

KRAIBON[®] Fire

Description

Calendared EVA-based film on 0.5 mm x 500 mm for direct bonding to epoxy pre-pregs. The material is optimized for applications with high fire safety requirements and meets the specifications of railway standard EN 45545-2:2016 at the highest performance class R1 HL3.

Application

- Direct bonding on
 - Carbon fibre reinforced plastic pre-pregs (CFP)
 - Glass fibre reinforced plastic pre-pregs (FRP)
 - Natural fibre reinforced plastic pre-pregs (NFP)
 - etc.
- EN 45545-2 R1 HL3 applications
- To improve the impact behaviour
- To improve the fragment binding when broken
- To improve the component acoustics
- Achievement of a ductile failure pattern
- Avoidance of contact corrosion
- Constrained Layer Damping (CLD)

Processing guidelines

Finishing

KRAIBON[®] can be cut with a cutter, scissors, jet water or a die cutter. Cooled material is easier to cut.

Like pre-preg, **KRAIBON[®]** is inserted, doubled and draped. During the liquid time (t₁₀), the material flows into the desired shape under pressure and can therefore also be formed into complex contours. To do this, the film only has to be finished roughly. The malleability and tack (stickiness) can be brought to the desired level by heating (not above 100°C) using a hot-air gun / heat channel or similar.

Our processing guidelines are based on our experiences and merely represent a technical description of our products. They do not release the buyer from their obligation to check the product for their purposes and processes. Long-term storage by freezing is not covered by the warranty.

Hardening

Vulcanization conditions / mixture hardening times

Temperature (°C)	Absolute pressure (bar)	Processing time or liquid time t_{10} (min)	Hardening time t_{90} (min)
100	1.2	6.9	287.0
130	2.7	0.8	28.0
140	3.6	0.7	8.0
150	4.8	0.5	4.0
160	6.2	0.3	2.2
170	8.2	0.2	1.7

The stated hardening times are minimum values. Longer hardening cycles lasting up to around five times the stated hardening time are not critical.

Contact with oxygen during the hardening process must be avoided as it inhibits vulcanization and leads to an uncured and sticky surface.

To avoid porousness in the elastomer, the minimum total pressure stated in the table should be adhered to. The pressure in the vacuum bag and the external pressure, e.g. from the autoclave, must be added to this.

Storage

If stored in accordance with DIN 7716, we guarantee a shelf life of 3 months. The calendar rolls must be stored in a suspended position to prevent pressure points or to make it less difficult to loosen the film.

Freezing the material significantly prolongs the shelf life. When thawed, penetration of condensation must be prevented.

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