



TCI 300-S

NSF 61

PRODUCT DESCRIPTION

TCI 300-S is a two-component, 100% solid, room temperature curing epoxy. Specially designed for FRP laminates, its low viscosity and long pot life characteristics make it ideal for wet-layup composite applications. TCI 300-S is formulated for use in potable water facilities, components are **ANSI/NSF 61 & NSF 372 Approved**, meeting and exceeding safety standards.

WHERE TO USE

- Hardening Epoxy Resin used with carbon/glass fibre to create an FRP laminate
- 300-S must be used with other TCI products
 - TCI CS-850 (CFRP)
 - TCI GS-500 (GFRP)

PROPERTIES

TCI-300-S Resin

TCI-300-S Hardener

Appearance	Clear	Clear
Specific Gravity @ 23°C, gm/cm ³	1.15 +/- .02	0.98 +/- 0.02
Viscosity @ 23°C, cps	5,500 +/- 500	80 +/- 20
Pot Life @ 23°C, 200gm mass	1.0-1.25 hours	
Gel Time @ 23°C, 200gm mass	1.45-2.45 hours	
Cure Cycle:	3 Days @ Room Temperature. OR 6 Hrs @ 45°C + 24Hrs @ Room Temperature.	
Shelf life:	two (2) years in original unopened, properly stored containers	

PHYSICAL PROPERTIES OF CURED PRODUCT

EPOXY MATERIAL – Cured 24 Hrs @ 60°C		
TYPICAL TEST PROPERTIES	ASTM METHOD	TYPICAL TEST VALUE
Tensile Strength	D638	10,050 psi (69.3 MPa)
Tensile Modulus	D638	406 Ksi (2,800 MPa)
Elongation Percent	D638	7.5%
Flexural Strength	D790	16,900 psi (116.5 MPa)
Flexural Modulus	D790	478 Ksi (3,296 MPa)
Glass Transition Temperature T _g	E1545	94°C (201°C)

PACKAGING AND YIELD

TCI 300-S is a two-component system consisting of a resin and a hardener, packaged separately in pre-weighted pails, the total volume is 14 Litres when mixed together.

Yield varies, depending on the minimum weight per sq.m of fibre fabric and the desired saturant-to-fabric ratio.

The yield when mixed is 20 m² when used strictly with TCI Carbon Fibre Fabric (CS-850).



STORAGE

- Store TCI 300-S in an environment where the ambient temperature does not fall below 5°C or reach above 30°C
- Store in dry conditions with original unopened packaging
- Never Store chemical containers in an environment exposed to the weather or direct sunlight

Environmental conditions

- Maintain a dry dehumidified environment and maintain the ambient temperature at a minimum of 10° F above the dew point.

MIXING

- Mix TCI 300-S components, resin (Component 'A') and hardener (Component 'B') for at least 5 minutes
- Always mix pre-weighed kits in their entirety to avoid human errors in proportioning the product components
- Mix the product in quantities according to the rate of application by the installation team
- Some settling of fillers and pigments will occur with time; therefore, thorough mixing of components containing fillers or pigments is necessary

APPLICATION

- Imbue TCI 300-S into the desired fabric (CS-850 or GS-500), ensure that the fabric is not oversaturated
- 300-S can be applied manually using trowels or mechanically using a machine
- The epoxy/fabric weight ratio shall be 1:1

This product datasheet shall be read in conjunction with CarbonStrong's CS-850 Composite datasheet.

Legal Disclaimer

Keep products containers tightly closed, keep products out of reach of children, products are not for internal consumption, products are for industrial use only, products are for professional use only. IN CASE OF EMERGENCY: Call CANUTEC +1 (613) 996-6666. Prior to each use of any product of Technical Construction Infrastructure Inc. ("TCI"), users must read and follow the warnings and instructions on the products most current product label, specification, products datasheet, products safety datasheet, and products material safety data sheet. Current safety datasheet, datasheet, and other TCI product literature can be obtained by emailing info@tcicarbonfibre.com, or by calling +1 (905) 997-5800. The information included herein is for illustrative purposes only, and to the best of our knowledge, is accurate and reliable. TCI cannot, however, under any circumstances make any guarantee of results or assume any obligation or liability in connection with the use of this information.