



# voestalpine Nortrak Polyprime

FAST-SETTING PRIMER FOR  
CONCRETE AND STEEL SUBSTRATES

voestalpine Nortrak POLYPRIME is a two-component, 100% solids, rapid setting primer for elastomeric coatings. Primer can be applied by plural-component proportioner, simple brush/roller or using a pump sprayer. It creates a strong bond between the substrate and topcoat, as well as help reduce the number of pinholes on porous substrates.

## WHERE TO USE

### WALLS & FLOORS

» concrete and steel

### EXPANSION JOINTS

» roadways, parking decks and warehouses

### PRIMER COATINGS

» for polyurea, polyurethane, epoxy

### POROUS SUBSTRATES

» prepared concrete

### LOW TEMPERATURE APPLICATIONS

» cures on cold substrates

## FEATURES AND BENEFITS

### SUPERIOR ADHESION

» tight bond to substrate and topcoat

### DAMP SUBSTRATES

» combats moist environments

### TOPCOAT AS LITTLE AS 20 MINUTES

» rapid return to service

### SEALS CONCRETE SURFACES

» minimizes pinholes

### EASE OF APPLICATION

» can be metered or hand applied

### COLORS

» Amber

### PACKAGING

» 600-mL Cartridge

» 1-Gallon (3.8 L) Jugs

» 5-Gallon (18.9 L) Pails

» 50-Gallon (189 L) Drums

### YIELD

» 300 ft<sup>2</sup> per gallon at 4 mils (27.8 m<sup>2</sup> per liter at 0.1 mm)

### SHELF LIFE

» 1 year when properly stored.

### STORAGE

» Store and ship this product in a clean, dry, low-humidity, shaded or covered environment at 60 to 90° F (15 to 32° C).

## TECHNICAL INFORMATION

### Typical Properties

<b>VOC</b> , lbs/gal (g/L), ASTM D 2369	0
<b>Viscosity</b> , cps, ASTM D 4878, resin / iso	1250 / 275
<b>Service temperature</b> , ° F (° C)	-22 to 170 (-30 to 82)
<b>Gel time</b> , min. at 70° F (21° C)	4 (Undiluted), 6 (Acetone Diluted)
<b>Ready for topcoat</b> , min.	15 - 120 (see Cure Time chart)
<b>Concrete adhesion</b> , psi (MPa), ASTM D 4541	> 500 (3.4) 100% Substrate
<b>Adhesion to steel</b> , lbf/in (N/m), ASTM D 903	35 (3.9) 100% cohesive

### Typical Set Times\* (Contact voestalpine Nortrak for more information)

\* shown are times to achieve non-transfer, which is sufficient for overcoat with pour-over material, spray elastomer overcoat requires longer set, 1.5-2 hr for walk-over/taping time

Substraight Temperature	Set Time (min)	Max. Recoat Time (hr)
40° F (4° C)	60	24
70° F (21° C)	20	8 - 12 (same day)
90° F (32° C)	10	8 - 12 (same day)

### Processing Parameters

Ratio by volume Resoin : Iso	1 : 1
<b>Application temp</b> , ° F (° C)	40 to 90 (4 to 32)
<b>Recommended thick.</b> , mils (mm)	1 to 10 (0.025 to 0.25)



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## FAST-SETTING PRIMER FOR CONCRETE AND STEEL SUBSTRATES

## APPLICATION

### SURFACE PREPARATION

#### CONCRETE

- Can be placed over concrete that has had less than 28 days to cure and can be placed over concrete in as little as 24 hours after placement. **Consult manufacturer for details.**
- Concrete surface must be dry and clean. Water or oil present can result in poor adhesion. Apply product only if surface temperature is 5° F (3° C) above dew point to avoid application over damp surface.
- Remove any contaminants before profiling surface.
- It is recommended to profile surface according to ICRI Guide 03732 to a minimum of CSP 3 by abrasive blasting.
- The surface must have low moisture vapor transmission (less than 3 lb/24 hr/1000 ft<sup>2</sup>, RMA Test Method).
- Use a minimum 120 PSI continuously dry compressed air to blow out loose debris, dirt and dust prior to applying product. Moist concrete can be torched dry. If moisture returns immediately after torching, stop and do not install POLYPRIME in this area.
- Use a steel bristle brush to remove dirt on vertical and horizontal concrete surfaces and use compressed air to blow out prior to applying product.
- Fill all voids and cracks between 0.06-0.50" (1.5-12.5 mm) with HPU Filler or other suitable filler. Contact your voestalpine Nortrak representative for filler options and technical recommendations.
- POLYPRIME is not recommended for use on asphaltic materials, bare ground, dirt, grass or other non-structural surfaces. Contact your voestalpine Nortrak representative for recommendations, and before using on surfaces intended for immersion service.

#### STEEL & OTHER METALS

- Steel and other metal surfaces must be cleaned. Remove any sharp edges, weld splatters and other surface imperfections.
- Test the surface for non-visible soluble salt contamination according to NACE 6G186. If necessary treat the surface with CHLOR\*RID or equivalent chloride remover until less than 3mg/cm<sup>2</sup> is detected.
- Apply POLYPRIME only if metal surface temperature is 5° F (3° C) above the dew point to avoid application over damp surface. Apply primer within the same day of blasting, before the prepared metal surface is chemically contaminated and before flash rusting or oxidation reoccurs.
- For aluminum and galvanized metals, and before using on surfaces intended for immersion service, contact your voestalpine Nortrak representative for additional information.

#### PROCESSING

- If possible, precondition material to ≈ 70°F (21°C) before use.
- Mix POLYPRIME resin in its original container before use. Do not dilute with isopropyl alcohol or any other alcohol-based products. Mix resin for 2 to 3 minutes using an appropriate mixer for the package size. Contact voestalpine Nortrak for mixing recommendations.

#### METERED SPRAY APPLICATION

- Before priming, protect adjacent surfaces with tape or other kinds of protective barriers.
- Begin priming only if the topcoat or joint sealant can be applied before exposure to rain or the formation of dew.
- Concrete is a porous material that contains air. When the temperature of the concrete rises, the air expands. This phenomenon, out-gassing, may produce pinholes or blisters in primers and topcoat systems. To reduce the risk of pinholes from out-gassing, apply POLYPRIME and topcoat when the concrete temperature is stable or dropping. Highly porous surfaces may require multiple primer coats.

- Contact your voestalpine Nortrak representative for plural component proportioner recommendations. Proportioner should be able to heat resin and iso to 110-150°F (43-66°C).
- Proportioner must generate a minimum spray pressure of 1,000 psi (13.8 MPa), maintain a stable pressure during spray and keep minimal pressure differential (less than 300 psi) between resin and iso.
- Contact your voestalpine Nortrak representative for high and low output application equipment, setups and spray information.

#### SPRAY AND BACKROLL

- This method is recommended for detail priming, large flat areas, vertical areas, and confined spaces where solvents are prohibited. Do not dilute with solvent when spraying. This is a fire and explosion hazard.
- Apply POLYPRIME no more than 4 mils (0.1 mm) WFT per application. Make sure primer does not puddle or build up in bugholes, crevices or joints.
- Backroll the primer into porous surfaces using a 1/2" (12.5 mm) nap roller. Work primer into corners with a brush.
- Check primer for set before topcoat by touching the surface and determining there is no transfer. Polyurea and similar elastomeric topcoats should not be applied until primer is firmly set, called walk-over or taping time, typically 1.5-2 hours at 70°F. Abrading foamed areas is not recommended for polyurea topcoat due to risk of pinholing. If excess primer must be removed, re-prime the area before topcoat.

NOTE: Topcoats must be applied before primer becomes contaminated with water, debris, oil, or other foreign materials. If maximum recoat time is exceeded, mechanically abrade to remove primed surface and re-prime area. Spray applications may require longer primer cure times than stated in the table for best results.

#### CLEANING & MAINTENANCE

- Use Cleaner on parts after every use. Do not immerse the entire applicator in Cleaner.
- CLEAN Y-STRAINERS REGULARLY.
- Contact your voestalpine Nortrak representative for pump flushing and long term storage stability recommendations.

#### MANUAL MIXING AND APPLICATION PREPARATION

- POLYPRIME can be mechanically mixed using a mixing blade and drill, or manually with a paint stir stick. Care must be taken to mix and apply the material onto the concrete surface rapidly to avoid pot life issues.
- Only mix material in a 1:1 (resin:iso) ration by volume. Acetone can be used to slow the material cure. Acetone will also decrease viscosity to allow for easier application. See table below for mixing ratios. Typically the resin: iso: acetone ratio is 1:1:1 by volume.
- Protect the surfaces around the application area to prevent contamination during the installation.
- Ensure that surfaces are ready for application of POLYPRIME before applying mixed material.
- Ensure that the mixing station is a short distance from the application area, as pot life is relatively short.

#### RECOMMENDED MIXING VOLUMES

Final Volume	Mix Container	Resin	ISO	Acetone
3 qts (2.5 L)	1 gal (3.8 L)	1 qt (1 L)	1 qt (1 L)	1 qt (1 L)
3 gal (9.4 L)	5 gal (19 L)	1 gal (3.8 L)	1 gal (3.8 L)	1 gal (3.8 L)

#### MIXING AND APPLICATION

- Add POLYPRIME resin and (optionally) acetone into an appropriate container.
- Using a mixer or stir stick, mix material together for 15 seconds.

- Add the isocyanate to the mixing container and mix for an additional 15 seconds or until uniform. Scrape the bottom and sides of the container during mixing to ensure no unmixed material remains.
- All of the resin and iso must be thoroughly mixed before application. The material may not cure properly if it is improperly mixed.
- IMMEDIATELY apply PolyPrime onto the surface by pouring, rolling or brushing. If material begins to gel stop and dispose of solidified material.
- When the material is on the substrate surface, the working life is approximately 5 minutes at 70°F undiluted, but will vary with temperature.
- Touch primed area after set time is achieved with a gloved finger, and examine the glove to see if any has transferred. Primer is ready for topcoat when material does not transfer. The primer may still be tacky at this point. Longer wait time for polyurea spray topcoat is recommended, 1.5-2 hours typically, before walk-over cure is achieved.
- Material may foam where puddles form, or if it encounters moisture. This is normal. As necessary remove excess primer and foamed areas after cure by scraping or sanding.

#### CARTRIDGE APPLICATION

- Use a 1-to-1 dispenser (maximum of 40 psi for pneumatic).
- Remove the retaining nut and caps from the cartridge.
- Keep the cartridge upright during assembly.
- Place mix tube on cartridge nozzle and hand tighten the retaining nut over the mix tube.
- Keep cartridge upright and load into applicator gun.
- Begin dispensing with cartridge upright to remove any trapped air.
- Dispense initial material (20-40mL) outside the repair area and discard.
- Dispense remaining material into a container at least 0.5 gal (2 L) volume, and immediately apply the mixed primer. Change mix tubes if dispensing stops for more than 30 seconds at 70°F (21°C).
- Backroll the primer into porous surfaces using a 1/2" (12.5 mm) nap roller or with a disposable brush. Check for primer set before topcoat.

#### HEALTH AND SAFETY

- Before handling, you should become familiar with the Material Safety Data Sheet (MSDS) regarding the risks and safe use of this product. To obtain an MSDS please call 800-333-9826 or send an email to: msds@wilvaco.com.

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