

PRODUCT DESCRIPTION

Powerflex 530 FM is a high performance fire protection polyurethane-polyurea thick elastomeric coating that was specially designed in order to provide high waterproofing performance and intumescent features.

PRODUCT FEATURES

- High hydro insulation and waterproofing
- Good elasticity and flexibility
- High film build in one coat
- Can be used for full coating, repair kit, bonding layer
- Applied by brush, roller or airless spray
- Cold weather cures temperatures down to 15°F (- 10°C)
- Fire protection of steel and concrete for 1 to 4 hours depending on the DFT of the application

TYPICAL USES

- Water proofing of concrete and wooden surfaces and industrial civilian buildings
- Fire resistance coatings

TECHNICAL DATA

Colors:	Ash gray	Drying times 68°F (20°C) based on 20 mils (0.5 mm) DFT	
Gloss:	Semi-gloss	Tack free :	1 1/2 - 3 hours
Solids by volume:	72 - 76 %	To recoat:	5 hours
Solids by Weight:	80 - 84 %	Hard	6 - 7 hours
Recommended Spreading Rate:	1.0 - 1.5 l/ m ²	Pot Life	1 hour
D.F.T. at 25 microns:	110 m ² / 3.78 liters	Reduction solvent (if necessary):	DE-300
Recommended WFT:	40 - 60 mils depends on the application	Dilution:	10% by volume
Dry film thickness:	28 - 45 mils depends on the application	(if necessary)	
*Kit Specific gravity:	1.20 - 1.30 kg/l	Catalyst:	530 C
Flash Point:	24°C (75.2°F)	Mixing Ratio:	1:1 by volume
V.O.C.:	250 grams/liter 2.08 lbs / US gal	Shelf life:	24 months @ 25° C unopened
*Data may vary for different colors Keep in cool dry area		Packaging:	
		Base:	2 US gallon (7.57L)
		Catalyst:	2 US gallon (7.57L)

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 spray equipment, could be diluted with 10% DE-300. Use one of the following recommendations:

- 1) Prepare surface in accordance with SSPC –SP – 11 (steel)
- 2) Prepare surface in accordance with SSPC –SP – 13 (concrete)

Apply Powerflex 530 FM directly on metal surface or using Powerflex 570. For application on concrete, apply Lahalt's moisture cure primer (Guard or MF PUR) or Powerflex 570 with 4 mils DFT (100 microns) before application of Powerflex 530 FM. (Refer to correspondent TDS for those products).

MIXING AND THINNING

First, power mix the base portion Powerflex 530 FM until it becomes homogenous. Secondly, add catalyst 530C slowly with continued agitation until both base & catalyst parts are well mixed together. Then product is ready for immediate use

Dilution when applied by:

- Airless spray: by special equipment 10% dilution by volume with DE-300 if necessary
- Brush, roller or squeegee: Dilution is not required

APPLICATION PROCESS

Substrate temperature			RECOATING TIME**		
			Minimum	Maximum	Normal
68°F (20°C)	Dust free	Hard	5 hours	30 days	12 hours
39°F (4°C)	1.5 – 3 hours	6 – 7 hours	24 hours	30 days	24 hours
14°F (-10°C)	3 – 5 hours	23 -26 hours	48 hours	30 days	48 hours
	18 – 20 hours	40 - 48 hours			

Application by spray, brush, roller as recommended below. **** After 30 days light sanding is required**

Application system depends on fire resistance rating requirements.

Option #1: Directly to 5mm (minimum) steel thickness with 28 - 45 mils DFT. Surface preparation should be as per SSPC-SP6 with 2-3 mils surface profile.

Option #2: For application over concrete, apply 4 mils DFT of Guard, MF PUR or Powerflex 570. The choice of the primer depends on the humidity in the concrete. Then apply Powerflex 530 FM with 28 - 45 mils DFT. Surface preparation should be as per SSPC-SP13.

PHYSICAL PROPERTIES

Properties under tension:

(ASTM D 412-C) Ultimate elongation = 130%

(ASTM D 412-C) Tensile = 631 PSI (4.36 N/mm2)

Indication of hardness:

(ASTM D-2240) 75 Shore A /25 Shore D

Adhesion by pull-off strength:

(ASTM D-4541) Directly to metal (SSPC-6) 500-600 PSI minimum

Taber abrasion resistance:

(ASTM D-4060) 1000 cycles, 1000g load, CS-17 wheel: 42 mg

Flexibility:

(ASTM D-522) Conical: Excellent

Impact resistance:

(ASTM D-2794) Direct @ 77°F (25°C); 160 in-lb (18.0 joules)

Indirect @ 77°F (25°C); 160 in-lb (18.0 joules)

Fire tests:

- Standard Practice for Intumescent Coatings (ASTM E 2924)

- Fire resistance ratings as per GOST # 53295-2009 2-4 hrs depending on DFT

- Class 1 fire rating as per ASTM E84:

- (Test method for surface burning characteristics of building materials)
- Flame spread index = 1.1
- Heat release, relative % = 2.4
- Smoke – developed index = 2.03

Powerflex 530 FM - DTM on sandblasted metal w/2-3 mil profile

50 - 55 mils DFT - FR Resistance: 240 minutes (4 hrs)

40 - 45 mils DFT - FR Resistance: 180 minutes (3 hrs)

30 - 35 mils DFT - FR Resistance: 120 minutes (2 hrs)

SPECIAL INSTRUCTIONS & PRODUCT LIMITATIONS

- 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 5°F (3°C) above the dew point during application

See the material safety data sheet and product label for complete safety and precaution requirements.

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."