

DESCRIPTION

Polyflex 55 is a high-performance polyurethane – polyurea highly crosslinking elastomeric coating specially designed to provide a superior chemical and abrasion resistant performance by regular methods of application.

POLYFLEX 55 - CHEMICAL RESISTANCE CHART

R: Recommended (as per ASTM D-1308)

NR: Not Recommended

L: Limited

CHEMICAL	24TH OF DIRECT CONTACT WITH POLYFLEX BASED COATING
I. ACIDS	
Acetic Acid 20%	R
Boric 10%	R
Formic 20%	R
Hydrochloric 15%	R
Hydrochloric 20-25%	L
Hydrofluoric 10%	R
Lactic 10%	R
Nitric 10%	R
Nitric 15-20%	L
Nitric 25%	NR
Sulfuric 50%	R
Tartaric 20%	R
II. ALKALIS	
Amonium Bicarbonate 5%	R
Aqueous ammonia 28%	R
Potassium Hydroxyde 50%	R
Sodium Hydroxide 20%	R
III. BLEACHES & OXIDANTS	
Calcium chlorate 20%	R
Calcium hypochlorite 5%	R
Sodium hypochlorite 12%	R
Potassium permanganate 20%	L

* Data may vary for different colors

Revised 3/11/2013

IV. SALTS	
Potassium chloride 25%	R
Potassium dichromat 12%	R
Sodium chloride	R
Sodium sulfate	R
Ferrous sulfate	R
Aluminium Sulphate	R
Tri Sodium Phosphate 50%	R
V. SOLVENTS	
Acetone	NR
Benzene	L
Butyl Acetate	NR
Butyl Alcohol	NR
Butyl Cellosolve	NR
Cyclohexane	NR
Cyclohexanone	NR
Ethanol	L
Methanol	L
Isopropyl Alcohol	L
Methyl Ethyl Ketone	NR
Styrene	NR
Toluene	L
Kerosene	R
Xylene	L
Mineral Spirit	R
VM&P Naphta	R
VI. OTHERS	
Crude Oil	R
Diesel Oil	R
DOP	R
Formaldehyde	R
Gas unleaded	R
Jet Fuel	L
Phenol 5%	NR
Skydrol LD-4	NR
Diethyleneglycol	R

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Revised 3/11/2013



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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:	3-4 hours
* Solids by volume:	76 – 80 %	Hard:	5-6 hours
* Solids by Weight:	82 - 86 %	Pot Life:	15-20 minutes without dilution 30-40 minutes with 20% dilution
Theoretical Coverage of 1 mil:	1237 ft ² / U.S. gallon	Reduction solvent (if necessary)	300
D.F.T. at 25 microns:	115 m ² / 3.78 liters	Dilution:	20 % by volume
Recommended WFT	17 – 35 mils * depends on the application	(If necessary)	
Dry film thickness	13 -28 mils * depends on the application	Catalyst:	Catalyst 55C
*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)

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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 Epoxy primer Poly-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 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 hour	5 – 6 hours	4 hours	30 days	12 hours – 14 days
4°C (39°F)	2 – 2.5 hours	10 -12 hours	8 hours	60 days	24 hours – 40 days
-10°C (14°F)	18 – 20 hours	40 - 48 hours	18 hours	90 days	48 hours – 60 days

** 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 55 17-35 mils D.F.T.

PHYSICAL PROPERTIES

Properties under tension: 25% - 30%

Resistance to tearing:

(ASTM D 624-C) Tensile = 35,7 Mpa

Indication of hardness:

(ASTM D2240) 65 Shore D

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 resistance:

(ASTM D2794) 52 inch/lb.

Taber abrasion resistance:

(ASTM D-4060)

1000 cycles, 1000g load CS-17 wheel 38 mg loss
 H-18 wheel 550 mg loss

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.