



Polyflex®
PROVEN AND PERFECTED

POLYFLEX 54

CORRO-SHIELD *plus*

DESCRIPTION

Polyflex 54 is a high-performance polyurethane – polyurea Iron oxide based elastomeric coating specially designed to provide a superior anticorrosion performance by regular methods of application.

FEATURES

- Excellent anti-corrosion and hydro insulation characteristics
- High film build in one coat
- Applied by brush, roller, squeegee and spray by conventional or special plural component spraying equipment **XM XTREEM**
- Outstanding hardness
- Excellent hydrophobic and waterproofing performance
- Cold weather cure for temperatures down to -10°C (15°F)
- Good abrasion resistance
- Chemical resistance to low concentrated acids and alkaline

RECOMMENDED USES

- Long term protection of steel and concrete surfaces against corrosion
- Equipment in mining and offshore environments
- Advanced Corrosion protection for installations in high-salinity coastal areas.
- Effective anti-corrosion protection on exterior parts of pipes and tanks
- Rated for applications in C5 and CX environments

TECHNICAL DATA

		<u>Drying times (20°C) based on 20 mils (0,5 mm) DFT</u>	
Colors available:	By request	Tack free:	1 1/2 - 3 hours
Gloss:	Semi-gloss to satin	To recoat:	5 hours
* Solids by volume:	84 – 86 %	Hard:	6-7 hours
* Solids by Weight:	89 - 91 %	Pot Life:	20-30 minutes without dilution 40 minutes with 20% dilution
Theoretical Coverage of 1 mil:	1345 ft² / U.S. gallon	Reduction solvent (if necessary)	X-34 / DE 300
D.F.T. at 25 microns:	125 m² / 3.78 liters	Dilution:	20% by volume
Recommended WFT:	25 - 35 mils * depends on the application	(If necessary)	
Dry film thickness:	20 - 30 mils (0.25 - 0.50mm) * depends on the application	Catalyst:	Catalyst 54C
*Kit Viscosity:	80-100 ku	Mixing Ratio:	1:1 by volume
*Kit Specific gravity:	1.2-1.45 kg/l	Shelf life:	24 months @ 25°C (77°F) unopened
Flash Point:	24°C (75.2°F)	Packaging: Base -	3.78L (1 U.S gallons) in 11.34L
V.O.C.:	250 grams/liter 2.08 lbs. / U.S. gal.	Catalyst-	3.78 L (1 U.S gallon)

* Data may vary for different colors

Revised 3/11/2013



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APPLICATION GUIDE

SURFACE PREPARATION: Remove all detrimental foreign matter such as oil, grease, dirt, soil, salts, drawing and cutting compounds and other contaminants from steel surfaces.
General use: If applied by squeegees, the dilution is not required, for application with a spray equipment, could be diluted with 10% 300.

Use one of the following recommendations:

1. Prepare surface in accordance with SSPC-SP-1 (solvent cleaning)
2. Prepare surface in accordance with SSPC-SP-5 (white metal blast cleaning) for immersion
3. Prepare surface in accordance with SSPC-SP-6 (commercial blast cleaning) for better chemical resistance

Apply Polyflex Moisture-Cure primer (Xyguard or Mono Ferro Pur) or Poly-Rock Epoxy primer (448 [448102] or 100 Series) with 4 mils DFT (100 microns) before application of Polyflex 54. (Refer to correspondent Technical Data Sheet for product information)

MIXING AND THINING: First, power mix the base portion Polyflex 54 until it becomes homogenous. Secondly, add catalyst 54C slowly with contained agitation until both base and catalyst parts are well mixed together. Product is then ready for immediate use.

Dilution when applied by:

- Air spray: **20% dilution (by volume) with solvent 300 if necessary**
- Brush and roller or squeegee or special plural spraying equipment XM XTREEM: **No dilution is necessary**

APPLICATION PROCESS

			RECOATING TIME		
Substrate temperature	Dust free	Hard	Minimum	Maximum	Normal
20°C (68°F)	1,5 – 3 hours	6 – 7 hours	5 hours	30 days	12 hours
4°C (39°F)	3 – 5 hours	23 -26 hours	24 hours	30 days	24 hours
-10°C (14°F)	18 – 20 hours	40 - 48 hours	48 hours	30 days	48 hours

**** After 30 days light sanding is required**

CONVENTIONAL SPRAY	
Manual Spray gun:	DeVilbiss JGA-510, MBC-510 or equivalent
Fluid Nozzle:	E Fluid Tip
Air Cap:	704 or 765
Atomizing Air:	45 – 75 lbs.
Fluid Pressure:	15 – 20 lbs.
Hose:	½ inch, 50 ft. length maximum

Application by spray, brush, roller (synthetic roller with ¼-½ inch nap) or squeegee. **Always smooth applied surface with roller 5 minutes after application by squeegee.**

Recommended coating systems:

Epoxy primer Poly-Rock 100/448 (448102) 4 mils D.F.T. (100 microns)
 Polyflex 54 20-25 mils D.F.T.

Epoxy primer Poly-Rock 100/448 (448102) 4 mils D.F.T. (100 microns)
 Polyflex 54 20-25 mils D.F.T.

PHYSICAL PROPERTIES

Properties under tension:

(ASTM D 412-C) Ultimate elongation = 90% - 100%

Resistance to tearing:

(ASTM D 624-C) Tensile = 7,5 - 8,5 Mpa

Indication of hardness:

(ASTM D2240) 80 - 85 Shore A

Shelf life: 24 months @ 25°C (77°F) unopened

Adhesion:

(ASTM D4541) on Moisture cure- or Epoxy Primer 448102 = 850 psi (5.5 MPa) minimum

Impact:

(ASTM D2794) Direct: 140 inch-pounds Reverse: 120 inch-pounds

Taber abrasion resistance:

(ASTM D-4060)

1000 cycles, 1000g load CS-17 wheel 120 – 130 mg loss

Salt spray resistance:

(ASTM 685) On Epoxy Primer 448102 in 50 mils DFT = 5,000 hours (No blistering)

SPECIAL INSTRUCTIONS:

- Thinner can be added depending on local VOC and air quality regulations
- Surface temperature must be at 3°C (5°F) above the dew point during application

DISCLAIMER:

"The following is made in lieu of all warranties, expressed or implied: Manufacturer's obligation shall be to replace such quantity of the product proven to be defective. The manufacturer shall not be liable for any injury, loss or damage, direct or incidental or consequential, arising out of the use of or the inability to use the product. Before using, the user shall determine the suitability of the product for the intended use and the user assumes all risk and liability whatsoever in connection therewith. All values shown are approximations. Values indicated are for guide purposes only, as actual values can change due to application conditions, application methods, environmental conditions etc. The information contained herein is subject to change without notice. Consult your representative for a current data sheet. The foregoing may not be altered except by an agreement signed by the officers of the manufacturer." © Polyval Coatings Inc. Polyflex and Polyval are registered trademarks of Polyval Coatings Inc. All Rights Reserved.

Keep in cool and dry area. See the material safety data sheet and product label for complete safety and precaution requirements.

Chemical resistance information is currently being updated according to ASTM standards. Please contact your local representative for an update.