



Protective & Marine Coatings

POLY-GLASS™ POLYESTER LAMINATE SYSTEM

PART A
PART B
PART B

939 SERIES
531-0-006
531-0-001
530-0-001
970-C-949

POLYESTER RESIN
CATALYST MEK PEROXIDE RED
CATALYST MEK PEROXIDE CLEAR
GLASS MAT
WAX SOLUTION

Revised: November 16, 2020

PRODUCT INFORMATION

TRM.50

PRODUCT DESCRIPTION

POLY-GLASS reinforced polyester resin is a chemically resistant isophthalic polyester formulated specifically for lining the bottoms of steel storage tanks used to contain crude oil and a wide range of refined petroleum products including lubricants, heating oil, diesel fuel, and leaded and select unleaded gasoline. Reinforced with a fiberglass mat, Poly-Glass provides an economical alternative to a new steel bottom and guards against product loss through leakage and water or ground contamination.

PRODUCT CHARACTERISTICS

Finish: Gloss

Color: Clear, Pink or Green

Volume Solids: 100% ± 2%, theoretical

Note: Poly-Glass is a 100% reactive material, theoretically. However, some shrinkage will occur in application due to styrene evaporation as well as normal spray losses. Resulting practical volume solids will be approximately 75%.

VOC (calculated): <50 g/L; 0.42 lb/gal, mixed

Mix Ratio:

Use MEK Peroxide catalyst at the rate of 1½ fluid ounces per gallon (3.78L) of Part A. See Application Bulletin.

Recommended Spreading Rate:

For each 100 square feet of surface area, the approximate requirements are:

- 4 gallons of Resin 939 Series (36 lb)
- 10.5 lbs of glass mat
- 6 ounces of MEK Peroxide

Recommended DFT of first coat (40-45 mils / 1000-1125 microns)

Recommended DFT of gel coat (wax containing topcoat) 15-20 mils (375-500 microns)

Gel Coat: approximately 2 gallons (7.56L) of Resin (18 lb) per 100 sq ft

Drying Schedule:

@ 77°F/25°C

50% RH

To touch: 1 hour

To recoat: When Barcol hardness test reaches 30+

Full cure: 24-48 hours

Drying time is temperature, humidity, and film thickness dependent.

Pot Life (1.5 oz MEK Peroxide catalyst):

@ 70°F/23°C @ 77°F/25°C @ 80°F/27°C @ 85°F/29°C
37 minutes 25 minutes 15 minutes 12 minutes

Sweat-in-time: Not required

Shelf Life: 3 months, unopened
Store indoors at 77°F (25°C).

Flash Point: 87°F (30°C), PMCC, mixed

Reducer: Not recommended

Clean Up: MEK, R6K10

RECOMMENDED USES

- As an interior lining for storage tanks containing crude oil and refined petroleum products
- As a lining system for secondary containment applications
- Economical alternative to new steel tank bottom

PERFORMANCE CHARACTERISTICS

RESISTANCE GUIDE

IMMERSION

(Ambient temperature)

- Crude oil..... Recommended
- Diesel fuel..... Recommended
- Lubricating oils Recommended
- Fuel oils Recommended
- Aromatic solvents Not Recommended
- Hi-aromatic gasoline..... Not Recommended
- Ethanol gasohol..... Not Recommended
- MTBE, ETBE, TAME Recommended
- Ether/fuel blends (reformed gas)..... Not Recommended
- Acids..... Recommended*
- Methanol/methanol blends Not Recommended

SECONDARY CONTAINMENT

(Immersion service up to 72 hours)

- Crude oil..... Recommended
- Diesel fuel..... Recommended
- Lubricating oils Recommended
- Fuel oils Recommended
- Aromatic solvents Recommended
- Hi-aromatic gasoline..... Recommended
- Ethanol gasohol..... Recommended
- MTBE, ETBE, TAME Recommended
- Ether/fuel blends (reformed gas)..... Recommended
- Dilute acids..... Recommended
- Methanol/methanol blends Not Recommended

* Consult your Sherwin-Williams representative for specific application, temperature, concentration, and exposure recommendations.



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RECOMMENDED SYSTEMS

	Dry Film Thickness / ct.	
	Mils	(Microns)
Steel:		
Single Laminate		
1 ct.. Corobond Vinyl Ester Primer	2.0-3.0	(50-75)
1 ct. Poly-Glass Putty as needed		
1 ct. Poly-Glass Polyester Resin with 1½ oz. Glass Mat	40.0-45.0	(1000-1125)
1 ct. Poly-Glass Polyester Resin with Wax Solution (Gel Coat)	15.0-20.0	(375-500)
Total laminate thickness	55.0-65.0	(1375-1625)
Concrete:		
Single Laminate		
1 ct. Corobond Vinyl Ester Primer	3.5-4.5	(88-112)
1 ct. Poly-Glass Putty as needed		
1 ct. Poly-Glass Polyester Resin with 1½ oz. Glass Mat	40.0-45.0	(1000-1125)
1 ct. Poly-Glass Polyester Resin with Wax Solution (Gel Coat)	15.0-20.0	(375-500)

NOTE: In the event of a serious soilside corrosion potential, a double layer of laminate is recommended, for a total thickness of 95 - 110 mils (2375-2750 microns). When applying a double laminate, the Wax Solution is only added into the final gel coat.

The systems listed above are representative of the product's use, other systems may be appropriate.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

- * Iron & Steel:
Immersion: SSPC-SP10/NACE2, 2-3 mil (50-75 micron) profile
- * Concrete & Masonry:
Immersion: SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 4-6
- * Primer/Filler required

Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal	Sa 3	Sa 3	SP 5	1
Near White Metal	Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	C St 2	C St 2	SP 2	-
Pitted & Rusted	D St 2	D St 2	SP 2	-
Rusted	C St 3	C St 3	SP 3	-
Power Tool Cleaning	Pitted & Rusted	D St 3	SP 3	-

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:	60°F (16°C) minimum, 110°F (43°C) maximum (air, surface, material) At least 5°F (2.8°C) above dew point
Relative humidity:	85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:	
Part A:	53 gallon (200L) drum
Part B:	1 gallon (3.78L) MEK Peroxide
Wax Solution:	1 gallon (3.78L)
Glass Mat:	approximately 97 lbs per roll
Weight:	~9.0 lb/gal ; ~1.1 Kg/L

SAFETY PRECAUTIONS

Refer to the SDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

DISCLAIMER

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APPLICATION BULLETIN

TRM.50

SURFACE PREPARATIONS

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Iron & Steel (immersion service)

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2-3 mils / 50-75 microns). Remove all weld spatter and round all sharp edges. Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Prime all blast-cleaned surface with Corobond Vinyl Ester Primer, applied at a dry film thickness of 2.0-3.0 mils (50-75 microns). Apply Poly-Glass Polyester Putty to fill corrosion pits along floor and shell lap joints, and in the corner chine to a 3 inch radius (as needed). Consult your Sherwin-Williams Representative for detailed installation instructions.

Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 4-6. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910. Primer required. If surface deterioration presents an unacceptably rough surface, prime with Corobond Vinyl Ester Primer. Patch and resurface with Poly-Glass Putty.

Fill all cracks, voids and bugholes with Poly-Glass Putty (over Corobond Vinyl Ester Primer).

Follow the standard methods listed below when applicable:

ASTM D4258 Standard Practice for Cleaning Concrete.
ASTM D4259 Standard Practice for Abrading Concrete.
ASTM D4260 Standard Practice for Etching Concrete.
ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
ICRI No. 310.2R Concrete Surface Preparation.

Concrete, Immersion Service:

For surface preparation, refer to SSPC-SP13/NACE 6, Section 4.3.1 or 1.3.2 or ICRI No. 310.2R, CSP 4-6.

Surface Preparation Standards					
Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE	
White Metal	Sa 3	Sa 3	SP 5	1	
Near White Metal	Sa 2.5	Sa 2.5	SP 10	2	
Commercial Blast	Sa 2	Sa 2	SP 6	3	
Brush-Off Blast	Sa 1	Sa 1	SP 7	4	
Hand Tool Cleaning	Rusted C St 2	C St 2	SP 2	-	
Pitted & Rusted	D St 2	D St 2	SP 2	-	
Power Tool Cleaning	Rusted C St 3	C St 3	SP 3	-	
Pitted & Rusted	D St 3	D St 3	SP 3	-	

APPLICATION CONDITIONS

Temperature: 60°F (16°C) minimum, 110°F (43°C) maximum
(air, surface, material)
At least 5°F (2.8°C) above dew point

Relative humidity: 85% maximum

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

ReductionNot recommended

CleanupMEK, R6K10

Equipment:

External mix airless catalyst injection system. Equipment includes 30:1 airless pump with Binks Catalyst Tank, and siphon tube with Binks gun mounted on portable cart with all necessary regulators, hoses, and fittings.

Tip Orifice.....043 -.052
Fan Width at 12"40°
Fluid Pressure.....2000-2400 psi
Filter Screen.....60 mesh

Consult your Sherwin-Williams representative for further information.

If specific application equipment is not listed above, equivalent equipment may be substituted.



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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mixing Instructions: Add MEK Peroxide Catalyst, Part B, at the rate 1½ fluid ounces per gallon of Part A with catalyst injection system. Acceptable catalyst range is 1½-2½ oz/gal, depending on environmental conditions.

For final gel only, add Wax Solution at the rate of 2 gallons (7.56L) per drum (before adding catalyst) to Part A. Mix thoroughly with a Jiffy Mixer. Then add Part B, MEK Peroxide Catalyst, through catalyst injection.

Measure a section of the floor or shell to be covered by a segment of 1½ oz. glass mat roll. Apply catalyzed resin at the rate of 4 gallon (15.1L) per 100 sq ft. Apply in a continuous film.

Immediately apply glass mat. Saturate the mat by rolling with an aluminum or plastic grooved roller to work out the air bubbles. Apply additional resin as necessary to saturate the glass mat (DO NOT FLOOD). Remove air bubbles and any excess resin from the glass mat by working with a roller.

Prior to gel coat application, check laminate for full cure with a Barcol 934 Hardness Tester. The reading should be 30-40 after 24 hours at a minimum temperature of 60°F (16°C). Take film thickness reading for proper film thickness and continuity. Inspect for holidays using a 3000 volt spark detector. Repair any holidays. Repeat Barcol hardness test. Apply wax containing gel coat at a 15-20 mils (375-500 microns) wet film thickness.

After gel coat has cured, repeat Barcol hardness test and inspect for holidays using 5000 volt spark type detector. Repair any pinholes or voids. Repeat Barcol hardness test.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate:

For each 100 square feet of surface area, the approximate requirements are:

- 4 gallons of Resin 939 Series (36 lb)
- 10.5 lbs of glass mat
- 6 ounces of MEK Peroxide

Recommended DFT of first coat (40-45 mils / 1000-1125 microns)
Recommended DFT of gel coat (wax containing topcoat) 15-20 mils (375-500 microns)

Gel Coat: approximately 2 gallons (7.56L) of Resin (18 lb) per 100 sq ft

Drying Schedule:

@ 77°F/25°C

50% RH

To touch:

1 hour

To recoat:

When Barcol hardness test reaches 30+

Full cure:

24-48 hours

Drying time is temperature, humidity, and film thickness dependent.

Pot Life (1.5 oz MEK Peroxide catalyst):

@ 70°F/23°C @ 77°F/25°C @ 80°F/27°C @ 85°F/29°C

37 minutes 25 minutes 15 minutes 12 minutes

Sweat-in-time: Not required

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

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PERFORMANCE TIPS

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Not recommended directly over concrete or any alkaline substrate such as zinc coated substrates.

Do not mix previously catalyzed material with new.

Do not apply the material beyond recommended pot life.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with MEK R6K10.

For Immersion Service: (if required) Holiday test in accordance with ASTM D5162 for steel, or ASTM D4787 for concrete.

Refer to Product Information sheet for additional performance characteristics and properties.

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Reducer MEK, R6K10. Clean tools immediately after use with Reducer MEK, R6K10. Follow manufacturer's safety recommendations when using any solvent.

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