

Bondone Clear Cast

Ambient curing epoxy casting system — glass-like transparent casting

Product Information

Product Name	Bondone Clear Cast
Brand	Bondone (DCM Shriram / HSCL)
Type	Two-component, modified, low viscosity epoxy casting system
Description	Clear epoxy system with excellent optical properties, negligible shrinkage on curing. Faster productivity at higher temperature (~40°C).
Shelf Life	Resin: 12 months Hardener: 12 months from manufacture
Packaging	Resin: 9 kg jerry can, 27 kg carboy, 200 kg HDPE drum Hardener: 3 kg, 9 kg jerry can, 200 kg HDPE drum

Features & Applications

Features	Applications
Glass-like transparent casting with good hardness	Table top application
Good wetting properties & high gloss finish	Clear casting articles and decorative parts
Long pot life (300-370 min)	Handicrafts and decorative arts
Resistance to water and chemicals	Lamination applications
Negligible shrinkage on curing	Deep pour river tables

Product Specifications

Property	Unit	Standard	Resin	Hardener
Appearance	—	HTP-1	Clear liquid	Clear liquid
Color	APHA	ASTM D1209	Max 30	Max 40
Viscosity @ 25°C	mPas	ASTM D2196	3,000-4,000	10-25

Product Performance Data

Property	Unit	Standard	Value
Mixing Ratio (R:H)	Pbw	NA	3 : 1
Mix Viscosity @ 25°C	mPas	ASTM D2196	500-800
Pot Life (100 gm @ 25°C)	Minutes	ASTM D2471	300-370
Peak Exotherm Temperature	°C	ASTM D2471	Max 55
Hardness	Shore D	HTP-22	75-80
Tg, RT curing 24 hrs	°C	DSC	55-60
Tg, post cure 50°C/18 hrs	°C	DSC	60-65
Tg, post cure 80°C/3 hrs	°C	DSC	70-75

Application Guidelines

1. Mixing	Mix resin and hardener in 3:1 ratio by weight. Mix thoroughly manually or mechanically until no haziness or streaks remain. Scrape sides and bottom of mixing pot.
2. Degassing	Apply vacuum to remove air from the mix just prior to pouring. Mix small quantities at a time to avoid exotherm.
3. Pouring	Pour into mould (hard or silicone rubber). Can be carried out by gravity or under vacuum. Does not trap air easily when used properly.
4. Curing	Ambient temp: 20-35°C, humidity < 65%. Excessive humidity, low daylight, and temp < 20°C retard cure. Monsoon season may affect performance.
5. Post Cure	For faster productivity, cure at higher temp (~40°C). Post-cure at 50°C/18 hrs or 80°C/3 hrs for max Tg.

Safety & Storage

Safety	Wear PPE. Avoid contact with eyes and skin. Wash off immediately with warm water. Avoid breathing vapours. Refer to SDS.
	Hardener fumes — keep sealed. Temperatures below 15°C and humidity > 80% retard cure and cause blush. Warm resin and hardener before mixing in cold conditions.