

TD.555 – TECHNICAL DATA: E100-RT1™ Cold Temp Epoxy

Revised: 1/8/20

Product Name: E100-RT1™ Cold Temp Epoxy

Product Description:

E100-RT1™ is 100% solids, clear (amber) low viscosity, epoxy for use as neat, broadcast, slurry or mortar applications designed for use in cold environments as low as 1°C or 34°F in above grade and below grade environments including slightly damp to dry concrete and attain high strengths in as little as four hours. Additionally, cold temperature broadcast floor coating is suitable for structural anchoring of crane rail anchors and concrete crack repair.

Uses:

- Gravity filling of horizontal cracks in dry or slightly damp concrete
- Structural anchor bolt adhesive for horizontal applications
- Cold room flooring (neat, slurry, broadcast and mortar)
- General purpose adhesive for bonding dissimilar materials

Features:

- Extremely fast setting
- Low viscosity
- Cures down to 1°C or 34°F
- Bonds to slightly damp or dry concrete (no frozen water)
- 2 to 1 ratio by volume
- Clear (amber)
- Can be pigmented with ECS liquid epoxy pigment in the field

Physical Properties:

<u>Property</u>	<u>Test Standard</u>	<u>Result</u>
Gel Time: 23°C or 73°F	ASTM C-881	7-8 minutes
Compressive Strength	ASTM D-695	13,500 psi
Compressive Modulus	ASTM D-695	435,000 psi
Bond Strength (dry)	ASTM C-882	400 psi 3 hours
Bond Strength (wet)		450 psi 5 hours
Dry and Wet		500+ psi 1 day
Absorption	ASTM D-570	0.04%
Heat Deflection Temperature	ASTM D-638	63°C or 145°F
Elongation @ Break	ASTM D-638	2.6 %
Flexural Strength (psi)	ASTM D-790	652
Tensile Strength (psi)	ASTM D-638	9630
Shore D Hardness	ASTM D-2240	85

Mix Ratio: 2 to 1 by volume

Cure Schedule: Varies greatly depending on temperature and thickness applied = 35 minutes to 5 hours

Substrate preparation:

If application is in a cold environment ensure there is no frozen water in the substrate or failure is likely to occur. Follow standard guidelines for concrete preparation. Pre-fill all cracks and repair spalls with E100-RT1 slurry, mortar or patch. Remove all weak and contaminated concrete with appropriate degreasers and mechanical scarifier or steel shot blast equipment. End result is a laitance free hard sound surface for the epoxy to bond to with a recommended CSP or 3 or better.

Application Instructions:

NOTE: THIS COATING IS EXTREMELY FAST CURING. ENSURE ENOUGH PERSONNEL ON HAND TO COVER ALL APPLICATION STEPS IN SEQUENCE WITHOUT ANY DELAY.

YOU HAVE ONLY 7 MINUTES @ 73°F, (LESS AT HIGHER TEMPERATURES) FROM THE TIME THE MATERIAL IS MIXED TO APPLY, SPREAD, ROLL AND BROADCAST THE SELECTED NON-SLIP AGGREGATE.

MINIMUM APPLICATION CREW RECOMMENDED:

HAVE ONE PERSON MIXING, ONE PERSON POURING MIXED MATERIAL, ONE PERSON SPREADING THE MATERIAL, ONE PERSON ROLLING THE MATERIAL AND TWO PEOPLE BROADCASTING THE AGGREGATE.

Condition material: Keep both part A and Part B in a cool environment not higher than 70F for at least 24 hours before the application

MIXING:

Pour PART A into a clean, suitable size container (recommended not to mix more material than can be spread, rolled and broadcasted in 7 minutes or less time) as soon as part b is added to the part the working time begins. Remember you have only 7 minutes> mix with a variable speed drill for a minimum of one minute or until there are no streaks in mixed material.

As soon as the material is mixed immediately pour mixed material onto the properly prepared substrate and immediately spread with an 1/8" "V" notched squeegee, and immediately back roll the coating.

As soon as the coating is back rolled broadcast the selected aggregate to excess (no more wet spots showing.) Allow to cure.

Sweep up and vacuum up residual aggregate not imbedded into the coating. If a second broadcast base coat is required, follow steps outlined above.

After cure and removal of loose aggregate, apply selected topcoat.

COVERAGE FOR EPOXY COATINGS AND JOINTS

THICKNESS OF COATING APPLIED
(1000 MILS = 1")

COVERAGE PER US GALLON
(100% SOLIDS SYSTEM)

¼"	=	250.0 MILS	6.4 SQ. FT PER GALLON
3/16"	=	187.5 MILS	8.5 SQ. FT. PER GALLON
1/8"	=	125.0 MILS	12.8 SQ. FT PER GALLON
1/16"	=	62.5 MILS	25.2 SQ FT PER GALLON
1/32"	=	31.25 MILS	51.0 SQ FT PER GALLON
1/64"	=	15.63 MILS	102.0 SQ FT PER GALLON
		10 MILS	160.0 SQ FT PER GALLON
		5 MILS	320.0 SQ FT PER GALLON
		1 MIL	1600 SQ FT PER GALLON

For mortar binders: 1-gallon mixed resin/hardener to 5 gallons of 50 mesh silica sand:
 25 sq. ft. per mix @ ¼" thickness

For anchoring horizontal anchors and anchor bolts

Drill a hole ¼" larger than the diameter of the anchor bolt to be installed do not exceed this clearance. If you drill to large a hole, the adhesive will become a stress relieving rather than a stress transferring adhesive which is required to have a structural anchor withstand the stresses it will encounter. Typically, the depth of the hole will be 10-15 times the diameter of the anchor bolt.

Clean out the hole; remove all dust and standing water. Mix and pour Elite Crete Cold temperature adhesive/coating and fill approximately 60% of the hole and install the anchor bolt and fill if needed more cold temperature adhesive until level with the concrete surface. Immediately provide a temporary template to keep it in correct position while the adhesive cures

Shelf life:

1 year in unopened containers

This epoxy coating system is not intended for direct food contact

This epoxy curing agent will not comply with the U.S. Food, Drugs and Cosmetics Act as amended under Food Additive Regulation 21 CFR 175.300.

Customer Notice

Elite Crete Systems encourages its customers to review their applications for such products from the standpoint of human health and environmental quality. To help ensure that Elite Crete Systems products are not used in ways for which they were not intended or tested, Elite Crete Systems personnel are available to assist customers in dealing with ecological and product safety considerations. Your Elite Crete System sales representative can arrange for the proper contacts. Read and understand all Elite Crete Systems Literature, including SDS, prior to the use of any Elite Crete Systems products.