

Product Data Sheet EP GC 103 S30

It fulfills all the requirements concerning EP GC 203 EP GC 311
the types according to DIN EN 60893-3-2 EP GC 204 EP GC 306

Property	Method of testing	Unit	max. or min.	Ref. Value IEC 60893-3-2	Test value (median)
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Mechanical properties

Flexural stress at rupture perpendicular to laminations	ISO 178 150 °C 180 °C	MPa	min.	340 170	397,88 290,9 224,97
Apparent modulus of elasticity in flexure	ISO 178 150 °C 180 °C	MPa	min.	22000*	26065 21135 18885
Compressive strength perpendicular to laminations	ISO 604	MPa	min.	350*	523,36
Impact strength (Charpy) parallel to laminations	ISO 179/3C	kJ/m ²	min.	50	92,51
Tensile strength	ISO 527-4	MPa	min.	300*	356,95

Electrical properties

Electric strength at 90°C in oil perpendicular to laminations	IEC 60243-1	kV/mm	min.	10,2**	13,56
Breakdown voltage at 90°C in oil parallel to laminations	IEC 60243-1	kV	min.	45	80
Insulation resistance after immersion in water	IEC 60167	MOhm	min.	50.000	247.700
Proof tracking index PTI	IEC 60112	PTI			600 M
Comparative tracking index CTI	IEC 60112	CTI	min.	600*	600 M

other properties

Thermal endurance	IEC 60216	T.I.		155*	178
Density	ISO 1183	g/cm ³		1,8 - 2,0*	1,943
Water absorption, absolute	ISO 62	mg	max.	23***	14,60

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Certifications Underwriter Laboratories



Flammability	E307596	IEC 60695-11-10	UL 94		V-0	V-0
Hot-wire Ignition	E307596	UL746A	HWI			0
High Amp Arc Ignition	E307596	UL746A	HAI			0
Relative Temperature Index	E307596	UL746A	RTI			130

Fire testing at DIN EN 45545-2:2013

					R22 HL 3	2 mm
Oxygen index	T01	EN ISO 4589-2	Vol. %	min.	32	32,2
Smoke density D _s max	T10.3	EN ISO 5659-2		max.	150	255 (HL 2)
Smoke toxicity CIT _{NLP}	T12	NF X 70-100		max.	0,75	0,04

Fire testing at DIN EN 45545-2:2013

					R23 HL 3	25 mm
Oxygen index	T01	EN ISO 4589-2	Vol. %	min.	32	32,7 (PK IV) ¹
Smoke density D _s max	T10.3	EN ISO 5659-2		max.	300	255
Smoke toxicity CIT _{NLP}	T12	NF X 70-100		max.	1,5	0,04

Glowing/hot-wire based test methods

Glow-wire flammability index GWFI	DIN EN 60695-2-12				960/3,0
Glow-wire ignition temperature GWIT	DIN EN 60695-2-13				930/3,0

Base material Woven glass cloth
Matrix resin: Epoxy (epoxide)
Compound: halogen free

* Typical values as per IEC 60893-4. They shall not be considered as specification requirements.

** for thickness $\geq 3,0$ mm

*** for test specimens 50 x 50 x 4 mm

Test values are derived from an average type test

1 self-supporting moulding or sheet materials, for electrical purposes

RoHS- Declaration

This material does not contain any substances of very high concern as listed in the EU directive 2011/65/EU, article 4, paragraph 1