

## Product Data Sheet UP GM 203

Property	Method of testing	Unit	max. or min.	Ref. Value IEC 60893-3-5
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### Mechanical properties

Flexural stress at rupture perpendicular to laminations	ISO 178	MPa	min.	<b>130</b>
Apparent modulus of elasticity in flexure	ISO 178	MPa	min.	10000*
Compressive strength perpendicular to laminations	ISO 604	MPa	min.	220*
Impact strength (Charpy) parallel to laminations	ISO 179/3C	kJ/m <sup>2</sup>	min.	<b>30</b>
Shearing strength parallel to laminations	VDE 0318/2	MPa	min.	20*
Tensile strength	ISO 527-4	MPa	min.	70*

### Electrical properties

Electric strength at 90°C in oil perpendicular to laminations	IEC 60243-1	kV/mm	min.	<b>9,0**</b>
Breakdown voltage at 90°C in oil parallel to laminations	IEC 60243-1	kV	min.	<b>35</b>
Insulation resistance after immersion in water	IEC 60167	MOhm	min.	<b>500</b>
Proof tracking index PTI	IEC 60112	PTI		<b>500</b>
Comparative tracking index CTI	IEC 60112	CTI	min.	
Tracking and erosion resistance	IEC 60112	Klasse	min.	

### other properties

Thermal endurance	IEC 60216	T.I.		155*
Density	ISO 1183	g/cm <sup>3</sup>		1,8 - 1,9*
Water absorption, absolute	ISO 62	mg	max.	<b>63***</b>

### Fire behaviour and fire side effects of materials and parts DIN 5510 – 2

flammability group	DIN 5510 T.2	class		S 4
smoke emission class	DIN 5510 T.2	class		SR 2
drop forming category	DIN 5510 T.2	class		ST 2

Base material: glass mat  
Matrix resin: Unsaturated polyester

\* Typical values as IEC 60893-5. They shall not be considered as specification requirements.

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

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

### 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