(Technical data sheet)

HSC 2500
(Casting Resin)

Product Description

HSC 2500 is solid epoxy resin based of Bis-Phenol A for electrical insulation applications.

Key Properties

- The resin offers superior mechanical, electrical and thermal endurance properties along with good resistance to atmospheric conditions when used with anhydride hardener.

Applications &

- Indoor electrical insulators for medium/ high voltage like post insulators
- Bushings, Instrument transformers
- Dry type distribution transformers, Switch gears

Product Specification	Units	Reference Standard	Value
Appearance	Visual	HTP-1	Solid Epoxy Resin
Color	Gardener	ASTM D 1544	Max 3
Viscosity @ 25°C (40% Butyl Carbitol)	mPas	ASTM D 2196	70-90
Epoxy Equivalent Weight	gm/eq.	ASTM D 1652	345-385
Density	g/cc	HTP-6	1.1-1.3

Mixing

Casting resin with anhydride hardeners generally needs long working time. All components need to be mixed properly at room temperature or slightly higher temperature; vacuum may be used to assist mixing. Ensure proper filler wetting takes place which will result in right processing viscosity needed for application. The proper mixing will ensure better flow properties thus reducing tendency to shrink which enhances mechanical, thermal properties and improvement in partial discharge behaviour for high voltage applications.

For plants that require a resin and hardener feed can mix resin, flexibilizer and filler on one side (Part A) while hardener and accelerator on other side (Part B) and can store at slightly elevated temperatures of 50°C and above for 3-5 days. Prolonged storage of resin along with fillers causes precipitation. Hence it is advisable to mix fillers before preparation. Materials to be thoroughly mixed prior usage including bottom of the container. Uneven mixing will affect the final cured properties.

Filler need to dried for removal of moisture prior to use. We recommend salinized silica which assist in proper bonding of organic material (epoxy) with inorganic part (silica). Air release agents/ Defoamer can be used if mixing generates exorbitant air bubbles.

Mixing time depend on temperature, mixing equipment and quantity taken. Vacuum required for application should be between 0.5bar to 5bar.

Curing

Once all the components are mixed, they need to transferred in pre-heated moulds, they are cured at specified temperature and post cured for achievement of properties and subsequently cooled for specified number of hours before demoulding.

We recommend use of a good mould release agent which should be sprayed or brushed properly on mould before transferring of epoxy material which assists in proper demoulding.

Mould temperature	
Conventional vacuum casting	100 - 130°C
Demoulding times (depending on mould temperature and casting volume)	
Conventional vacuum casting	5 - 10h
Cure conditions (minimal post-cure)	
Conventional Vacuum Casting	10-20h at 130-140°C

Processing and Storage

Packing

HSC 2500 is available in packing of 25 Kg drums.

Safety & Handling

Following instructions needs to be followed strictly.
Keep working conditions clean. Allow fresh air in, if possible, provide ventilator. Avoid contact with human body directly, wear gloves and other personal protective equipment especially dust masks or respirators. Wash hands carefully with soap. If possible, wash with acetone and alcohol first, then soap and water. In case of eye contact, wash with running water for 15 minutes and then seek medical treatment.

Refer MSDS for better instruction on Safety & Handling

Storage Conditions

HSC 2500 should be stored at room temperature free of moisture, in the original containers kept tightly closed at temperatures between 5-35°C. Container once opened should be tightly closed to avoid contamination by foreign materials. The shelf life of the resin is 24 months

Disclaimer

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