Polyclad® 975
PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Two component epoxy
Description	Polyclad 975 is an advanced 100% solids, hybrid epoxy pipeline coating. Polyclad 975 has performance properties designed for corrosion protection of steel and ductile iron pipe exteriors, girth welds or tie-ins. It can be used for new pipe or rehabilitation of coated pipe. Polyclad 975 cures fast to allow quick QC and backfill times.Polyclad 975 is designed for spray application. Use Polyclad 975 H for hand applied applications.
Features	• Quick dry to touch and QC times • Color indicator confirms proper mixing • Low temperature cure 40°F (4.4°C) • Excellent cathodic protection performance • Film build up to 50 mils DFT in one coat • Excellent edge retention • Superior adhesion to steel • Excellent adhesion over prepared FBE, epoxy and polyurethane coated pipe • Can be applied by spray, brush, roller or dual cartridge
Color	Polyclad 975 is offered in Green (0300), Grey (0700) and Blue (0100)
Finish	Semi-Gloss (Epoxies lose gloss, discolor and eventually chalk in sunlight exposure.)
Primer	Self-priming
Dry Film Thickness	20 - 30 mils (508 - 762 microns) Typical DFT with hand application 20 - 30 mils (508 - 762 microns) typical for spray application Application up to 50 mils (1250 microns)in one coat is acceptable.
Solids Content	By Volume 99% +/- 1%
Theoretical Coverage Rate	1588 ft²/gal at 1.0 mils (39.0 m²/l at 25 microns) 79 ft²/gal at 20.0 mils (1.9 m²/l at 500 microns) 53 ft²/gal at 30.0 mils (1.3 m²/l at 750 microns) Allow for loss in mixing and application.
VOC Values	**As Supplied** : 0.04 lbs./gal (5 g/L)
Dry Temp. Resistance	Continuous: 200°F (93°C) Non-Continuous: 250°F (121°C)
Approvals	Meets criteria for AWWA C210-7

SUBSTRATES & SURFACE PREPARATION

General	All sharp edges shall be ground to produce a radius and all imperfections, such as, delaminations, scabs, slivers and slag shall be corrected prior to abrasive blasting. Degrease surface prior to abrasive blast in accordance to SSPC SP-1. Organic solvents, alkaline solutions, steam, hot water with detergents or other systems that will completely remove dirt, oil, grease, etc. may be used
Steel	Steel substrate must be blasted to a minimum Near-White Metal Finish (SSPC SP10 or NACE NO. 2) with a 2.5 to 4.5 mil (62 to 112 microns) dense, sharp angular profile.

PERFORMANCE DATA

Test Method	System	Results
Cathodic Disbondment ASTM G-95, 24°C (75°F), -1.5 V, 28 days	20 to 30 mils DFT (500 to 750 microns)	<3 mm
Cathodic Disbondment ASTM G-95, 65°C (149°F), -1.5 V, 28 days	20 to 30 mils DFT (500 to 750 microns)	<4 mm
Cathodic Disbondment ASTM G-95, 65°C (149°F), -3.0 V, 7 days	20 to 30 mils DFT (500 to 750 microns)	<5 mm
Cathodic Disbondment ASTM G-95, 80°C (176°F), -1.5 V, 28 days	20 to 30 mils DFT (500 to 750 microns)	<6 mm
Chemical resistance immersion, NACE TM 0174 method-B, 24°C for 7 days	20 to 30 mils DFT (500 to 750 microns)	Results below
Chemical tested: 10% Nitric Acid	20 to 30 mils DFT (500 to 750 microns)	Pass, no effect
Chemical tested: 10% Sodium Chloride	20 to 30 mils DFT (500 to 750 microns)	Pass, no effect
Chemical tested: 10% Sodium Hydroxide	20 to 30 mils DFT (500 to 750 microns)	Pass, no effect
Chemical tested: 5% Sulfuric Acid	20 to 30 mils DFT (500 to 750 microns)	Pass, no effect
Chemical tested: Fuel Grade Ethanol	20 to 30 mils DFT (500 to 750 microns)	Pass, no effect
Chemical tested: Toluene	20 to 30 mils DFT (500 to 750 microns)	Pass, no effect
Flexibility, CSA Z245.20-10 (12.11) at 23°C	27 to 30 mils DFT (686 to 750 microns)	Pass 1.0°/pd
Impact resistance, ASTM D2794	20 to 30 mils DFT (500 to 750 microns)	45 in-lbs
Shore D hardness, ASTM D2240	30 to 40 mils DFT (750 to 1000 microns)	75-85 Shore D
Wet Adhesion, hot water soak for 24 hours,	20 to 30 mils DFT (500 to 750 microns)	Rating #1

MIXING & THINNING

Mixing | Power mix part A and part B separately until uniform for plural airless spray application. Do not over mix or incorporate air by mixing too fast. Hand apply kits are hand mixed until color is consistent.

Green kit consists of Part A in yellow 0600; Part B in blue P100
Gray kit consists of Part A in gray 0700; Part B in 0909
Blue kit consists of Part A in blue 0100; Part B in 0909

Thinning | Thinning is not required.

Ratio | 4:1 Ratio by volume(A to B)

Pot Life | 15 minutes @ 75°F

*These are general guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Spray Application (General) | Spray application can be done by plural airless or the dual cartridge methods. If you have questions about equipment specifics please contact Carboline's Technical Service at 1-800-848-4645.

Conventional Spray | Not recommended

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Airless Spray	Use fixed ratio (4:1 by volume) heated plural component spray equipment with heated hoppers, heated hoses leading to a mixer manifold and static mixer, attach to a 15 to 25 ft. ¼" ID whip hose (depending on tip size used) followed by an airless gun utilizing self-cleaning reverse "a" tips from 0.019-0.031 inches. Check with Carboline's Technical Service Department to review your application set up. 1-800-848-4645 Note: Heat the "A" side material to 110 to 130°F (43-54°C) and the "B" side material to 90 to 100°F (32-38°C). Fluid pressure will range from 2500 to 3500 psi. This will ensure proper spraying. Take care to prevent the mixed material from setting up in your whip hoses. For best results, keep your whip hoses as short as possible, purge them immediately if work is interrupted, keep them insulated from hot surfaces.
Brush & Roller (General)	May be hand applied for small repair areas by first mixing the coating and spreading the coating to desire thickness using brush or roller. Polyclad 975 H is our hand applied version and is better suited for hand application.
Dual Cartridge	Dual cartridge kit contains 750 ml of Polyclad 975 R product. It can be sprayed using a Hand Spray System(HSS) spray gun. HSS spray gun is a portable spray unit that only requires clean compressed air to spray Polyclad 975 R. For specific application instruction see application guide for dual cartridge application.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	90°F (32°C)	40°F (4°C)	20°F (-7°C)	0%
Maximum	130°F (54°C)	110°F (43°C)	110°F (43°C)	90%

This product simply requires the substrate temperature to be above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate.

CURING SCHEDULE

Surface Temp.	Dry to Handle	Dry to Touch	Maximum Recoat Time
35°F (2°C)	15 Hours	6 Hours	12 Hours
50°F (10°C)	13 Hours	3.5 Hours	6 Hours
75°F (24°C)	3 Hours	1 Hour	4 Hours
90°F (32°C)	1.5 Hours	0.75 Hours	2 Hours

Over-coating after the maximum recoat time requires that the surface be abraded prior to application. Use a medium grit, 60 to 80 grit paper or sweep blast to roughen the surface. Clean abraded area of dust before recoat or repair.
Coating is ready for backfill when it is "thumb nail" hard. The thumb nail hardness is defined by when one cannot make a permanent indention in the coating with one's thumb.

CLEANUP & SAFETY

Cleanup	Use Thinner #2 or Thinner 225E (VOC Exempt). In case of spillage, absorb and dispose of in accordance with local applicable regulations.
Safety	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal workmanlike safety precautions.

CLEANUP & SAFETY

Ventilation	While this is a solventless epoxy, it is common practice when used as a tank lining or in enclosed areas to circulate the air during and after application until the coating is cured. Minimal protection is needed when proper ventilation is achieved.
Caution	If product is thinned with flamable solvents, keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: 24 months Part B: 24 months *Shelf life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.
Storage Temperature & Humidity	40° - 110°F (4°- 43°C) 0-90% Relative Humidity
Storage	Store Indoors.
Shipping Weight (Approximate)	5 Gallon Kit: 70 Lbs. (32 Kg) 20 Gallon Kit: 280 Lbs. (127 Kg) Polyclad 975 R, Dual Cartridge Kit(750 ml): 3 Lbs. (1.4 Kg)
Flash Point (Setaflash)	Polyclad 975 Part A: >205°F (96°C) Polyclad 975 Part B: >205°F (96°C)

WARRANTY

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