

EXEL EXTENS™ CARBON FIBRE STRENGTHENING PLATE



CARBON FIBRE PLATES STRENGTHENING THE STRUCTURE

Utilizing UD carbon fibre plates gives significant advantages over traditional metal plate bonding.

The material is easy to handle and apply by hand and has better properties than e.g. competing steel plates.

Exel produce plates with a peelply surface to enhance bonding properties and protect from contaminants.

The plates are extensively tested in Exel laboratories and can be delivered on coils or cut to length.

IMPORTANT PROPERTIES

- High characteristic stiffness
- High characteristic strength
- Low weight
- Excellent adhesion properties
- Long continuous lengths
- Fast deliveries
- Ensured quality control

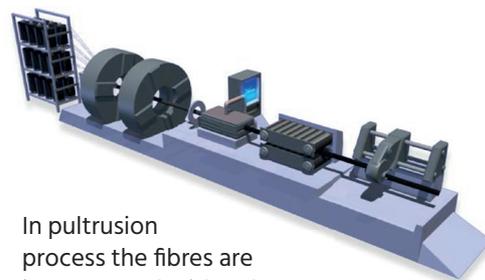
STANDARD GRADES

Three standard grades are offered with different stiffness characteristic covering most applications.

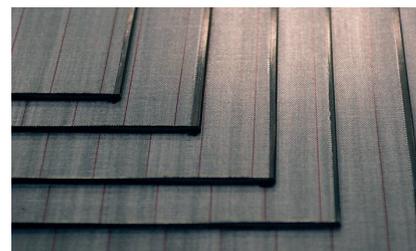
TYPICAL APPLICATIONS:

- reinforcement of concrete structures such as bridges, buildings and silos
- preservation and reinforcement of historic monuments

PRINCIPLE DRAWING OF PULLWINDING PROCESS



In pultrusion process the fibres are impregnated with a thermoset resin and pulled through a heated die where curing takes place. The products are cut to length at the end of production line.



TECHNICAL DATASHEET

| | | | |
|---------------------------------------|--|-----------|------------|
| Manufacturing Method | Pultrusion | | |
| Structure | Unidirectional fibres | | |
| Materials - fibre type | Carbon fibre | | |
| Materials - resin type | Vinylester or epoxy | | |
| Fiber volume content | 68 v-% | | |
| Dimension range: thickness | 1,2 mm, 1,4 mm Special dimensions available on request, thickness 1– 8 mm | | |
| Dimension range: width | 50 mm, 80 mm, 100 mm, 120 mm | | |
| Colours | Black, peelply (optional) | | |
| Density | 1.6g/cm3 | | |
| Surface finish | Peelply (plain available on request) | | |
| Grades | HS | HM | UHM |
| Tensile modulus, longitudinal | 150 GPa | 250 GPa | 360 GPa |
| Tensile strength, longitudinal | 2800 MPa | 2000 MPa | 1500 MPa |
| Elongation at break | 1,9% | 0,8% | 0,4% |

Non stock item, typical production quantity for EXEL EXTENS products is 500-5000 meters/batch

