

sti[®] Seamless Technologies, Inc.

SeamTek[®] Clear Chemical Resistant Epoxy Seal CRH 405

Product Data

Description

Two part 100% solids epoxy resin with low VOC. CRH-405 has been specifically formulated with excellent air release and chemical resistance for use as a seal coat on floor and wall system.

Color

Amber clear.

Packaging

Packaged as 5 gallon container.

Uses

CRH405 Chemical Resistant Hardener has non-chalking properties combined with excellent abrasion, chemical and good heat resistance properties. Since this is a clear coating it should only be applied over ultra violet stable surfaces, particularly when used outside. Like all epoxy products it will amber when exposed to UV light. It can be used where ever a clear coating is required to add gloss, abrasion resistance or chemical resistance to a surface. It can be used to enhance the color of brick, or colored concrete surfaces.

Technical Data

Table 2 – Typical Performance Properties

Property	Measuring Standards and Conditions	Binder Resin Results Only See Note 1 below
Drying time	ASTM D 1475 77°F (25°C)	To Touch: 8 to 12 hrs. max. To complete: 24 hrs. max.
Hardness (indentation)	ASTM D 2240 Rex D Model 1700	80-85 resin only
Elongation	ASTM D 638	Less than 0.1%
Tensile Strength	ASTM D 638	3800 psi (31 MPa)
Water Absorption	ASTM D 570-95	Less than 0.2%
Indentation Resistance	Mil. Std. D-3134	Zero
Water Vapor Transmission	ASTM E 96-94	Less than 0.10 U.S. perms
Weathering Resistance	ASTM G 26 Type B, BH, 300 hrs	Slight Yellowing
Abrasion Resistance	ASTM C 501, CS-17 Wheel, 1000 rev. with 1000 gram weight	Less than 0.1 grams weight loss
Bond Strength to Concrete	ASTM D 4541	350 to 500 psi (2.4 to 3.4 MPa) Concrete failure
Electrical Conductivity		Non conductive
Flammability	ASTM D 635	Self-Extinguishing

1. For additional performance properties for binder resin with aggregate added (i.e. Tensile Strength, Flexural Strength, Flexural Modulus, Compressive Strength, Coefficient of Linear Expansion, etc.) refer to STI technical manual for specific system(s) selected.

Note: Although this coating composition is not a fire-retardant product, it will not support combustion and will self-extinguish when the source of fire is removed nor will it support the growth of bacteria.

Chemical Exposure	Chemical Resistant Epoxy	Chemical Exposure	Chemical Resistant Epoxy
Acetic Acid 10 %	SS	Maleic acid, < 40%	NR
Acetic Acid 50 %	SS	Maleic acid, > 40%	NR
Acetic Acid, glacial	NR	Methanol	SS
Acetone	SS	Methyl ethyl ketone (MEK)	SS
Acrylonitrile	NR	Methyl isobutyl Ketone (MIBK)	SS
Aluminum Chloride	E	Methylene chloride	NR
Aluminum Nitrate	E	Mineral spirits	E
Ammon. Hydroxide, 28%	SS	Motor oil	E
Aniline	NR	Nitric acid, 10%	SS
Benzene	SS	Nitric acid, 30%	SS
Benzoic acid	NR	Oleic acid	E
Butyl acetate, 10%	NR	Oxalic acid, 10%	G
Butyric acid, 10%	G	Perchloric acid, 30%	NR
Calcium chloride, 30%	E	Perchloroethylene	NR
Calcium hypochlorite, 20%	E	Phenol, > 10%	SS
Chlorine, Wet and dry	SS	Phenol, > 10%	NR
Chromic acid, 10%	SS	Phosphoric Acid, 50%	E
Citric acid, 10%	E	Phosphoric acid, 85%	SS
Clorox, full strength	SS	Picric acid	NR
Cresylic acid	NR	Potassium hydroxide	E
Diacetone alcohol	NR	Potassium permanganate, 25%	SS
Diethyl Phthalate	E	Silver nitrate, 10%	SS
Ether	NR	Skydrol A500	E
Ethyl Acetate	NR	Sodium hydroxide, 10%	E
Ethyl alcohol, 95%	SS	Sodium hydroxide, 50%	E
Ethylene dichloride, 10%	NR	Sodium hypochlorite, 15%	SS
Ethylene glycol	E	Sodium hypochlorite, 50%	NR
Formaldehyde, 37%	SS	Sulfuric acid, 10%	E
Formic acid, < 10%	SS	Sulfuric acid, 30%	E
Formic acid, >10%	SS	Sulfuric acid, up to 98%	SS
Gasoline	E	Tannic acid	G
Glycerin	E	Tartaric acid	G
Hydraulic Fluid	E	Toluene	SS
Hydrochloric acid, 10%	E	Triacetin	G
Hydrochloric acid, 37%	G	Trichloroethane	G
Hydrofluoric acid	NR	Trichloroethylene	G
Hydrogen peroxide, 6%	SS	Trisodium phosphate	E
Isopropyl alcohol	SS	Turpentine	G
JP Jet Fuel	E	Urea	E
Lactic acid, < 20%	E	Urine	E

RATING SYSTEM – TESTS WERE RUN IN TOTAL IMMERSION AND FOLLOWING RATES GIVEN: **Excellent** – 3 months with no blistering or coating degradation. **Very Good** – 2 months with no blistering or coating degradation. **Good** – 1 month with no blistering or coating degradation. **Fair** – ½ month with no blistering or coating degradation. **Poor** – Less than ½ month.

Surface Preparation

Surfaces should be cleaned of oil, grease and dirt. If applied over a smooth, glossy surface, the surface should be grit blasted or ground with a coarse diamond cup to create a surface profile for optimum adhesion. When applying 405 over previously sealed surfaces, a spot test should be made to check for lifting or incompatibility with the old coating. It is extremely important that this surface is free of all moisture prior to coating application or blistering of paint film may occur.

Application

CRH 450 can be applied immediately after mixing with desired resin. However, thorough mixing of the two components is important. Mechanical mixing is preferred at slow speed to avoid air entrapment. Do not mix quantities greater than you can apply in 20 minutes @ 70 degrees F. This coating may be applied by spreading with a trowel or squeegee followed by back rolling with a 3/16" nap roller. Care must be taken to protect skin and eyes from contact. Check with system specification for environmental temperature and humidity guidelines as well as other quality control parameters.

HARMFUL OR FATAL IF SWALLOWED. If swallowed do not induce vomiting. Call physician immediately.

Eye Irritant. Wear eye protection. In case of contact with eyes, flush repeatedly with water and contact a physician.

Difficult to Remove From Skin. Wear gloves and protective clothing. Do not attempt to remove cured coating on skin with solvent; soak in warm, soapy water. Barrier creams are not recommended; where possible wear protective clothing.