

Trans® ER-099 SPL with EH-150

Two Component Epoxy System

Product Description

Trans® Epoxy Resin ER-099 SPL in combination with Epoxy Hardener EH-150 is a solvent Free room temperature curing epoxy system with Low viscosity for better flow and penetration . It gives hard bonds to metal, ceramics, leather, vulcanised rubber, gem, stones, woods, concrete and thermoset plastics etc. Bonded assemblies have excellent resistance to shock and vibration and can be subjected to continuous operating temperatures from -60°C + 60°C and to even higher temperatures for short duration.

Product Features

- ✓ Multi purpose Epoxy.
- ✓ Rapid Cure.
- ✓ Low shrinkage.
- ✓ Good resistance to Heat, Salt Water, Chemicals, dynamic loading, Thermal Shock etc.
- ✓ Bonds a wide variety of materials in common use.
- ✓ Results in glossy, anti stain surfaces for Epoxy Coatings and Floorings.
- ✓ Solvent Free.
- ✓ Anti Blushing
- ✓ Doesn't require any external heat for curing. But may be applied for reducing the cure schedule.
- ✓ Low Viscosity for better flow.

Epoxy Resin ER-099 SPL

Trans® ER-099 SPL is a low viscosity Bisphenol-A type, modified liquid epoxy resin. It is a Crystallization free resin with attractive processing properties which is specially modified with AGE to give perfect wetting and adhesion to most substrates and have excellent mechanical strength and resistance to chemicals. It can be cured or cross linked with a variety of Trans Epoxy Hardeners depending on properties desired in the finished products and processing conditions employed. This can be suitably formulated combined with Aliphatic Polyamines, Polyamidoamines or their adducts (Aliphatic and Aromatic) and Polyamides. Some commonly used Epoxy Hardeners with recommended concentrations, typical cure schedules employed in major end use applications are Epoxy Hardeners EH-030 / EH-100 / EH-150 / EH-200 SV / EH-540.

Epoxy Index [eq/Kg.]	5.5 - 5.7
	182 - 192
Viscosity at 25°C	450 - 650
Appearance	Colorless Clear Liquid
Shelf Life	Two Years

Epoxy Hardener EH-150

Trans® EH-150 is a low-viscosity, modified cycloaliphatic, accelerated polyamine hardener. It is commonly used in combination with suitable epoxy resins such as Trans™ ER-099SPL / ER-055 / ER-077 / ER-088. It is suitable for the production of solvent free floorings, epoxy resins mortars and anti corrosive coatings and for filling the hollow sections, chipset encapsulations, insulations, protective coatings etc. It is used with suitable resins make it a low viscosity, making it easy to work, high level of reactivity with adequate working time which can be extended with the proportional use of less reactive hardener, very good curing property, good mechanical properties, high chemical resistance, smooth gloss, non tacky cured films, good corrosion protector, Good colour stability etc., Recommended Mix ratio is 40% to 60%. Shelf Life 2 Year up to 40°C.

Viscosity at 25°C [mPas]	450 - 670
Appearance	Colorless Clear Liquid

Application Procedure

(A)-Surface Preparation

The Surface must be thoroughly degreased with a good degreasing solvent and abraded with coarse emery paper or chemically etched. Inadequately pre - treated substrates may not bond satisfactorily. For special Pretreatments, please refer to the specific Instruction Sheet on this subject or to IS 13199 :1991 "Adhesive - Guidelines for surface preparation for adhesive bonding".

(B)-Mixing of Resin & Hardener

The two components are thoroughly mixed preferably in a disposable container (to avoid the necessity of cleaning it) with a metal or wooden rod/stick or with a Paint Paddle Mixer. The mix must be used within its pot - life which is about 30 minutes at room temperature (20° - 30° C).

(C)-Application:

: For bonding two (or more surfaces) :

The Mixed Epoxy Solution should be applied by brush or spatula on both (all) surfaces to be bonded. The two (all) components are then assembled in a suitable jig or fixture with just contacted pressure till the Epoxy sets. The consumption of Epoxy Solution is about 250 - 300 grams per square metre.

: For Marble, Granite or any Stone coating:

The Mixed Epoxy solution should be applied by brush / squeegee / spatula on the surface of the stone. After curing may be polished.

: For Epoxy Protective Coatings (on Wood) :

The Mixed Epoxy Solution should be applied using a 3/4 inch nap roller on an extension handle on the surface (ie. Clean Wood Surface). Leave it for 24 hours for room temperature (48 hours for low temperatures). The consumption of Epoxy Solution is about 250 - 500 grams per square metre.

: For Table Top Transparent Coating:

The nearby area should be covered prior to the application. The table top / Counter Top should be placed at 0° (zero Degree angle). After cleaning the top surface, pour the mixed epoxy solution, spread evenly and let it flow (the solution is self levelling). Leave it for 24 hours for room temperature (48 hours for low temperatures).

Mixing Ratio	Part by Weight	Part by Volume
ER-099 SPL	100	100
EH-150	50	50

Curing Properties

Complete Curing normally takes place at room temperature within about 12 - 24 hours depending on ambient temperature but may be accelerated by the application of heat.

Properties of the cured Epoxy	
Shear strength on an aluminum alloy lap	1 Kg./mm ²
Coefficient of expansion (Linear)	60x10 ⁻⁶ /°C
Temperature withstand ability of joint	-60° to +60°C
Modules of elasticity	7x10 ⁶ Kg./mm ²

Temperature	Curing Time
25° C	4-6 Hours
40° - 50° C	1-2 Hours

Cleaning of Equipment

Once the resin has set hard, it is very difficult to remove it. Before this occurs, it should be scraped off the tools. The resin still sticking to the tools or mixing vessels can be removed with the solvent. If however, polyethylene vessels or spatulas are used, it is best not to clean them. The resin should be allowed to cure. Then, on gently flexing of the plastic, the resin will de bond and flake off.

Hygiene

As far as possible, direct contact of resin and hardener with the skin should be avoided as they might cause irritation on sensitive skin. It is advisable to wash off the resin and hardener immediately if it does come in contact with the skin. Special barrier creams and cleansing creams are available commercially as additional safeguards.



Epoxy Flooring in Public Place



Epoxy Flooring at Residential Area



Tile Joint Filling



Expansion Joint Filling



Epoxy Application at Marble & Granite Resin Plant in INDIA



Epoxy Protective Paint (Wooden Boat)



Epoxy Protective Coating on Furniture



NOTES:

All recommendations for the use of our products, whether given by us in writing, verbally, or to be implied from the result of tests carried out by us, are based on the current state of our known. Not notwithstanding any such recommendations the buyer shall remain responsible for satisfying himself that the products as supplied by us are suitable for his intended process or purpose. Since we cannot control the application, use or processing of the products, we cannot accept responsibility therefor. The buyer shall ensure that the intended use of the product will not infringe any third party's intellectual property rights. We warrant that our products are free from defects in accordance with and subject to our general conditions of supply.

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