

PRODUCT DESCRIPTION

Perlastic® products are a family of corrosion protection products for industrial applications over metal or concrete. Perlastic SG is a two part, spray applied elastomeric membrane engineered to resist the corrosion/ chemical attack of the substrate. The chemically resistant asphalt-based formula provides excellent barrier properties to withstand many of the aggressive chemistries found on industrial sites.

Perlastic is a two component product that mixes in the air as it is sprayed from the nozzle. The catalyst (B component) is supplied with the Perlastic and mixes at the nozzle at a 12:1 ratio.

Perlastic should be applied to a thickness of 60 mils (1.5mm) for typical exposed applications. For applications where the Perlastic will be subject to immersed conditions, a minimum of 80 mils (2mm) is required.

Perlastic® SG is specially formulated as a corrosion protection barrier for use on:

- Structural steel
- Steel and concrete tanks and related structures
- Concrete secondary containment structures
- Mechanical equipment and conveyors
- Steel and concrete pipes and related structures

LIMITATIONS

Perlastic should not be used as an exposed wearing surface. Do not apply to contaminated surfaces. Substrate temperature should be above 40°F (18°C). Do not apply when ambient temperatures are expected to be below freezing within 48 hours. Properly ventilate. Cure rates are extended in high humidity conditions. Check with Global Polymer Solutions for direct exposure to chemicals for compatibility. Not recommended for contact with petroleum based products. Do not allow material to freeze prior to application.

PACKAGING

Perlastic SG is available in plastic lined plastic 55 gallon drums, and in 275 gallon totes. Perlastic catalyst (B component) is available in 55 gallon drums.

INSTALLATION

General: Global Polymer Solutions recommends installation of Perlastic SG by an applicator that has been trained in the proper installation methods. Global Polymer Solutions provides training to applicators and on-site supervision.

Surface Prep: Perlastic SG is self priming and can be sprayed directly over mildly rusted steel. Power washing to remove any loose particles, oils and grease is required. Concrete should have a minimum of 28 days cure time prior to application on horizontal surfaces. All surfaces must be clean, sound and free of contaminants that may affect adhesion.

Detail Work: Prior to applying SG to vertical and horizontal surfaces, all cracks and transitions, inside and outside corners should be details with Perlastic RG. Consult the Perlastic Application Guide for more specific instruction.

Membrane Application: Perlastic membrane can be applied in thicknesses from 40 to 120 mils thick in a single application with multiple passes of the spray nozzle. Approximately six gallons of Perlastic will yield a 100 ft² surface at 60 mils (1.5mm) dry.

Equipment: A dual pump spraying system is required. Spray equipment should be capable of an operating pressure of greater than 400 psi, and support a tip size of 4015. The Catalyst (B component) side must be capable of greater than 150 psi, and support a tip size of 4010. Tip sizes are selected to control mixing ratio.

Quality Control: Global Polymer Solutions recommends on site supervision of the Perlastic system by a qualified and trained third party inspector. Contact Global Polymer Solutions for more information on the inspector program.

PERLASTIC® SG MECHANICAL & PHYSICAL PROPERTIES		
MECHANICAL PROPERTY	TEST METHOD	TYPICAL RESULT
Tensile Stress @ Break	ASTM D412	100 PSI
Tensile Elongation @ Break	ASTM D412	920%
Elastic Recovery %	ASTM D412	71%
Tear Strength Max	ASTM D624	1.6 (lbf)
Shore A Durometer Testing	ASTM D2240	31
Shore 00 Durometer Testing	ASTM D2240	87
Penetration Value	ASTM D5	25 dmm
Puncture Deflection	ASTM E154	>10 inches
Low Temperature Flexibility	ASTM D5147	Pass @ 6°F
Brittleness Temperature by Impact	ASTM D746	Pass @ 31°F
Peel Adhesion to Alloy Steel 1080 *	ASTM D903	10 lbf/in - CF*
Peel Adhesion to Galvanized Steel *	ASTM D903	15 lbf/in - CF*
Peel Adhesion to Steel with Flash Rust *	ASTM D903	22 lbf/in - CF*
Peel Adhesion to Concrete *	ASTM D903	19 lbf/in - CF*
Positest Adhesion to Alloy Steel 1080 *	ASTM D4541	104 PSI - MM*
Positest Adhesion to Flash Rust *	ASTM D4541	150 PSI - MM*
Positest Adhesion to Galvanized Steel *	ASTM D4541	107 PSI - MM*
Positest Adhesion to Concrete *	ASTM D7234	120 PSI - MM*

PHYSICAL PROPERTY	TEST METHOD	TYPICAL RESULT
Return to Service	Internal Method	1 day
Walk-On Time	Internal Method	45 min (light)
Full Cure Time	Internal Method	48 hrs
Specific Gravity to Fully Cured Membrane	D792	1.08
Typical Moisture Content of Cured Membrane	Karl Fisher	0.21%
Thermal Resistance (k)	ASTM C518	0.074 W/(K · m)
Volume Resistivity	ASTM D257	1.90 x 10 ¹⁰ Ω · cm
Surface Resistivity	ASTM D257	9.54 x 10 ⁹ Ω
Dielectric Strength in Oil	ASTM D149	41 V/mil
Dielectric Constant (k)	ASTM D150	4.67
Dissipation Factor (D)	ASTM D150	0.493
Water Vapor Transmission	ASTM E96-B	0.27 perms
Water Vapor Permeability	ASTM E96-B	0.11 grains/h-ft ²

PERLASTIC® SG EXPOSURE TESTING		
EXPOSURE TESTING	TEST METHOD	TYPICAL RESULT
Salt Spray Testing - 1344 hrs	ASTM B117	Pass
Rust Creep (Salt Spray) - 1344 hrs	ASTM D1654	Pass
UL 94 Flammability Rating	UL 94	V2
Direct Flame Test	ASTM D2939	0 sec
Chip Resistance	ASTM D3170	No defects, rating = 10

* +14 Day Cure ; CF = Cohesive Failure / AF = Adhesive Failure / MM = Mixed Mode (AF & CF)

Check with Technical Services before coating for compatibility issues for surfaces like coal tar or other.

WARRANTY

GLOBAL POLYMER SOLUTIONS warrants this product to be free of defects in material and workmanship. GLOBAL POLYMER SOLUTIONS's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited, at GLOBAL POLYMER SOLUTIONS's option, to either replace the products not conforming to this Warranty or credit to Buyer's account in the invoiced amount of the nonconforming products. Any claim under this Warranty must be made by the Buyer to GLOBAL POLYMER SOLUTIONS in writing within (5) days of Buyer's discovery of the claimed defect, but in no event later than the expiration of the applicable shelf life, or one year from the delivery date, whichever is earlier. Buyer's failure to notify GLOBAL POLYMER SOLUTIONS of such nonconformance as required herein shall bar Buyer from recovery under this Warranty.

GLOBAL POLYMER SOLUTIONS makes no other warranties whether express, implied, or statutory, such as warranties of merchantability or fitness for a particular purpose, shall apply. In no event shall GLOBAL POLYMER SOLUTIONS be liable for consequential or incidental damages.

Any recommendations or suggestion relating to the use of the products made by GLOBAL POLYMER SOLUTIONS, whether in its technical literature, or in response to specific inquiry, or otherwise, is based on data believed to be reliable; however, the products and information are intended for use by buyers having requisite skill and know-how in the industry, and therefore it is for Buyer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that Buyer has done so, at its sole discretion and risk. Variation in environment, changes in procedures of use, or extrapolation of data may cause unsatisfactory results.

LIMITATION OF LIABILITY

GLOBAL POLYMER SOLUTIONS's liability on any claim of any kind, including claims based upon GLOBAL POLYMER SOLUTIONS's negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or part thereof which gives rise to the claim. In no event shall GLOBAL POLYMER SOLUTIONS be liable for consequential or incidental damages.

GLOBAL POLYMER SOLUTIONS LLC

T: 800-933-1031

www.polymers-online.com