

Low Temperature Epoxy

RT - LT

Product Description and Use

Low Temperature Epoxy is a specially formulated, 100% solids acrylated epoxy system designed to provide positive cure down to 20°F and extremely rapid room temperature cure. Its low viscosity contributes to easy handling, excellent substrate wetting and the development of strong bonds to a variety of substrates including damp concrete. LOW TEMPERATURE EPOXY. cures blush-free even under cold, damp conditions. This material possesses a desirable combination of flexibility, chemical resistance, and good impact resistance at low temperatures. It is available in a thickened paste version for easy joint and crack filling LOW TEMPERATURE EPOXY. was developed for use in cold weather exterior concrete repair and refrigerated industrial areas where conventional epoxy systems cannot cure completely or cure too slowly to be of practical use to the coatings contractor. Because it is ready for traffic in 2- 3 hours at room temperature, Low Temperature Epoxy is especially useful in rapid turnaround concrete repair and floor coating projects. Its low modulus characteristics make this material well suited for industrial joint and crack repair. It is the ideal primer for use under fast set polyurea systems. Polyurea materials can be applied directly to wet Low Temperature Epoxy for guaranteed intercoat adhesion. It is also used as a fast set, damp surface primer under other epoxy materials and polyurethanes. The standard material will tend to amber and is not suitable as a decorative topcoat. A special hardener is available that eliminates this problem.

Chemical Composition: Acrylated Bisphenol A epoxy resin crosslinked with an aliphatic amine curing agent.

Colors: 16 standard colors available, plus clear.

Limitations:

- Short work life at temperatures over 60°F requires careful planning and application.
- Do not use Low Temperature Epoxy over damp concrete.

Technical Data

Physical Properties

Mix Ratio, by Volume	2-1
Solids Content, %	100
Viscosity, cps (77°F)	250
Pot Life, (77°F, 1 quart mass)	5 minutes
Pot Life, (35°F, 1 quart mass)	25 minutes

Pot life is reduced by increasing temperature and/or mass.

Cure Times (77°F)

Dry to Touch	90 minutes
Light Traffic	2-3 hours
Full Cure	3 days

Cure Times (35°F)

Dry to Touch	12 hours
Light Traffic	18 hours
Full Cure	5 days

Performance Properties

Tensile Strength, psi (ASTM D-638)	4,200
Ultimate Elongation, % (ASTM D-638)	40
Hardness, Shore D (ASTM D-790)	72
Compressive Yield Strength (ASTM D-695)	6500
Ultimate Compressive Strength (ASTM D-695)	24000
Impact Resistance (ASTM D-2794)	Passes 80-inch pounds direct impact
Bond Strength to Damp Concrete (ACI 503.4-2.3.2.2)	concrete fails before loss of bond

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Chemical and Stain Resistance (ASTM D-1308 24 Hour Immersion)

Coffee	no effect
Vegetable Oil	no effect
Mustard	no effect
Whiskey	no effect
Urine	no effect
Gasoline	no effect
Motor Oil	no effect
Brake Fluid	no effect
Transmission Fluid	no effect
Skydrol	no effect
Mineral Spirits	no effect
10% Sulphuric Acid	no effect
10% Hydrochloric Acid	no effect
10% Acetic Acid	no effect
Xylene	slight softening, film recovers
MEK	film destroyed

General Information

Moisture Vapor Emissions Precautions

All interior concrete floors not poured over an effective moisture vapor retarder are subject to possible moisture vapor transmission that may lead to blistering and failure of the coating system. It is the coating applicator's responsibility to conduct calcium chloride and relative humidity probe testing to determine if excessive levels of vapor emissions are present before applying any coatings. RESINTEK can supply moisture remediation products. Consult our technical service department. ResinTek and its sales agents will not be responsible for coating failures due to undetected moisture vapor emissions.

Surface Preparations

Concrete must be cured 30 days and be clean, structurally sound, and free of wax, loose paint or curing compounds. Surface may be damp but standing water should be removed. Concrete should be shotblasted, acid etched or diamond ground to achieve a minimum 5 mil profile. If acid etched, use of a floor machine with a nylogrit brush is required. Etched surface must be neutralized with ammonia and water or RESINTEK Super Base Neutralizer and water. Carefully follow the guidelines listed in the ResinTek Surface Preparation Manual. If surface is prepared by diamond grinding, grind thoroughly to "open up" the surface. Vacuum concrete dust and rinse the surface well. Previously coated surfaces must be mechanically cleaned and abraded with steel wool or 80 grit sandpaper. If applied over acid stains, the surface must be properly neutralized with RESINTEK Super Base Neutralizer or ammonia.

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Application Recommendation

LOW TEMPERATURE EPOXY. should be mixed in manageable quantities and poured out of the mixing pail immediately to extend work time. If using as a primer or unfilled coating, material may be thinned with Acetone up to 15% to reduce viscosity and extend work time. If spraying polyurea directly onto wet LOW TEMPERATURE EPOXY., do not thin the LOW TEMPERATURE EPOXY. If using as an aggregate binder, do not thin. Apply with a brush, roller, notched trowel, or squeegee.

Handling Precautions

Do not breathe vapor. Use appropriate respirator with green band cartridge to protect against methyl amine vapors. Avoid contact with skin; wear protective gloves. Read Material Safety Data Sheet before using.

Slip and Fall Precautions

OSHA and the American Disabilities Act (ADA) have now set enforceable standards for slipresistance on pedestrian surfaces. The current coefficient of friction required by ADA is .6 on level surfaces and .8 on ramps. ResinTek recommends the use of angular slip- resistant aggregate in all coatings or flooring systems that may be exposed to wet, oily, or greasy conditions. It is the contractor and end users' responsibility to provide a flooring system that meets current safety standards. ResinTek or its sales agents will not be responsible for injury incurred in a slip and fall accident.