

DESCRIPTION

Polyflex 55 is a high-performance polyurea-polyurethane highly crosslinking elastomeric coating specially designed to provide a superior corrosion, chemical, and abrasion resistant performance by regular methods of application. Polyflex 55 has excellent resistance performance to a broad range of chemicals, acids, and alkalis.

FEATURES

- Excellent chemical resistance
- High film build in one coat
- Can be used for full coating or as a repair kit
- Applied by brush, roller, squeegee and spray by conventional or special plural component spraying equipment **XM XTREEM**
- Excellent Corrosion resistance
- Exceptional hardness and toughness
- Excellent hydrophobic & water proofing performance
- Cold weather cure for temperatures down to -4°C (25°F)
- Excellent wear/abrasion resistance

RECOMMENDED USES

- Protection on steel and concrete surfaces from chemicals
- Interior lining of tanks and pipes
- Acid retaining walls, Pumps bases and casings
- Equipment in mining and offshore environments
- Advanced Corrosion protection for installations in high-salinity coastal areas.
- Chemical resistant to drains, channels and flooring
- Protection of mining equipment from abrasion wear and chemicals
- Chemical transfer and holding areas
- Tank pads
- Rated for applications in C5 and CX environments

TECHNICAL DATA

Drying times (20°C) based on 20 mils (0,5 mm) DFT

Colors available:	Dark colors according to RAL color chart	Tack free:	1 hour
Gloss:	Semi-gloss to satin	To recoat:	1-2 hours
* Solids by volume:	76 – 80 %	Hard:	5-6 hours
* Solids by Weight:	82 - 86 %	Pot Life:	15-20 minutes without dilution
Theoretical Coverage of 1 mil:	1237 ft ² / U.S. gallon		30-40 minutes with 20% dilution
D.F.T. at 25 microns:	115 m ² / 3.78 liters	Reduction solvent (if necessary)	X-34, X-60, DE-300
Recommended WFT	17 – 35 mils	Dilution:	20 % by volume
	* depends on the application	(If necessary)	
Dry film thickness	13 -28 mils	Catalyst:	Catalyst 595C
	* depends on the application		
*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. gallon) 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

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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 10-20% of X-34, X-60, DE-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 Polyval's Moistures Cure primer (Xyguard or Mono Ferro Pur) or Epoxy primer Polys Rock Epoxy primer (448 [448102] or 100 Series) with 4 mils DFT (100 microns) before application of Polyflex 55. (Refer to correspondent Technical Data Sheet for product information)

MIXING AND THINING: First, power mix the base portion Polyflex 55 until it becomes homogenous. Secondly, add catalyst 55C 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 X-34, X-60, DE-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
29 - 35°C (84 - 95°F)	1 hour	5 – 6 hours	1 hour	4 hours
16 - 28°C (61 - 83°F)	2 – 2.5 hours	10 -12 hours	2 hours	6 hours
5 - 15°C (41 - 60°F)	18 – 20 hours	40 - 48 hours	4 hours	8 hours

****Abrade slightly after recoat has lapsed, or Polyflex solvent surface activator 101645 should be used.**

CONVENTIONAL SPRAY		AIRLESS SPRAY	
Manual Spray gun:	DeVilbiss JGA-510, MBC-510 or equivalent	Pump Ratio:	30:1
Fluid Nozzle:	E Fluid Tip	Pressure:	1500 - 3000 Psi
Air Cap:	704 or 765	Hose:	¾ inch, 50 ft length maximum
Atomizing Air:	45 – 75 lbs.	Tip Size:	0.015 - 0.021
Fluid Pressure:	15 – 20 lbs.	Filter Size:	50 Mesh (300 um)
Hose:	½ inch, 50 ft. length maximum		

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

Recommended coating systems:

Concrete Substrate

1st coat / Xyguard : 4-6 mils DFT (102-152 microns DFT) / Mono Ferro PUR : 3-4 mils DFT (76-102 microns DFT) / epoxy Polyrock 448 : 10-15 mils DFT (254-381 microns DFT) / Polyflex 111: 8-10 mils DFT (203-254 microns DFT)
 2nd coat / Polyflex 55: 6.5-14 mils DFT (165-356 microns DFT)
 3rd coat / Polyflex 55: 6.5-14 mils DFT (165-356 microns DFT)

Steel Substrate

1st coat (optional) / Xyguard : 4-6 mils DFT (102-152 microns DFT) / Mono Ferro PUR : 3-4 mils DFT (76-102 microns DFT) / epoxy Polyrock 448 : 10-15 mils DFT (254-381 microns DFT)
 2nd coat / Polyflex 55: 6.5-14 mils DFT (165-356 microns DFT)
 3rd coat / Polyflex 55: 6.5-14 mils DFT (165-356 microns DFT)



Polyflex®
PROVEN AND PERFECTED

POLYFLEX 55

ULTRA-CHEM *plus*

PHYSICAL PROPERTIES

Properties under tension:

(ASTM D 412-C) Ultimate elongation = 25%

(ASTM D 412-C) Tensile Strength = 35.7 N/mm² (5177 PSI)

Adhesion by pull-off strength:

(ASTM D 4541) Xyguard, Mono Ferro Pur, epoxy Polyrock 448 or Polyflex 111 = 5.5 N/mm² (800 PSI)

Indication of hardness:

(ASTM D 2240) 65 Shore D

Taber abrasion resistance:

(ASTM D 4060) 1000 cycles, 1000g load, CS-17 wheel : 38 mg

(ASTM D 4060) 1000 cycles, 1000g load, H-18 wheel : 550 mg

Impact resistance:

(ASTM D 2794) Direct @ 77°F (25°C): 52 in-lb (5.9 joules)

SPECIAL INSTRUCTIONS:

- Thinner can be added depending on local VOC and air quality regulations
- Shelf life: 24 months @ 25°C (77°F) unopened

- Surface temperature must be at 3°C (5°F) above the dew point during application
- When applied as a repairing coating, the repairing damaged area should be removed completely with the careful sanding, dusting off and solvent cleaning of underneath primer or substrate (depends where the delaminating and peeling off have been examined) to provide the highest intercoat adhesion value

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.



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