

TC-1600 A/B

GENERAL PURPOSE CLEAR EPOXY LAMINATING RESIN

TC-1600 A/B is an unfilled, low viscosity laminating epoxy resin for variety of fabricating applications. It features the ability to cure at room temperature for applications that do not require a working service temperature above 180°F (82°C). When post cured at elevated temperatures, this system can provide service up to 300°F (149°C).

TC-1600 is commonly used to reinforce fiberglass, Kevlar/aramid, and carbon fiber fabrics. It is also used as an adhesive for bonding wood, composites, and other substrates. Adding fillers like fumed silica, micro-spheres, and short-strand fibers can create pastes for fillets, fairings, and bonding applications.

PHYSICAL PROPERTIES	TEST METHOD	RESULTS
Hardness, Shore D	ASTM D2240	95
Density (g/cc)	ASTM D792	1.17
Cubic Inches per Pound	N/A	24.7
Color/Appearance	Visual	Clear
Tensile Strength (psi)	ASTM D638	35,000
Flexural Strength (psi)	ASTM D790	40,000
Flexural Modulus (psi)	ASTM D790	2.3 x 10 ⁶
Shrinkage (in/in)		0.00015
Izod Impact, notched (ft-lb/in)	ASTM D256	5
Heat Deflection Temperature @ 66 psi	ASTM D648	250°F (121°C)
Compressive Strength (psi)	ASTM D695	42,000
Water Absorption (% in 100 Hours)	ASTM D570	1.5
Coefficient of Thermal Expansion (in/in/°F)	ASTM D3386	1.1 x 10 ⁻⁵

1/4" laminates, 10 oz. cloth, post-cured specimens

HANDLING PROPERTIES	Part A	Part B
Mix Ratio by weight	100	20
Specific Gravity @ 77°F (25°C)	1.15	0.98
Viscosity (cps) @ 77°F (25°C) Brookfield	2,000	185
Mixed Viscosity (cps) @ 77°F (25°C) Brookfield	1,700	
Work Time, 100g mass @ 77°F (25°C)	30 minutes	
Cure Schedule	12 – 15 hours	

Properties above are typical and not for specifications.

POST CURE:

TC-1600 A/B may need to be post cured when parts or tools will be subject to service temperatures in excess of 180°F (82°C), or after laminating in cold weather conditions. Generally, most laminates can be de-molded at room temperature after 12-15 hours. Post-curing will expedite demold time, however a laminate should always be allowed to cool to room temperature before demolding.

RECOMMENDED CURE SCHEDULE:

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|----|---------------|---|--|
| 1) | 77°F (25°C) | - | 16-24 hours [Will provide service to 180°F (82°C)] |
| 2) | 150°F (66°C) | - | 2 hours followed by step #3 |
| 3) | 250°F (121°C) | - | 1 hour [Will provide service to 300°F (149°C)] |

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.

PACKAGING	Part A	Part B
Gallon Kits	9 lbs.	1.8 lbs.
5-Gallon Kits	40 lbs.	8 lbs.
55-Gallon Kits	400 lbs.	80 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.



TC-1600 Part A SDS



TC-1600 Part B SDS