

Product Data Sheet

2720 Britannia Road East, Suite 334
Mississauga, ON L5P 1A2, Canada



Polyforce® Flex

Tel: 1-647-479-4069
Email: info@polyforcecenter.com

Selection & Specification Data

Generic Type Modified Monomer / Polymer

Description Polymer composition Flex is elastomer (elastic polymer) composed of polyurethane base, which when exposed to air is converted into durable wear-resistant material.

Flex is designed as a thin coating membrane system for applications to concrete, brick, wood or metal.

This material is used for the waterproofing, chemical and corrosion protection of metal and concrete structures.

Hardener must be used prior to the Flex application to form a solid base. Flex after polymerization has a low toxicity profile and is suitable for coating surfaces that get into contact with drinking water, and food.

Features

- Abrasion, weather and acid resistant
- Non flammable
- High adhesion to Hardener base allowing to form a strong homogenous protective surface
- Excellent flexibility up to 12%; well withstands expansion and contraction
- Resistant to alkalis, petroleum products and diluted acids
- When used for road or parking repairs, allows to eliminate many steps required for surface preparation leading to potential savings
- Designed for application by airless sprayer

Color Transparent, can add any color

Primers Hardener

Topcoats Resistant to UV, can be used for outdoor applications

Dry Film Thickness 0.02 inch (0.5 mm). Total value depends on the number of coats

Solids Content By Volume: 70%

Theoretical Coverage Rate 10-12 ml sq./ft.

VOC Values As supplied: 0.0 lbs./gal (0.0 g/l)

Dry Temp. Continuous: 320F (160°C)

Resistance Non-Continuous: 374F (190°C)

Discoloration and loss of gloss is observed above 320F (160°C).

Limitations Shelf life in original packaging is 6 months after manufacturing; low resistance to nitric acid and acetic acid; Flex contact with water or moisture should be avoided during application process

Performance Data

Tensile Strength 8702 psi
less than 12% Elongation

Abrasion Resistance (Tabor Abrasion) 1.9 mg loss

Elcometer Adhesion (over SP10 blasted s 580 psi

Elcometer Adhesion (cured concrete) 653 psi

Freeze resistance 400 Cycles

Exposure	Immersion	Fumes
Acids, Diluted	Good	Excellent
Alkalis, Diluted	Good	Excellent
Solvents, Aliphatic	Excellent	Excellent
Salts	Excellent	Excellent
Water	Excellent	Excellent
Sour Crude Oil	Excellent	Excellent
Gasoline	Excellent	Excellent

Substrates & Surface Preparation

General All surfaces must be thoroughly cleaned to remove dirt, grease and any other contaminants that can reduce adhesion

Concrete Concrete must be cured to less than % relative humidity. If new, laitance, formoils, curing agents and hardeners should be removed from the concrete surface by suitable method before Flex application

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Mixing & Thinning

Mixing	Premixing is not required
Ratio	Single component - ready to apply
Thinning	Not required
Pot Life	About 90 minutes at 75°F (24°C) or when begins to "gel". Pot life time might decrease at higher temperatures

Cleanup & Safety

Cleanup	Thinner, ethyl acetate, acetone can be used for light clean up, cleaning brushes and equipment
Safety	Follow all recommended precautions for this product. Refer to MSDS for Flex. Workers should wear protective clothing and gloves
Ventilation	When used in enclosed areas, thorough air circulation must be used during and after application (15 x air exchange rate) until the coating is cured. The ventilation system should be capable of preventing the solvent vapor concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not sure or if not able to monitor levels, use MSHA/NIOSH approved respirator.

Application Conditions

Condition	Material*	Surface	Ambient	Humidity
Normal	41°F (5°C)	(50°F 86°F) (10°C 30°C)	(50°F 86°F) (10°C 30°C)	5-50%
Minimum	-22°F (-30°C)	(32°F 50°F) (0°C 10°C)	(-22°F 50°F) (-30°C 10°C)	0%
Maximum	86°F (30°C)	(86°F 122°F) (30°C 50°C)	(86°F 122°F) (30°C 50°C)	70%

Do not apply when surface temperature is less than 5°F (3°C) above the dew point. To reduce outgassing when applying to concrete substrates, do not apply in direct sunlight or when surface temperatures are increasing. Best results are obtained when ambient and surface temperatures are decreasing or constant. Special application techniques may be required above or below normal application conditions.

Curing Schedule

Surface Temp. @ 5% Relative Humidity	Max. Recoat Hours	Full Cure
(-22°F 122°F) (-30°C 50°C)	10 - 20	5 Days (open surfaces) 7 Days (enclosed Surfaces)

Curing schedule is based on consistent temperature and relative humidity conditions. In reality, curing times may vary depending on changing conditions.

Higher coat thickness, insufficient ventilation or cooler temperatures will require longer curing times and could result in solvent entrapment and suboptimal final product. Excessive humidity or condensation on the surface during curing can interfere with the normal curing process, cause discoloration and result in a surface blush or haze. If the maximum recoating time has been exceeded surface must be reactivated with Polyforce Activator prior to application of additional coats.

Packaging, Handling & Storage

Shipping Weight (Approximate) 5.1 Gallon kit 52.9 lbs. (24 kg.)

Storage (General) Store Indoors

Storage Temperature & Humidity -22 | 122F (-30° | 50°C)

Shelf Life 6 months at normal storage conditions

*Shelf Life: (actual stated shelf life) from the time of manufacturing, when kept at recommended storage conditions and in original unopened containers.

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