

Thermopressed Multilayer Boards

In the production of high-performance thermoplastic composites, the **matrix materials** polypropylene (PP), polyamides (PA), polyphthalamides (PPA), thermoplastic polyester (PBT), polyphenylene sulfide (PPS) and polyethylene (HDPE) are reinforced with woven or nonwoven fibres (**glass/carbon fiber technology**). The outcome are innovative composites featuring cross sections with excellent mechanical properties and high rigidity despite low energy absorption. The product is mouldable and can serve as a substitute for steel, aluminium, magnesium, for example, or as extra reinforcement for other materials.



Advantages:

- Realisation of a variety of surface finishes
- Materials with optimal physical and technical properties, depending on the selected thermoplastic
- Thermoplastic combinable with metal inlays or fibrous materials
- Light weight advantages
- High shape retention on exposure to heat and good dimensional stability with only minimal distortion, depending on the selected thermoplastic
- Relatively tension-free production
- Processing of high-temperature materials
- High elongation at break and elastic energy absorption
- Fiberglass shows outstanding corrosion behaviour even in aggressive environments
- Flame-retardant
- Weldable
- plasticizer-free (DIN EN ISO 11833-1)
- Shape retaining



KAROTEC / Carbon Fiber Composite

This carbon fiber composite material is used as a blank or panel material in orthopedics.

- Thermal deformability at 165°C / 170°C
- Tests
ISSF 7.5.2.3 für $t = 1,5$ & $1,9$ mm
- Tensile test DIN EN ISO 527 at 1,9mm
Tensile strenght: 311,36 MPa
- Bending test: DIN EN ISO 178 at 1,9mm
Bending stress: 760,77 MPa
- Charpy impact test: ISO 179-1/1eUb at 1,9 mm
Impact strength notched: 213 KJ/m²

Availability in blanks or panel material

- in individual thicknesses from 1 mm
- Panel size 1,200 x 2,470 mm

Kontakt

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