to clean up before it hardens. Commercial epoxy/paint stripper solvents are recommended for hardened epoxy. Consult solvent manufacturer's usage recommendations.

LIMITATIONS:

- MASTERSEAL GP should be stored in tightly sealed containers in a dry location at normal room temperatures [65 °F to 85 °F (18 °C to 29 °C)].
- Some epoxy materials can crystallize during storage. The tendency to do so is affected by conditions of storage, composition and other factors.
- As with all epoxy sealers, MASTERSEAL GP may tend to become yellow or "chalk" in both interior and exterior environments. It may also turn "milky" if placed on damp concrete or if exposed to high moisture prior to full cure.
- Epoxy sealers, including MASTERSEAL GP, should not be substituted in industrial environments where an epoxy "coating" or where a fluosilicate type of liquid floor hardener is required or specified. *Epoxy sealers* remain, for the most part, on the floor surface rather than fully penetrating as is the case with *fluosilicate hardeners*. Further, they do not have the superior wear and scratch resistance of *epoxy coatings*. WHEN AN EPOXY COATING IS NEEDED, it is suggested that the MASTERTOP® product line be considered.
- This product should be used by qualified personnel for recommended applications in accordance with the previously described procedures.
- Components may be flammable or combustible, therefore extinguish open flames in the area prior to use. Ensure adequate ventilation to keep vapors below threshold limits. For details regarding personnel protective equipment and first aid, refer to the product Material Safety Data Sheet (MSDS).

RELATED BULLETINS:

Material Safety Data Sheet – MASTERSEAL GP

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