PHENOLIC BAKELITE WOVEN COTTON FABRIC HGW 2082

Phenolic woven cotton fabric HGW 2082 consists of a base of layers of cotton cloth impregnated with phenolic resin. The material can be used for applications up to 120°C. A combination of temperature resistant phenolic resin and woven cotton fabric, HGW 2082 displays excellent wear resistance and weatherability. Examples of typical usage are applications exposed to high mechanical loads such as bushings, guide rings for hydraulic, gliding bearings, structural materials exposed to weak acids at elevated temperatures, etc.

- Compliant with: DIN 7735 – HGW 2082, IEC 60893 – PF CC 201
- Good resistance against oils and greases, weak acids
- Very good weatherability and resistance against salt water
- High wear resistance
- Good temperature properties
- Good mechanical machining properties

PRODUCT INFORMATION

Phenolic Bakelite woven cotton fabric HGW 2082 is made from a base cotton cloth layers bonded with phenolic resin. The material can be used for applications up to 120°C. Excellent wear resistance combined with low friction and high chemical resistance even when exposed to high temperatures render HGW 2082 suitable for many applications where challenges and constraints have to be resolved.

Applications

Examples of typical usage are applications exposed to high mechanical loads in combination with low-friction properties such as bushings, guide rings for hydraulic, gliding bearings, etc. Chemical resistance to weak acids make the material suitable for mechanical construction applications and for use in structural component for, amongst others, machines for galvanic plating, synthetic fibre production, etc.

Properties

- Good chemical resistance and durability against water, oils, greases and weak acids
- Very good weatherability and resistance against salt water
- Very high wear resistance
- Good heat resistance at 120°C while maintaining good mechanical properties
- Good mechanical machining properties

Composition

- Woven cotton fabric base laminated in many layers with a phenolic resin, cured under high temperature and pressure in accordance with defined industrial standards into a rigid, mechanically strong laminate.

Colour

- Brown

Dimensions

- Usual sheet size for thickness range 0.8 – 3 mm: 1220 x 1220 mm *
- Usual sheet size for thickness range 4 – 10 mm: 1220 x 2440 mm (can be divided into two sheets) *
- Usual sheet size for thickness range 12 – 100 mm: 1020 x 2040 mm (can be divided into two sheets) *
- Thickness range 0.5 – 100 mm
- HGW 2082 parts and pieces machined according to specification are available on request

* Sheet sizes may vary

Packaging

- Standard dimensions sold individually
- Usually non stock order item

Product information for which Carbex bears no responsibility is provided by the manufacturer.
PHENOLIC BAKELITE WOVEN COTTON
FABRIC HGW 2082

Technical data

Phenolic Bakelite woven cotton fabric complies with international standards:
DIN 7735 - HGW 2082, IEC 60893 - PF CC 201

Properties

<table>
<thead>
<tr>
<th>Mechanical</th>
<th>Value</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Density</td>
<td>1.4</td>
<td>g/cm³</td>
</tr>
<tr>
<td>Flexural strength perpendicular at +20°C</td>
<td>100</td>
<td>N/mm²</td>
</tr>
<tr>
<td>Flexural modulus of elasticity</td>
<td>7000</td>
<td>N/mm²</td>
</tr>
<tr>
<td>Compressive strength</td>
<td>250</td>
<td>N/mm²</td>
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<tr>
<td>Impact strength parallel to laminations</td>
<td>8.8</td>
<td>kJ/m²</td>
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<tr>
<td>Water absorption (thickness 3mm)</td>
<td>249</td>
<td>mg</td>
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<table>
<thead>
<tr>
<th>Thermal</th>
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<tbody>
<tr>
<td>Thermal endurance (Temperature Index)</td>
<td>120</td>
<td>T.I</td>
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<table>
<thead>
<tr>
<th>Electrical</th>
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</thead>
<tbody>
<tr>
<td>Dielectric strength at 90°C in oil perpendicular to laminations (thickness 3mm)</td>
<td>1.5</td>
<td>kV</td>
</tr>
<tr>
<td>Dielectric strength at 90°C in oil parallel to laminations</td>
<td>1</td>
<td>kV/25mm</td>
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<tr>
<td>Creep voltage strength</td>
<td>100</td>
<td>CTI</td>
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<tr>
<td>Insulation resistance after immersion in water</td>
<td>1</td>
<td>MΩ</td>
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</table>

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