ISOVAL® RKB-FR

Composition

ISOVAL® RKB-FR is prepared from glassroving fabric impregnated with a special tracking resistant and flame retardend epoxy resin. Laminates exhibit excellent mechanical strength and good electrical insulation behaviour.

Application

ISOVAL® RKB-FR is used as an electrical insulation material in those areas where high mechanical and electrical strength is required, for example for shift rods in medium voltage switches.

Machining recommendation

Due to the strength and hardness of the laminate and also the high glass content the tools used can be subject to a great degree of abrasion. We therefore advise that only diamond carbide tipped tools and high speed machinery are used.

Toxicity:	ISOVAL® RKB-FR is free of halogens, antimony, nitrogen, phosphor and sulphur.	
Corrosiveness:	acc. to VE 0472 / part 813 the conflagration gases of ISOVAL® RKB-FR are non-corrosive.	
Availability:	Thicknes:	1 to 30 mm
	Thickness tolerance:	according DIN 40606 (as Hgw 2370.4)
	Sheet size:	1040 x 1040 mm
		2140 x 1040 mm
	Tolerances:	+30/-0 mm

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A Constantia INDUSTRIES Company

Technical Data

Properties according IEC 60893	Testmethod	Unit	Value
Density	ISO 1183 / A	g/cm³	approx. 1.95
Flexural strength	ISO 178	MPa	450
Flexural modulus of elasticity	ISO 178	MPa	> 18000
Compressive strength perpendicular to laminations	ISO 604	MPa	> 500
Impact strength (Charpy) parallel to laminations	ISO 179 / 3 C	kJ/m²	> 50
Tensile strength	ISO 527	MPa	280
Electric strength at 90°C in oil perpendicular to laminations (thickness 3mm)	IEC 243	kV/mm	> 12
Breakdown voltage at 90°C in oil parallel to laminations	IEC 243	kV	40
Permittivity at 50 Hz and 1 MHz	IEC 250	-	< 5.5
Dissipation factor at 50 Hz and 1 MHz	IEC 250	-	< 0.04
Insulation resistance after immersion in water	IEC 167	Ohm	$> 10^{12}$
Comparative tracking index	IEC 112	-	CTI 600 M
Thermal endurance	IEC 216	T.I.	155
Water absorption (thickness 10 mm)	ISO 62 / 1	mg	20
Electrolytic corrosiveness	DIN 53489		AB 1
High voltage arc resistance	ASTM D 495	sec.	180
Flammability (vertical burning test, 5 mm test laminate)	UL 94		V0
Limiting oxygen index: LOI	ASTM D 2863		54

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