Isopreg® EP 2047

Description

Isopreg® EP 2047 consists of E-glass cloth impregnated with a special epoxy resin in B-stage.

Properties

Isopreg® EP 2047 is a dry prepreg which can be laminated under pressure and temperature to form rigid plates or moulded parts. After curing the material is resistant against oil, solvents and water.

Application

Isopreg® EP 2047 is used for the production of moulded parts such as L and U channels for turbo rotors, for the fabrication of tubes and cylinders for transformers and switch gear or for the insulation of different parts of electrical equipment where the prepreg is directly pressed to the parts which are to be insulated.
The processing conditions need to be altered empirically to suit the application.

Availability

Rolls, Tapes on Request

Nominal Thickness:	0.12mm	:	max. Width 1240mm
	0.23mm	:	max. Width 1200mm
	0.26mm	:	max. Width 1080mm
	0.35mm	:	max. Width 1140mm
Standard Length:	50 metres		

Shelf Life and Storage

6 months Minimum Shelf Life when stored at 20°C & 50% relative humidity.
12 months Minimum Shelf Life when stored at 5°C

Tapes and rolls should always be stored in sealed polythene plastic away from heat and direct sunlight

Curing Conditions

2 hours at 160°C
4 hours at 150°C

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Technical Data (uncured, as delivered)

Properties	Test Method	Unit	Values			
Nominal Thickness		mm	0.12	0.23	0.26	0.35
Total Substance	IPV 004	g/m²	180 ± 10	300 ± 20	360 ± 20	462 ± 25
Glass Content		g/m²	108 ± 5	163 ± 8	200 ± 10	280 ± 10
Resin Content	IPV 018	g/m²	72 ± 5	137 ± 12	160 ± 10	182 ± 10
Resin Flow (9 layers 10 min. 160°C 1N/mm²)	IPV 008	%	15 ± 3	15 ± 3	15 ± 3	20 ± 5
Gel Time at 150°C	IPV 005	min	2 - 3	2 - 3	2 - 3	2 - 3

Technical Data After Pressing

Properties	Test Method	Unit	Values			
Nominal Thickness		mm	0.12	0.23	0.26	0.35
Breakdown Voltage (1 layer)	IEC 60243	kV	≥ 0.4	≥ 1.0	≥ 1.0	≥ 1.0
Density	ISO 1183	g/cm³	1.7 - 1.9			
Loss Factor at 50Hz	IEC 60250		ca. 0.005			
Spec. Volume Resistance	IEC 60167	Ohm cm	$\geq 10^{13}$			
Martens Stability	DIN 53462	°C	≥ 200			
Flexural Strength	ISO 178	N/mm²	≥ 350			
Coefficient of Thermal Expansion		1/k	$1\text{-}2 \times 10^{-5}$			
Tracking Resistance	IEC 60112		CTI 180			
Thermal Classification	IEC 60216		180°C (H)			

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