

## TC-1607 A/B HIGH TEMPERATURE EPOXY LAMINATING RESIN



TC-1607 A/B is an unfilled, medium viscosity laminating resin for high temperature plastic tooling and part fabrication. This system is ideal for wet lay-up tooling applications where excellent dimensional stability and high mechanical properties are required.

- Easy to use for lay-ups requiring vacuum bagging
- Withstands temperatures to 350°F (177°C)
- Designed for fabrication of a variety of molds

PHYSICAL PROPERTIES (With 8 plies of 7500-glass cloth, vacuum bagged)	TEST METHOD	TEST RESULTS
Hardness, Shore D @ 77°F (25°C)	ASTM D2240	95 ± 2
Hardness, Shore D @ 350°F (177°C)	ASTM D2240	87 ± 2
Density (g/cc)	ASTM D792	1.16
Color/Appearance	Visual	Translucent Amber
Tensile Strength (psi)	ASTM D638	25,500
Flexural Strength (psi) @ 77°F (25°C)	ASTM D790	48,600
Flexural Strength (psi) @ 350°F (177°C)	ASTM D790	15,000
Flexural Modulus (psi) @ 77°F (25°C)	ASTM D790	2.25 x 10 <sup>6</sup>
Flexural Strength (psi) @ 350°F (177°C)	ASTM D790	1 x 10 <sup>6</sup>
Shrinkage (in/in) (16 plies of 7500-fiberglass cloth laid up @ 0° and 45°)	—	0.0013
Compressive Strength (psi)	ASTM D695	26,400
Coefficient of Thermal Expansion (in/in/F°)	ASTM D3386	0.8 x 10 <sup>-5</sup>
Glass Transition Temperature (T <sub>g</sub> )	ASTM E1356	330°F (166°C)
Laminate Service Temperature	—	350°F (177°C)

HANDLING PROPERTIES	Part A	Part B
Mix Ratio by weight	100	20
Mix Ratio by volume	100	24
Specific Gravity @ 77°F (25°C)	1.20	1.00
Color	Pale Yellow	Amber
Viscosity (cps) @ 77°F (25°C) Brookfield	6,500	185
Mixed Viscosity (cps) @ 77°F (25°C) Brookfield	2,100	
Work Time, 1 lb. mass @ 77°F (25°C)	35 minutes	
Demold Time @ 77°F (25°C)	24 hours	

Properties above are typical and not for specifications.

## **POST CURING:**

All physical property results are based upon post-curing this system. The following procedure provides the best results:

- 1) 150°F (66°C) for 1.5 to 2 hours
- 2) 250°F (121°C) for 2 hours
- 3) 300°F (149°C) for 1 hour
- 4) 350°F (177°C) for 1 hour

Allow to cool in the oven. This procedure provides further stabilization and eliminates possible thermal shocks for cavity tools that are temporarily clamped together for curing purposes.

## **STORAGE:**

Store at ambient temperatures, 65-80°F (18-27°C). Unopened containers will have a shelf life of 12 months from date of shipment when properly stored at recommended temperatures. Purge opened containers with dry nitrogen before re-sealing.

<b>PACKAGING</b>	<b>Part A</b>	<b>Part B</b>
Gallon Kits	9 lbs.	1.8 lbs.
5-Gallon Kits	40 lbs.	8 lbs.

## **SAFETY PRECAUTIONS:**

Use in a well-ventilated area. Avoid contact with skin using protective gloves and protective clothing. Repeated or prolonged contact on the skin may cause an allergic reaction. Eye protection is extremely important. Always use approved safety glasses or goggles when handling this product.

## **IF CONTACT OCCURS:**

**Skin:** Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. It is *not* recommended to remove resin from skin with solvents. Solvents only increase contact and dry skin. Seek qualified medical attention if allergic reactions occur.

**Eyes:** Immediately flush with water for at least 15 minutes. Call a physician.

**Ingestion:** If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person.

**Refer to the Material Safety Data Sheet before using this product.**

**⚠WARNING:** This product can expose you to chemicals including 4,4'-Isopropylidenediphenol, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).