

StoPoxy™ Adhesive

CR631

Division 3

super strength
moisture insensitive
excellent adhesion
fast set
corrosion inhibiting



StoPoxy Adhesive is a solvent-free, moisture-insensitive, medium viscosity, two-component, 100% solids epoxy adhesive meeting ASTM C-881 Type I, II, IV, V, Classes B & C, Grade 2 for multiple uses.

Technical Data

REPORT	TEST METHOD	RESULTS	SPECIFICATION
Mix Ratio (by volume)		1 to 1	none
Modulus of Elasticity (psi)	ASTM D-695	345,170	90,000 min. ² 150,000 min. ^{1,5} 200,000 min. ⁴
Tensile Strength (psi)	ASTM D-638	7,109	2,000 min. ² 5,000 min. ¹ 6,000 min. ⁵ 7,000 min. ⁴
Bond Strength (psi) 2 Day Cure	ASTM C-882	2,515	1000 min. ^{1,4}
Bond Strength (psi) 14 Day Cure	ASTM C-882	2,910	1,500 min. ^{1,2,4,5}
Absorption (%)	ASTM D-570	0.61	1.0 max. ^{1,2,4,5}
Gel Time (minutes)	ASTM C-881	30	30 min. ^{1,2,4,5}
Viscosity (cps)	ASTM D-2393	2500	2,000-10,000
Linear Coefficient of Shrinkage	ASTM D-2566	0.0016	0.005 max. ^{1,2,4,5}
Heat Deflection Temperature	ASTM D-648	125°F	120°F min. ^{4,5}
Compressive Strength (psi)	ASTM D-695	10,283	5,000 min. ² 8,000 min. ^{1,5} 10,000 min. ⁴
Elongation at Break (%)	ASTM D-638	3.8	1.0 min. ^{1,2,4,5}
Hardness, Shore D	ASTM D-2240	85	N/A

* Typical values for material cured at 73°F (23°C) and 50% R.H.
Note: To convert psi to megapascal (MPa) multiply by 0.0069.

¹ASTM C-881 Type I
²ASTM C-881 Type II

⁴ASTM C-881 Type IV
⁵ASTM C-881 Type V

Packaging

2 gal (7.6 L) units: (2-1 gal cans)

Coverage

1 gal (3.8 L) of epoxy covers approximately 80 ft² (7.43 m²)

Compliances

ATSTM C-881: Types I, II, IV & V
Grade 2
Classes B & C

Shelf Life

24 months in original, unopened, properly stored container.

Storage

Store away from sparks and open flame. Store in a dry area, between 40°F (5°C) and 95°F (35°C). Protect from direct sunlight, and freezing. Condition material to temperature between 65°F (18°C) and 85°F (29°C) before using.

Features

Benefits

- | | |
|---------------------------------------|---|
| 1 Moisture-insensitive | Before and after cure bonds to dry or damp substrates |
| 2 1:1 ratio between components | Easy to mix |
| 3 Excellent bond strength | Tenacious bond to concrete, steel and most construction materials |
| 4 Corrosion Inhibiting | Minimizes the oxidation of metals |

CR631 StoPoxy™ Adhesive

Surface Preparation

Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove surface contaminants - i.e. dust, grease, curing compounds, impregnations, waxes, foreign particles and disintegrated materials.

Concrete: Sandblast or use other approved mechanical means.

Steel: Sandblast to white metal finish.

Mixing

Pre-mix each component thoroughly. Place 1 part by volume of Component A and 1 part by volume of Component B into a clean pail. Mix thoroughly for 3 minutes with low-speed drill and Jiffy type

mixer (400-600 rpm) until uniformly blended. Mix only the quantity that can be used within its gel time.

Application

To Bond Fresh Concrete to Hardened Concrete:

Apply by brush, roller, broom or spray to cured concrete substrate. Place fresh concrete while StoPoxy Adhesive is still tacky. If coat of StoPoxy Adhesive loses tackiness before pouring concrete, roughen epoxy surface to create a bonding profile. Recoat with additional StoPoxy Adhesive and proceed.

To Bond Old Concrete to Old Concrete:

Apply the mixed StoPoxy Adhesive by brush, roller, broom or spray to the substrate, working it in for positive adhesion. While coating is tacky, join the coated substrates and secure firmly into place. Glue-line should not exceed 1/8 in (3.2 mm).

To Structurally Repair Cracks by Gravity Feed:

If cracks reflect through slab, seal underside of cracks by buttering crack with StoPoxy Quick-Set Gel. Otherwise, pour neat StoPoxy Adhesive into vee-notched crack. Continue placement until crack is completely filled.

To Vertically Anchor Rebar, Dowels, and Threaded Rod:

For efficient transfer of stress, the annular space around bolt should not exceed 1/8 in (3.2 mm). The depth of embedment is typically 9 times the bolt diameter. Grout with neat StoPoxy Adhesive.

To Prepare Epoxy Mortar: Slowly add 1 1/2 parts by loose volume of an oven-dried aggregate to 1 part mixed StoPoxy Adhesive. Mix until uniform in consistency and color.

Clean Up

Equipment: Uncured material can be removed with citrus-based cleaner or other approved solvent. Cured material can only be removed mechanically.

Material: Collect with absorbent material. Flush area with water.

Curing/Drying

StoPoxy Adhesive has a 30 minute pot life after mixing the 2 components.

Limitations

- Minimum substrate temperature is 40°F (5°C).
- Do not thin. Solvents will prevent proper cure.
- Use only oven-dried aggregate.
- Minimum age of concrete must be 5-7 days, depending on curing and drying conditions, for mortar.
- Do not seal slabs on grade with product. StoPoxy Adhesive is a vapor barrier.
- Maximum epoxy mortar thickness is 1.5 in (3.8 cm) per lift.

How It's Used

StoPoxy Adhesive is used for the structural bonding of fresh to hardened and new to old concrete. Used for structural crack repair for larger cracks, i.e. 0.007 – 0.30 in (0.18 – 0.76 mm)

cracks. Used as a structural adhesive for concrete, masonry, metal, wood, etc. Can also be used to vertically anchor rebar, dowels and threaded rod.

Health And Safety

Health Precautions

Component A is an irritant. Component B is a corrosive. This product is a strong sensitizer. The use of safety goggles and chemical resistant gloves are recommended if ventilation is inadequate. The use of a NIOSH/MSHA organic vapor respiratory is recommended if ventilation is inadequate. Avoid breathing vapors and skin contact.

Safety Precautions

Use adequate ventilation. Safety goggles and protective gloves are recommended.

First Aid

SKIN CONTACT: Remove any contaminated clothing. Remove epoxy immediately with a dry cloth or paper towel.

Solvents should not be used as they carry the irritant into the skin. Wash skin thoroughly with soap and water. EYE CONTACT: Flush immediately with water for at least 15 minutes and contact a physician.

RESPIRATORY PROBLEMS: Remove affected person to fresh air immediately and contact a physician.

HYGIENE: Wash hands immediately after use. Wash clothing before reuse. CURED EPOXY RESINS ARE INNOCUOUS.

Spills

Collect in an appropriate container. Uncured material may be removed with water.

Disposal

Dispose of in accordance with local, state, or federal regulations.

Warning

KEEP CONTAINERS CLOSED WHEN NOT IN USE. KEEP OUT OF THE REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR INDUSTRIAL USE ONLY. Consult the Material Safety Data Sheet for further health and safety information.

LIMITED WARRANTY

THIS PRODUCT IS SUBJECT TO A WRITTEN LIMITED WARRANTY WHICH CAN BE OBTAINED FREE OF CHARGE FROM: Sto Corp., 3800 Camp Creek Parkway, Building 1400, Suite 120, Atlanta, GA 30331; Tel: 404-346-3666; Fax: 404-346-3119

ATTENTION

This product is intended for use by qualified professional contractors, not consumers, as a component of a larger construction assembly as specified by a qualified design professional, general contractor or builder. It should be installed in accordance with those specifications and Sto's instructions. Sto Corp. disclaims all, and assumes no, liability for on-site inspections, for its products applied improperly, or by unqualified persons or entities, or as part of an improperly designed or constructed building, for the nonperformance of adjacent building components or assemblies, or for other construction activities beyond Sto's control. Improper use of this product or use as part of an improperly designed or constructed larger assembly or building may result in serious damage to this product, and to the structure of the building or its components. **STO CORP. DISCLAIMS ALL WARRANTIES EXPRESS OR IMPLIED EXCEPT FOR EXPLICIT LIMITED WRITTEN WARRANTIES ISSUED TO AND ACCEPTED BY BUILDING OWNERS IN ACCORDANCE WITH STO'S WARRANTY PROGRAMS WHICH ARE SUBJECT TO CHANGE FROM TIME TO TIME.** For the fullest, most current information on proper application, clean-up, mixing and other specifications and warranties, cautions and disclaimers, please refer to the Sto Corp. website, www.stocorp.com.

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