

HydraTech PolyPrime

Concrete Primer for Polyurea Application

Issue 10.14

PRODUCT DESCRIPTION

PolyPrime is a low viscosity 100% solids deep penetrating, fast drying concrete primer. PolyPrime utilizes unique chemistries for a technology that gives rapid drying times even in adverse weather conditions (cold/damp or high humidity). PolyPrime's technology actively displaces absorbed water from saturated concrete, thereby enhancing the surface strength of the concrete to tensile load and the adhesion of a subsequently applied topcoat.

PolyPrime is 100% solids and can be applied to the desired coverage weight in just one application, enhancing productivity and economy of use. PolyPrime also complies with the strictest state and federal VOC regulations and being solvent free, and is not classified as flammable.

Advantages

- Low viscosity for high penetration of concrete
- 100% Solids
- Fast Cure for rapid top coating
- Moisture Tolerant

Limitations

Not recommended for;
Priming ferrous and non-ferrous metals.

Health & Safety

Consult product MSDS supplied separately.

Shelf Life & Storage

The product has a shelf life of six months when stored in the original unopened containers and not subject to temperatures below 70°F and above 130°F.

PHYSICAL PROPERTIES

RESIN Viscosity	250 – 500 cP @ 77 °F
ISO Viscosity	20 – 50 cP @ 77 °F
Mixed	100 – 200 cP @ 77 °F

Mix Ratio*

By volume	1 part ISO : 1 part RESIN
By weight	1.229 part ISO : 1 part RESIN

*Mix for 5 minutes or until solution clears prior to application.

Usable Pot Life: 2 hours

Tack free: 50 min

Time to recoat: 24 hours

COVERAGE RATE

Theoretical	1604 sq ft / gal / mil
Recommended	160.4 sq ft / gal @ 10 mil wft

Adhesion¹ ASTM D4541

Concrete, dry (psi)	with PolyPrime	900 – 1000
	no primer	350 - 450

Concrete, wet ² (psi)	with PolyPrime	400 - 450
	no primer	0

¹ PolyPrime applied at recommended coverage weight and top coated with PolySpray HE800.

² Concrete block fully immersed in water and left for 24 hours to saturate prior to immediate treatment as per dry concrete.



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A 100% solids, rapid cure, concrete primer providing enhanced performance for polyurea topcoats

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SURFACE PREPARATION & APPLICATION

Concrete

Unless otherwise recommended by HydraTech, cure new concrete a minimum of 28 days before application of PolyPrime.

New concrete generally requires a minimum 28 day cure time under favorable environmental conditions to achieve its design strength. PolyPrime can be brush or roller applied over damp or green concrete, however this may reduce adhesion and increase the potential of water vapor and/or gas caused blisters.

Prior to application of coatings, check for the presence of moisture beneath the surface according to the Plastic Sheet Method described in ASTM D4263. Other appropriate alternate test methods may be submitted for consideration. Conduct the test on representative sections of each pour. If moisture is present, consult HydraTech Engineered Products, LLC, for required action.

Remove surface hardeners, oil, grease, dirt, efflorescence, laitance, or other foreign contaminants before applying coatings. Remove curing membrane (if any), if it is determined that the membrane would interfere with the adhesion or performance of the applied PolyPrime products. The concrete surface also needs to be free of standing water.

If portions of the existing coating are sound and intact, determine the compatibility of PolyPrime products with the existing coating in accordance with ASTM D5064. If PolyPrime products are incompatible with the existing coating, the existing coating must be removed using the methods described below.

The compressed air supply used for blast cleaning shall be completely free of all oil, water and other contaminants and provide the required volume of air at 100psi or greater. Abrasives used shall be clean, a uniform grade and of an appropriate size to obtain the specified surface finish and profile. Do not use contaminated abrasive. Water used with high-pressure water blasting or wet abrasive blasting shall be clean potable water.

A surface texture similar to that of medium-coarse sandpaper should be attained.

Thoroughly clean all blasted surfaces to remove all dust and debris after dry blasting, or to remove all water, sludge and debris after wet blasting. Vacuum cleaning a roughened concrete surface is the only known effective method of removing dust from deep pits, cracks, crevices, bug holes, etc. and is considered a mandatory procedure.

Use coving products or mastics to eliminate 90° internal angles and corner sections. Repair and remove or fill cracks, voids, honeycombs, fins and other surface irregularities using a recommended patching material. Grind all form ties or other metallic protrusions below the surface and then patch or fill.

All expansion joints and moving cracks which have opened to a width of 1/16" (1.6mm) or greater must be repaired with an elastomeric caulking material as per the caulking manufacturer's instructions.

Apply PolyPrime with a brush or roller, ensuring even coverage. DO NOT flood coat the concrete surface. If excess material is applied, remove by wiping surface with a clean rag.

PolyPrime is typically tack free and ready to topcoat in a half hour or less.