

Ply-Guard EP (Flex)

Ply-Guard EP (Flex) is a 100% solids, medium viscosity liquid or non-sag paste, flexible epoxy. It has excellent elongation, hardness, and impact resistance. The material cures blush-free and forms a tenacious bond to dry or damp concrete and properly prepared metal. It can be purchased in a liquid or thickened paste version for easy joint and crack filling. A special hardener is available where cold weather cure down to 40° or when accelerated room temperature cure is required.

Ply-Guard EP (Flex) was developed for industrial joint and crack repair. Its combination of resilience and physical strength allows it to absorb the impact of heavy loads and steel wheeled traffic, while reinforcing the concrete joint nosing. When used as a coating system, it is especially well suited for applications where surface movement, vibrations or thermal cycling may affect the protection of a rigid material. Typical applications include wood decks, suspended concrete slabs, mechanical equipment rooms and exterior aggregate-filled flooring. Ply-Guard EP (Flex) has been used successfully as a coating material for aluminum and on steel ship decks.

Colors & Limitations

- Sixteen (16) Standard Colors, Plus Black, White, and Clear
- Exterior Pigmented Applications will Show Chalking
- Exterior Clear Applications Are Not Recommended

The chemical composition of Ply-Guard EP (Flex) is internally flexibilized Bisphenol A epoxy resin crosslinked with a cycloaliphatic amine curing agent.

Product Data

Mix Ratio, by Volume:	2:1
Solids Content, %:	100
Volatile Organic Compounds (VOC), gr./lt.:	0
Viscosity, Epoxy 100 Clear, cps:	1250
Pot Life, Regular Cure, 1 Quart (.95 liters) Mass, min:	45
Pot Life, Fast Cure, 1 Quart (.95 liters) Mass, min:	20

Pot life is reduced by increases in mass and/or temperature

Technical Bulletin

Cure Time at 77°F (25°C)			
Regular Cure	Time	Fast Cure	Time
Dry to Touch	12 Hours	Dry to Touch	6 Hours
Light Traffic	24 Hours	Light Traffic	12 Hours
Full Cure	7 Days	Full Cure	5 Days

Cure times are influenced by both ambient air temperature and the concrete substrate temperature.

Typical Physical Properties at 70°F (21°C)		
Tensile Strength	ASTM D638	1,000 psi
Tensile Elongation	ASTM D638	60%
Compressive Yield Strength	ASTM D695	2,000 psi
Hardness, Shore D	ASTM D2240	55–60
Adhesion to Concrete	ASTM D7234	400 psi
Tensile Shear Strength to Steel	ASTM D1002	347 psi
Water Absorption	ASTM C413	<0.1%
Flammability when Bonded to Concrete	ASTM D635	Self-Extinguishing
Moisture Vapor Transmission (Maximum)*	ASTM F1869	3 lbs./24 Hr./1,000 Sq Ft.
Concrete Relative Humidity Moisture % (Maximum)*	ASTM F2170	75% RH
Microbial (Fungi) Resistance	ASTM G21	Passes #1
Coefficient of Friction, Static Wet, with Aggregate	ANSI B101.1	>0.45 (Inclines)
		>0.42 (Level)
Coefficient of Friction, Dynamic Wet, with Aggregate	ANSI B101.3	>0.45 (Inclines)
		>0.42 (Level)

*If the numbers exceed the product's limitations, consult Polyset's product offering.

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