



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

EPOTEC YDC 6006 / TH 7269

Ambient Temperature Cure Casting Resin System

YDC 6006 100 Pbw
 TH 7269 9-10 Pbw
 Silica* 150 Pbw

Description

EPOTEC YDC 6006 is liquid low viscosity, modified DGEBA resin, recommended for room temperature casting.

EPOTEC TH 7269 is low viscosity polyamine hardener suitable to cure at ambient temperature. It is highly reactive and should not be used in excess of the recommended mixing ratio. It is sensitive to the humidity and hence must always be stored in tightly closed containers.

When system is fully cured, possesses excellent electrical insulation properties and high mechanical strength. It also adheres to inserts and hence provides a leak-proof barrier to humidity and offers excellent protection to sensitive components, which it encapsulates.

Application

This system is recommended for potting, casting or encapsulation of small low voltage electrical and electronic components.

Typical properties**EPOTEC YDC 6006**

Property	Test Method	Unit	Specification
Epoxy equivalent weight (EEW)	DIN 16945/4.15B (89) TEC-AS-C-002	g / eq	220 - 240
Color gardner	ASTM D-1544 (89) TEC-AS-P-006	Gardner	Max. 1
Viscosity @ 25 °C	JISK 7233	cPs	1000 ± 300
Specific gravity @ 25 °C	TEC-AS-P-004	-	1.05 - 1.15

EPOTEC TH 7269

Property	Test Method	Unit	Specification
Appearance	visual	-	Clear pale yellow liquid
Specific gravity @ 25 °C	TEC-AS-P-004	-	0.93 - 0.99
Viscosity @ 25 °C	JISK 7233	cPs	10 - 40

Casting mix preparation method

Preheat filler at 150 - 200 °C for 24 hours and cool to ambient temperature. Add desired quantity of filler into resin and mix thoroughly at room temperature. This premix can be stored for longer period of time. Hardener should be added in premix at room temperature just before pouring into mould.

Processing properties of system

Property	Unit	Specification
Processing temperature	°C	15 - 30
Initial viscosity of mix	cPs / °C	8,500 / 25
Pot life of mix	min / °C	25 / 25
Gel time	min / °C	100 ± 10 / 25
Post cure	Hrs / °C	6 / 80

Properties of casting

Property	Test Method	Unit	Specification
Tensile strength	ISO 527	MPa	35 - 45
Tensile elongation at break	ISO 527	%	2 - 4
Flexural strength	ISO 178	MPa	90 - 100
Impact strength	ISO / R 179	KJ/M ²	7 - 10
Elastic modulus of tension	ISO 527	MPa	15,500 - 16,000
Deflection temperature [HDT]	ISO /R 75	°C	65 - 70
Coefficient of linear thermal expansion	DIN 53752	°K ⁻¹	45 - 50 x 10 ⁻⁶
Thermal conductivity	ISO 8894-2	W/m-k	0.608
Density	DIN 55990	g / cm ³	1.6 - 1.7
Water absorption (60 x 10 x 4 mm) 23 °C/ 10 days	ISO / R 62	%	0.4
Dissipation factor 23 °C at 50 hz	IEC 60250	%	3 - 4
Dielectric constant at 25 °C	IEC 60250	-	5.2 - 5.7
Arc resistance	ASTM D 495	Sec.	180
Comparative tracking index (CTI)	IEC 60112	Volts	400
Electrical strength Perpendicular (2 mm thick sheet)	IEC 60243-1	KV / mm	18 - 22

Storage and handling

EPOTEC YDC 6006, TH 7269 can be stored up to 1 year in sealed original container. Storage condition below 15 °C may cause crystallization of the resin. Crystallization may be reversed completely by heating the material to 50 - 60 °C. It is advised to use resin and hardener only when they are clear and free from cloudiness.

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

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