



Aditya Birla Chemicals (Thailand) Ltd. (Epoxy Division)

EPOTEC YDC 6001 / TH 7656

Hot Curing EPOTEC Casting Resin System

YDC 6001 100 Pbw
TH 7656 30 Pbw
Silica flour 200 Pbw

Description

EPOTEC YDC 6001 is semi solid, low molecular weight DGEBA resin designed for electrical casting applications.

EPOTEC TH 7656 is a solid anhydride hardener, which melts at 130 - 132 °C.

When hardener and filler are mixed with resin and casted under vacuum, excellent mechanical and electrical properties with good resistance to thermal shocks can be achieved. This system also provides fairly good resistance to mechanical and electrical stress and suitable to withstand 130 °C temperature in continuous use.

Processing

- Recommended for conventional vacuum castings.

Applications

Large insulation parts for medium and high voltage applications such as switchgear components, bushings, post insulators as well as instrument and dry type distribution transformers. This system is recommended where low exothermic heat is required.

Typical Properties**EPOTEC YDC 6001**

Property	Test Method	Unit	Specification
Epoxy equivalent weight (EEW)	DIN 16945/4.15B (89) TEC-AS-C-002	g / eq	360 - 420
Melt viscosity @120 °C	ASTM D 4287 (88) TEC-AS-P-003	cPs	300 - 500
Color Gardner	ASTM D-1544 (89) TEC-AS-P-006	Gardner	1 Max.

EPOTEC TH 7656

Property	Test Method	Unit	Specification
Appearance	Visual	-	White crystalline solid
Specific gravity @ 25 °C	TEC-AS-P- 004	-	1.50 - 1.55
Melting point	TEC-AS-P- 008	°C	130 - 132

Casting Mix Preparation Method

The resin is preheated to 120 °C and then silica flour is added, which has also been heated at 120 °C and mixed under vacuum. Ensure filler should be thoroughly dried at about 150 °C for 16-24 hours. This premixed resin and filler can be stored for several days at room temperature and blended with TH 7656 in vacuum for about 20 - 30 minutes at 120 °C in main mixer. Premix with hardener should be thoroughly stirred to get homogenous mass before pouring into preheated mould.

Processing Properties of System

Property	Unit	Specification
Processing temperature	°C	120 - 140
Initial viscosity of mix	cPs / °C	1,900 / 120 500 / 140
Pot life of mix 5 kg	Hr / °C	6 / 120
Gel time	Min / °C	780 / 110 330 / 130 150 / 150
Minimum post cure	Hr / °C	16 / 140 10 / 150

Properties of Casting

Property	Test Method	Unit	Specification
Tensile strength	ISO 527	MPa	85 - 95
Tensile elongation at break	ISO 527	%	1.1 - 1.5
Flexural strength	ISO/178	MPa	135 - 145
Impact strength	ISO / R 179	KJ/m ²	15 - 22
Elastic modulus of tension	ISO 527	MPa	10,000 - 11,000
Deflection temperature (HDT)	ISO / R 75	°C	110 - 120
Density	DIN 55990	g / cm ³	1.7 - 1.8
Water absorption (60 x 10 x 4 mm) 23 °C/ 10 days	ISO / R 62	%	0.15 - 0.25
Dissipation factor 23 °C at 50 hz	IEC 60250	%	1.5 - 1.8
Arc resistance	ASTM D 495	seconds	180 - 190
Comparative tracking index	IEC 60112	Volts	> 400
Electrical strength perpendicular (2 mm thick sheet)	IEC 60243-1	KV / mm	22 - 24

Storage and Handling

EPOTEC YDC 6001 and TH 7656 can be stored up to 1 year in sealed original container.

It is also advised to follow standard procedures for handling chemicals. Contact with skin and eye may cause irritation and prolong, repetitive contact with skin may cause dermatitis.

Disclaimer

All recommendations for use of our products whether given by us in writing, verbally or to be implied from the results of tests carried out by us are based on the current state of our knowledge. Although, the information contained in this sheet is accurate, no liability can be accepted in respect of such information. We warrant only that our product will meet the designated specifications and make no other warranty either express or implied, including any warranty of merchantability or fitness for a particular purpose as the conditions of application are beyond our control.

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