



## **LOW TEMPERATURE EPOXY (L.T.E.)**

### **PRODUCT DESCRIPTION AND USE**

Low Temperature Epoxy (L.T.E.) 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. L.T.E. 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

L.T.E. 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, L.T.E. is very 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 L.T.E. 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 have a tendency to amber and is not suitable as a decorative top coat. A special hardener is available that eliminates this problem. Specify L.T.E. (C.S.)

### **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 L.T.E. (C.S.) over damp concrete.

### **WARRANTY INFORMATION**

Arizona Polymer Flooring guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. ARIZONA POLYMER FLOORING MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. Arizona Polymer Flooring shall not be liable for damages caused by application of its products over concrete with excessive moisture vapor transmission or alkalinity. Arizona Polymer Flooring shall not be liable for any injury incurred in a slip and fall accident. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product.

### **SPECIALIZED FLOOR COATINGS & DECORATIVE CONCRETE SYSTEMS**

**TECHNICAL DATA**

**Physical Properties**

Mixing 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).....	6,500
Ultimate Compressive Strength (ASTM D-695) .....	24,000
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

**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/Alkalinity Precautions**

All interior concrete floors not poured over an effective moisture vapor retarder are subject to possible moisture vapor transmission and related high levels of alkalinity 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 or alkalinity are present before applying any coatings. These test kits are available from APF. Arizona Polymer Flooring and its sales agents will not be responsible for coating failures due to undetected moisture vapor emissions or related high levels of alkalinity.

### **Surface Preparation**

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 APF Super Base Neutralizer and water.** Carefully follow the guidelines listed in the Arizona Polymer Flooring Surface Preparation Manual. If surface is prepared by diamond grinding, grind thoroughly to “open up” the surface. Vacuum concrete dust and rinse surface well. Previously coated surfaces must be mechanically cleaned and abraded with steel wool or 80 grit sandpaper. If applied over acid stains, surface must be properly neutralized with APF Super Base Neutralizer or ammonia.

### **Application Recommendations**

L.T.E. 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 L.T.E., do not thin the L.T.E. If using as an aggregate binder, do not thin. Apply with a brush, roller, notched trowel or squeegee.

### **Handling Precautions**

Do not breathe vapors. 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 slip-resistance on pedestrian surfaces. The current coefficient of friction required by ADA is .6 on level surfaces and .8 on ramps. Arizona Polymer Flooring 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. Arizona Polymer Flooring or its sales agents will not be responsible for injury incurred in a slip and fall accident.