Laminates

PARA-LITE PGR 20

- **High pressure laminate with very high impact strength. Therefore, suitable for ballistic applications**
- **Low smoke emission in case of fire. Applicable as fire protection in construction sector**
- **Certified acc. to EN 45545-2: 2020-02, R1**

General description
PARA-LITE PGR 20 is a laminate based on special phenolic resin and E-glass roving.

Color
Yellow brown

RoHS Directive
Hazardous products listed in the EU-directive 2011/65/EU (RoHS-directive), annex II, are not used as ingredients in this material.

Application
Ballistic protection
Construction sector

Form of delivery
Sheet formats
2070 x 1070 mm
4200 x 1250 mm
Tolerance of formats 0 / - 30 mm

Thickness in range of 0.5 to 30 mm
Thickness tolerances to be agreed

Material available as cut to size panels and machined parts. Other dimensions and thicknesses on request.

Machining
Machining with carbide or diamond tools.

For water jet cutting we recommend adding silica sand to the water and to drill through-holes prior to machine.

	Unit	Value	Test norm
Mechanical properties			
Flexural strength at 23°C	MPa	220	ISO 178
Modulus of elasticity at 23°C	MPa	22000	ISO 178
Impact strength (Charpy), //	KJ/m²	350	ISO 179
Compressive strength ⊥, at 23°C	MPa	550	ISO 604
Tensile strength	MPa	350	ISO 627
Thermal properties			
Temperature index	°C	120	IEC 60216
Thermal conductivity	W/ m K	0.6	DIN 52612
Coefficient of thermal expansion	10E-6/ K	15	VDE 0304
Physical properties			
Density	g/cm³	2.15	ISO 1183
Water absorption	mg / %	200 / 0.70	ISO 62
Other properties			
Flammability	V-0	≥ 5 mm	UL 94

STANAG 2920 – 1,1g Splinter	V-50 (m/s)	Distance (m)	Areal weight (kg/m²)
Material thickness			
6 mm	470	2.5	12,9
9 mm	655	2.5	19,3
10 mm	730	2.5	21,5
15 mm	1050	2.5	32,3

Standard EN 1522	Caliber	Velocity (m/s)	Thickness (mm)	Areal weight (kg/m²)
FB 1	.22 LR	360	4	8,3
FB 2	9mm Luger	400	7	15,0
FB 3	.357 Magnum	430	10	21,5
FB 4	.357/.44 Magnum	430/440	10	21,5
FSG	Brenneke (L)	420	13	28,0

VRIR 03/2026

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