



POLECLAD 100™ ALIPHATIC

TECHNICAL DATA

HIGH PERFORMANCE COATING FOR STEEL POLES

THE PRODUCT AND ITS USES

PoleClad 100™ protective coatings are extremely tough corrosion resistant polymers especially developed for the protection of metallic poles and similar structures. Examples include electrical transmission and distribution poles, cellular towers and highway signage. The products work well on mild steel, galvanized surfaces, ductile or cast iron, aluminum and other metals. PoleClad 100™ Aliphatic (the product detailed in this Technical Data Sheet) is based on automotive-grade color-stable polyurethane resins and can be used on any and all portions of the structure. A lower-cost sister product, PoleClad 100™ Aromatic is based on industrial-grade polyurethane resins that perform superbly but will chalk in direct sunlight; as such, that product is usually specified at and below the ground line. Both products are in a plural component instant setting format.

PoleClad™ products are based on Madison technology that has been in use since 1987 in the pole industry, together with a variety of performance-enhancing additives that provide industry-leading toughness. In addition, PoleClad™ products are formulated to be extremely “surface tolerant”. Thus, the substrate need not be intensely blasted (as required by other coatings) but can be lightly blasted or simply acid etched in preparation for the coating application.

These products cocoon the structure, protecting it in any kind of climate. They resist handling damage, chemicals and corrosion (both above and below ground). They are environmentally friendly (no solvents, non-flammable, green labeled). Use where a design life of 30 to 50 years is desired.

TECHNICAL INFORMATION

POLECLAD 100™ ALIPHATIC

PROPERTY	TEST DESCRIPTION	RESULTS
Application Temperatures	N/A	-10°C(10°F) to 65°C(150°F)
Initial Setting Time	@ 20°C/70°F	6 to 10 minutes
Curing Time Before Handling	@ 20°C/70°F	20 to 30 minutes
Ultimate Cure	@ 20°C/70°F	4 to 7 days
Recoat Time*	@ 20°C/70°F	1 hour
Solids Content	ASTM D-1259	98% +/-2%
Volatile Organic Compounds (VOCs)	ASTM D-2369	0 grams/litre
Theoretical Coverage	N/A	975 m ² /litre/microns (1604ft ² /US gallon/mil)
Adhesion to Steel	ASTM D-4541 (SSPC-SP5)	Greater than 2000 p.s.i.
Hardness	ASTM D-2240 Shore D	40 to 50
Flexibility	ASTM D-522 (15 mils)	180° over knife edge
Elongation	ASTM D-412	Greater than 20%
Abrasion Resistance	ASTM D-4060 (Taber CS-17)	40 mg loss @ 1 kg per 1000 cycles
Water Absorption	ASTM D-471	Less than 3% (no absorption below surface)
Impact Resistance	ASTM D-2794 (20 mils)	100 in. lbs.
Ultraviolet Resistance	ASTM G-154	Very Good
Temperature Resistance	ASTM D-870, ASTM D-2485	-40°C(-40°F) to 90°C(195°F)
Colors		Over 20 colors available

*However, recoat window varies depending on the spray equipment temperature setting, the ambient conditions, product temperature/thickness, and the temperature of the substrate being coated. NOTE: All statements, technical information and recommendations contained herein are typical of results obtained under laboratory conditions and are not intended to be used as contract specifications. For specification guidelines please contact Madison Chemical.

APPLICATION INSTRUCTIONS

Because of the specialized nature of PoleClad 100™, consult your Madison representative for application instructions. The products are applied with 1:1 ratio plural component spray equipment. Surface preparation is either a commercial blast (NACE No. 3 or SSPC SP 6) or single-step acid etching with Madison GalvaPrep™, a proprietary compound that eliminates the need for blasting.

HEALTH AND SAFETY

PoleClad 100™ products are intended for industrial use only. They contain no monomeric isocyanates but may nevertheless cause respiratory distress in some people. Provide ample ventilation. Wear a fresh air respirator when using in confined areas or when spraying. Wear rubber gloves, safety goggles and protective clothing. If swallowed, DO NOT induce vomiting as this will cause additional throat irritation; contact physician. If splashed on skin, remove immediately with rubbing alcohol and then wash with soap and water. If splashed in eyes, wash liberally with clean water and contact physician; temporary irritation of eyes may last several days. Contains trace amounts of ingredients which may cause skin cancer following prolonged direct skin contact. Therefore, commonly used skin protection is recommended. See MSDS for more information. The finished product is completely inert.

LIMITED TWO YEAR WARRANTY

Madison will replace any product which, in service for which it is suitable, fails to meet specifications within two years of sale and which is proven to be defective when applied according to instructions by a Madison Approved Applicator or Certified OEM Applicator. Madison accepts no responsibility or liability for any other loss, claim, damage, injury or expense, direct or consequential, in contract or negligence. This product replacement warranty is in lieu of any other right, warranty, guarantee or condition, statutory or otherwise, expressed or implied, whether as to fitness for a particular purpose or as to merchantable quality or otherwise.

The information contained herein is believed to be accurate as of the date of publication. Madison reserves the right to change product specifications without notice

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