TriCast 10 Epoxy Resin System
Technical Data Sheet

Product Description

The TriCast 10 is a two component Epoxy Casting Resin System with high transparency suitable for shallow castings up to 10mm.

Component A is an epoxy resin, unfilled, bluish-transparent.

Component B is amine, unfilled, transparent.

Applications

The TriCast 10 is suitable for applications in art and decoration to make transparent objectsfrom 1 mm up to 10 mm such as thin inclusions, embeddings, wood surface sealing and coatings.

Resin Properties

- High transparency
- Easy mixing ratio 2:1
- Self-degassing behaviour
- Quick setting in thin layers
- Good UV resistance

Physical Properties

		Resin A	Hardener B
Components		TriCast 10 Part A	TriCast 10 Part B
Viscosity, 25 °C	mPa.s	~ 500	~ 650
Density, 23 °C	g/cm3	~ 1.12	~ 1.00
Mixing ratio	in parts by weight	100	50
	in parts by volume	100	50
		Mixture	
Colour			
Viscosity, 25 °C	mPa.s	~ 500	
Reactivity on 150 g, 25 °C	min	~ 60	

Final Hardness (50g)

Hardness after 24h @RT	~ D 55
Hardness after 7 days @RT	**~ D 80**
Hardness after 24h @RT + 16h @ 50°C	**~ D 81**

Mechanical and Thermal Values
approx. values on standard-sized specimen

			After 7 days @ RT	24h RT + 16h @50 °C
Flexural modulus of elasticity	ISO 178	MPa	1600	1600
Elongation at maximum strength	ISO 527	%	5	5
Glass transition temperature (TMA)	ISO 11359-2	°C	53	53

Processing Data

- Room temperature is the most important parameter to be successful in TriCast 10 casting. There is a link in between room temperature (RT), thickness of cast resin and curing speed. A speed curing caused by warm RT creates high exothermic reaction and cured resin could be yellow with streaks on top.
- In thin layers – coating (1 to 5 mm) a warm room (25 – 30 °C) is advised to speed up curing and get best properties.
- Mixing should be done by hand or with an electric mixer. Be careful not to incorporate too much air while mixing. Emulsion must be avoided.
- After a primary mixing in a bucket pour the product in a second bucked and finish the mixing. Scrap well the walls of the mixing container. Prior to casting the mixing can be left for self-degassing for maximum 10 minutes. Alternatively, the mixing can be evacuated in a vacuum chamber.
- According to long pot life and low viscosity the casting frame must be perfectly tight. Brown PE packing tape is self-releasing from the resin and could be used in corners of the box and anywhere resin should not bond on support.
- A liquid or pasty wax could be also used to prevent bonding on models and supports. The wood or porous surfaces of models must be sealed before casting the resin. Quick setting epoxy or a varnish could be used but sealer must be cured prior to casting of the resin.
- After casting and some relaxation time the remaining bubbles can easily be removed with a hot airstream gun (sweep the surface at 15 – 20 cm of distance).
- A thin sanding and polishing are almost always needed to get shiny and flat surface. Use appropriate tools in order to avoid heat on the resin when polishing. Water sandpaper is advised.
- Polishing paste on a buffer is giving the best finishing. Do not heat up too much the casting layer when polishing in order to avoid marks.

Storage Conditions

Shelf life

- TriCast 10 Epoxy Resin System Component A: 12 months
- TriCast 10 Epoxy Resin System Component B: 12 months

Storage temperature:

- TriCast 10 Epoxy Resin System Component A: 15 – 25°C
- TriCast 10 Epoxy Resin System Component B: 15 – 25°C

Crystallization

- After prolonged storage at low temperature, crystallization of A (RESIN) component may occur.
- This is easily removed by warming up for a sufficient time to a maximum of 70 °C.
- Allow to cool to requested processing temperature before use.

Opened packages

- Containers must be closed tightly immediately after use to prevent moisture and dust ingress. The residual material needs to be used up as soon as possible.

Further Information

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Tricel Composites Technical Department. Copies of the following publications are available on request: Safety Data Sheets

Basis of Product Data

All technical data stated in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Health and Safety Information

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

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