Requirement-specific system solutions with the highest level of fire protection – consisting of non-crimp-fabrics, resins, gelcoat and optional core material. The **SAERTEX LEO® SYSTEM** is particularly suitable for structural parts with complex shapes in the areas of rail vehicles, shipbuilding and the construction industry. Produced by vacuum infusion and RTM.

1. **Fire protection according to EN 45545-2**
   LEO® meets international fire protection standards and conforms to DIN SPEC 91326. // Reproducible fire retardancy that is uniform across the entire component.

2. **Lightweight material with excellent mechanical properties**
   Allows for lower weight and reduced material thickness. // Rigidity, tensile strength and bending characteristics that are many times better than conventionally produced components.

3. **Weather resistance**
   Excellent weather resistance. // Meets the requirements of the Cataplasme test according to NF EN 13523–27. // Special composition minimizes the effects of the weather to the paint surface. // Flawless surfaces over long periods of time even with thin paint layer, thus reducing maintenance and repair costs.

4. **High economic efficiency**
   Lowest possible material input. // Labour-cost-efficient manufacturing processes such as standardized infusion technology. // Production of components without time-consuming intermediate curing of individual layers.

5. **Toxicological safety**
   Free of halogens and toxicologically safe. // No release of toxic substances in the event of a fire. // Smoke generation is minimal.

6. **Global availability**
   Partnership with SCOTT BADER provides combined-performance for applications with the highest fire protection requirements. // High-quality consulting and fast availability. // Materials of the LEO SYSTEM are perfectly matched to one another. // Both companies are active worldwide.
SAERTEX LEO® SYSTEM – STANDARDS

The LEO SYSTEM is tested according to international fire protection standards and uniquely combines the highest level of fire protection with top mechanical performance and minimum component weight.

DIN EN 45545-2 (2-2016)

RAIL VEHICLES

HL2 for R1 / R7 / R10 / R17 in various glass and carbon bodywork applications
HL3 for R10 as carbon sandwich
Results with different paints available

SAERTEX LEO® SYSTEM – WEATHERING TEST

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Requirements</th>
<th>2-LAYER PAINT (BECKERS)</th>
<th>3-LAYER PAINT (BECKERS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross cut test (EN ISO 2409)</td>
<td>Quotation: ≤ 1</td>
<td>Qt = 0 ✓</td>
<td>Qt = 0 ✓</td>
</tr>
<tr>
<td>Cataplasm (NF EN 13523-27)</td>
<td>7 days – 60 °C</td>
<td>Blistering: ≤ 3(S2) or 2(S3)</td>
<td>0(S0) ✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cross cut test after 24 hrs: Qt ≤ 2</td>
<td>Qt = 1 ✓</td>
</tr>
<tr>
<td>Humidity resistance (DIN EN ISO 6270-2)</td>
<td>480 hrs – 40 °C</td>
<td>Blistering: ≤ 0(S0)</td>
<td>0(S0) ✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cross cut test after 24 hrs: Qt ≤ 1</td>
<td>Qt = 1 ✓</td>
</tr>
<tr>
<td>Corrosion Cycle (DIN EN ISO11997-1 cycle B)</td>
<td>6 cycles</td>
<td>Blistering: ≤ 0(S0)</td>
<td>0(S0) ✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cross cut test after 24 hrs: Qt ≤ 1</td>
<td>Qt = 1 ✓</td>
</tr>
</tbody>
</table>

HLU with standard PES

1,850 °C
3,362 °F
3 min

SAERTEX LEO®

1,850 °C
3,362 °F
3 min

Example of a laminate with LEO fire protection

The above information is based on our current knowledge and experience. Due to the multitude of possible influences during processing and application of our products, this does not relieve processors from the responsibility of carrying out their own tests and trials. A legally binding assurance of certain properties or suitability for a specific application cannot be derived from this information.