



Item# EP98 Revised: 03/14/2015

## Ultra-high cross-link, aliphatic polyamine novolac epoxy for ultra-high chemical resistance

### Description

Epoxytec Uroflex™ HCN is an ultra-high chemical resistant formulation. The two-component polymer epoxy system is 100% solid, containing no V.O.C.s. Uroflex™ HCN is an ultra-high cross-linking novolac/aliphatic polyamine system with excellent resistance to chemicals and good surface properties. It is designed as a high-build coating for continuous immersion in aggressive environments where high chemical resistance is required. It has excellent resistance to concentrated sulfuric acid, as well as alkalis, and most solvents and hydrocarbons.

Excellent smooth film, high gloss, impact resistance, blush resistance, chemical resistance, U.V. tolerance.

### Typical Uses

Uroflex™ HCN has been proven in many aggressive enclosed, immersive, and partially opened environments. Uroflex™ performs in areas subject to high chemical attack. Ideally suited as a protective coating/lining solution for:

- Industrial structures, tanks, vessels, etc.
- Primary and secondary containment
- Seamless and sealed coating & lining
- Protection against chemicals for steel and concrete
- Other industrial lining and coating applications

### Features

- "Green" - 100% solids, no VOCs
- Excellent chemical resistance
- Excellent abrasion resistance
- Self-priming
- High build
- Formulated resilience
- High impact strength
- Surface & moisture tolerant
- Cold temperature performance
- U.V. tolerant
- Self-leveling
- High gloss finish
- Easy to apply by roller, brush or spray

### Film Thickness

Uroflex™ HCN can be a single coat or multiple coat system.

Uroflex™ HCN can be applied onto a cementitious surface at 16 mils (minimum) to 30 mils (maximum by roller/brush) or 65 mils (maximum by spray) per coat at 77F. For a total coating thickness exceeding 30 mils (by roller/brush) or 65 mils (by spray), multiple coats are necessary.

Uroflex™ HCN can be applied onto a metallic surface at 10 mils (minimum) to 16 mils (maximum by roller/brush) or 30 mils (maximum by spray) per coat at 77F. For a total coating thickness exceeding 16 mils (by roller/brush) or 30 mils (by spray), multiple coats are necessary.

### Theoretical Coverage

Uroflex™ HCN is a 100% solid coating that will not shrink.

Therefore, the theoretical coverage properties between wet film thickness (WFT) and dry film thickness (DFT) are the same. Eighty (80) square feet (sq.ft.) per gallon (gal.) at 20 mils thick. Actual coverage will depend on surface conditions, irregularities, and surface profile.

### Surface Preparation

The success of any coating application is directly proportional to the completeness of the substrate preparation and the care the application crew puts into the application. Surface must be clean and sound. Remove all dust, contaminants, grease, curing compounds, rust, impregnation, waxes, foreign particles, and disintegrated materials from the surface, in order to achieve a clean and profiled surface.

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# Uroflex™ HCN

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**Concrete:** Prepare the concrete by abrasive blasting, high pressure water cleaning, and/or approved mechanical method to achieve clean, sound, and profiled concrete. Prepare concrete in accordance with SSPC-SP 13/NACE No. 6. "Surface Preparation of Concrete." Although priming is not required, in some cases when suspecting excessive moisture vapor transmission (MVT), out-gassing, or other impediments - an Epoxytec recommended primer may be considered.

**Steel:** Before preparing steel, please inspect and remove oil, grease, or other contaminants - "Solvent Cleaning" (SSPC-SP1) may be required. Remove all sharp peaks, including weld spatter. Abrasive blasting (or other approved mechanical methods) must be used in order to achieve a clean surface with a minimum profile of 3 mils. Stripe coat all edges and peaks with an Epoxytec recommended primer. To prevent flash rusting, consider the use of an Epoxytec recommended primer.

## Application Method

Mix part A with part B. Proportion the components into a clean pail and mix for approximately 5 minutes with a "jiffy mixer" (or equivalent electric drill), on a low speed (400-600 rpm) drill until the color is uniform blend.

When possible, Epoxytec recommends Uroflex™ HCN as a two-coat system.

**NOTE:** If spraying, Epoxytec recommends at minimal the use of a .023" orifice spray tip or greater, 64:1 ratio spray pump or greater, 3/8" hoses, with 1/4" whip.

## Thinning

Thin with Epoxytec Cut 5.

## Storage & Handling

- Shelf life: 14 months, sealed. Store in a dry area away from direct sunlight. The material should be conditioned to between 65° F and 85° F before use.

## Packaging & Color

- 5 Gallon Kit (pails) Item# EP98-G5-PE (pebble)
- 1 Gallon Kit (pails) Item# EP98-G4-PE (pebble)

## Safety

Consult Material Safety Data Sheet (MSDS) for all material safety information.

## Chemical Resistance

Resistant = 72 hour immersion, less than 50% loss in hardness, no blistering, no whitening (for more specific chemicals, contact Epoxytec)

25% ammonium hydroxide	antifreeze	butanol	carbon tetrachloride
beer	citric acid	30% HCL	moth ball
40% chromic acid	diesel fuel	10% nitric acid	10% oxalic acid
crude oil	5% formaldehyde	10% H <sub>3</sub> PO <sub>4</sub>	12% bleach
10% ethanol	hydraulic fluid	60% H <sub>2</sub> SO <sub>4</sub>	boiling water
grape juice (no stain)	3% hydrogen peroxide	sewage	whiskey
20% HCL	castor oil		
jet fuel	lard	10% acetic acid	amines
milk	5% soap solution	chloroform	ethyl acetate
30% salt solution	50% NaOH at 50C	ethanol	37% HCL
20% sulfuric acid	turpentine	Perchloroethylene	Trichloroethylene
wine	water	20% HNO <sub>3</sub>	phenol
xylene	propylene oxide	5% H <sub>3</sub> PO <sub>4</sub>	H <sub>2</sub> S

	7 Days	30 Days
Glacial acetic	-.640	- 1.148
98% Sulfuric	-.216	-.993
68% Nitric	-.941	- 1.648
49% Sulfuric	-.130	- 1.113
34% Nitric	-.821	- 1.293

## Technical Properties

Finish		Gloss
Mix Ratio		3 to 1 (by volume)
Type		Aliphatic polyamine novolac
Solids by Volume	ASTM D2697	100%
Solvent (VOC)	ASTM D3960	none
Pot Life		30 min. (25 C / 200 g mass)
Viscosity (mixed)	ASTM D2196	2,500 cps @ 25 C
Adhesion Strength	ASTM D4541	substrate failure
Adhesion Strength (steel)	ASTM D4541	2,000 psi
Water Absorption	ASTM D1653	< 0.1 g/sq.m.
Tensile Strength	ASTM D638	9,900 psi
Compressive Strength	ASTM D695	12,200 psi
Hardness, Shore D	ASTM D2240	70
Elongation	ASTM D2370	3%
Complete Cure		72 hours (25 C)
Operational Temperature		40F - 120F
Temperature Exposure (dry)		0F - 160F
Temperature Exposure (wet)		0F - 147F
Recoat Time		3 hr. - 48 hrs. (25 C)