

Product Data Sheet

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



Polyforce® Plus EP

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

Selection & Specification Data

| | |
|-----------------------------|--|
| Generic Type | Flexible rugged rubberized two component epoxy resin based material |
| Description | <p>Flexible three component Epoxy base resin, designed for rehabilitation and protection of reinforced concrete structures exposed to high moisture or running water at temperatures from +5 °C +60 °C.</p> <ul style="list-style-type: none">- Rehabilitation, protection or reinforcement of reinforced concrete main barring structures- Vibration Dampening and structural reinforcement in bridges or rail structures- Rehabilitation and protect metals from hydro erosion of metals, high pressure pumps, ship/machine body and others- For sealing and waterproofing of basements, foundations, facades, pools, tunnels, mines, wastewater treatment structures, large concrete pipes, steel joints and many more |
| Features | <ul style="list-style-type: none">● Reinforces concrete, increases surface strength and durability● Non flammable, self leveling● 100% water, salts and elements impermeability ● Resistive to abrasive wear, mechanical and chemical intrusions● Extreme adhesion to concrete, steel, ceramics, wood and plastics● Non flammable, self leveling● Non-toxic, can be used for waterproofing of tanks, can be in contact with drinking water● Can be applied on wet surfaces |
| Color | Transparent |
| Primers | non |
| Topcoats | Resistant to UV, can be used for outdoor applications |
| Dry Film Thickness | 0.02 inch (0.5 mm) to several meters |
| Solids Content | By Volume: 70% |
| VOC Values | As supplied: 0.0 lbs./gal (0.0 g/l) |
| Dry Temp. Resistance | Continuous: 194F (90°C) Non-Continuous: 374F (190°C) Discoloration and loss of gloss is observed above 194F (90°C). |
| Limitations | Shelf life in original packaging is 12 months after manufacturing; low resistance to nitric acid and acetic acid; |

Performance Data

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| Strength in compression | 116 MPA |
| Tensile strength at ambient temperature (MPA) +20 °C / +60 °C / -20 °C | 44 / 34.7 / 49 |
| Adhesion to Concrete (separation from concrete) | higher than concrete, break in concrete body |
| Adhesion to metal at ambient temperature (MPA) +20 °C / +60 °C / -20 °C | 29,4 / 12,1 / 33,3 |
| Freeze resistance | Over 300 Cycles |
| Operating Temperature range | -100 °C to + 100 °C |
| Abrasive wear - smearing (bonding) | 8.23 mm3/m (Cement 1085,5) |
| Waterproofing | 16 Atmospheres (separation on concrete) |

| Exposure | Immersion | Fumes |
|---------------------|-----------|-----------|
| Acids, Diluted | Excellent | Excellent |
| Alkalis, Diluted | Excellent | 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 | The surface must be cleaned mechanically (metal brushes, sanders, etc.) to expose concrete. Remove fragile, loose or delaminating old concrete as well as other loose materials for good results. |
| Application Temperature | +5 °C +60 °C |
| Ambient or Surface Humidity | Material is able to work in high ambient of surface humidity |

Product Data Sheet

Polyforce® Plus EP

Mixing & Thinning

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| Mixing | Mix component "A" with component "B" as per proportions specified on the packaging and carefully stir for no less than 30 seconds until uniform consistency is achieved. |
| Ratio | Bulk (A) Hardener (B): 5:1 |
| Thinning | Not required |
| Pot Life | About 90 minutes at 75°F (24°C) or when begins to gel. Pot lifetime might decrease at lower temperatures. |

Cleanup & Safety

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|--------------------|---|
| Cleanup | Thinner, ethyl acetate, acetone can be used for light clean up, cleaning brushes and equipment. Equipment must be cleaned immediately after the application. |
| Safety | Follow all recommended precautions for this product. Refer to MSDS for Plus EP. Workers should wear protective clothing, eye protection and gloves |
| Ventilation | When used in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. Workers must use respirators or other breathing air filtering equipment |

Application Conditions

| Condition | Material* | Surface | Ambient | Humidity |
|-----------|----------------|---------------------------------|---------------------------------|----------|
| Normal | 59°F (15°C) | (50°F 86°F) (10°C 30°C) | (50°F 86°F) (10°C 30°C) | 5-50% |
| Minimum | 41°F (5°C) | (41°F 50°F) (5°C 10°C) | (14°F 50°F) (-10°C 10°C) | 0% |
| Maximum | 86°F (30°C) | (86°F 140°F) (30°C 60°C) | (86°F 140°F) (30°C 60°C) | 70% |

Do not apply when surface temperature is less than 5°F (3°C). 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. @ 50% Relative Humidity | Max. Recoat | Full Cure |
|---------------------------------------|-------------|--|
| (41°F 68°F) (5°C 20°C) | 2 Hours | 4 hours - 50% strength 2 Days - 100% strength |

With regular application the surface is cured for auto traffic after 4 hours.

Packaging, Handling & Storage

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|--------------------------------------|----------|--------------|
| Shipping Weight (Approximate) | 5 L kit | 1.3 US (Gal) |
| | 10 L kit | 2.6 US (Gal) |
| | 20 L kit | 5.3 US (Gal) |

Storage (General) Store Indoors

Storage Temperature & Humidity 32 | 86F (0° | 30°C)
0-95% Relative Humidity

Shelf Life 12 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.

Material must be stored away from freezing ambient temperatures, open flames or excessive heat.

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