

Product Data

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



Polyforce® Hardener A

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

Selection & Specification Data

Generic Type Modified Monomer / Polymer

Description Material is designed to permeate up to 15 mm. into concrete, creating a strong polymer layer resistant to external elements. Monomer Hardener composite is converted into the polymer during curing. Curing of the material occurs when it comes in contact with salts and moisture always present in concrete. Hardener has fungicide and antiseptic properties, preventing development of fungus and mold. Material is used for waterproofing and chemical protection of any porous building materials (wood, plywood, concrete, plasters, ceramic and brick). Hardener is also used as a primer for subsequent coats of Polyforce Sealer to increase adhesion during rehabilitation of concrete.

- Features**
- Permeates Concrete volume up to 15 mm restoring original surface properties by filling all micro cracks
 - Imbedded material can't delaminate even with static hydraulic pressure
 - Excellent flexibility, withstanding expansion and contraction of the surface
 - Resistant to alkalis, petroleum products, and diluted acids
 - Eliminates some steps required for surface preparation before concrete repair leading to potential savings
 - Designed for application by airless sprayer

Color Light Brown

Primers Non required

Topcoats Polyforce Sealer

Dry Film Thickness Hardener doesn't form a membrane on top of the surface -it gets absorbed by the treated surface

Solids Content By Volume: 45%

Theoretical Coverage Rate 29-48 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 of material is 6 months after manufacturing in original packaging at standard conditions. Contact with water or moisture should be avoided during application process

Performance Data

Abrasion Resistance (Tabor Abrasion) 1.9 mg loss

Elcometer Adhesion (over SP10 blasted) 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, loose rust and any other contaminants that can reduce adhesion

Concrete Concrete must be cured to less than 10% relative humidity. If new, laitance, formoils, curing agents and hardeners should be removed from the concrete surface by suitable method before Sealer application

Product Data

Mixing & Thinning

Mixing	Premixing is not required
Ratio	Single component - ready to apply
Thinning	Not Recommended
Pot Life	120 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 Sealer. 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.
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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 the 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.

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Curing Schedule

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

These times are based on consistent ambient conditions as stated. In practice, it may be difficult to maintain consistent curing temperatures which may and will affect the dry times as stated.

Should the curing temperatures deviate during the curing cycle it is recommended to follow the dry times as stated for the lower ambient temperature reached.

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

Packaging, Handling & Storage

Shipping Weight (Approximate)	5.3 Gallon kit	42.8 lbs. (19.4 kg.)
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Storage (General)	Store Indoors
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Storage Temperature & Humidity	-22 122F (-30° 50°C) 0-95% Relative Humidity
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Shelf Life	6 months at normal storage conditions
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*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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