

# laminates

## DELThERM 68890

- ▶ Asbestos free
- ▶ Low heat conductivity
- ▶ Excellent tolerances with respect to parallelism
- ▶ Easy to machine
- ▶ Long life expectancy
- ▶ Low water absorption
- ▶ Good hydrocarbon stability
- ▶ Good chemical stability
- ▶ Excellent mechanical durability
- ▶ Very good electrical properties

### General description

Von Roll offers a complete range of temperature resistant materials with well established performance.

The low thermal conductivity of our products allows to achieve substantial energy costs savings. As a result of the very low water absorption and chemical stability, there is an increased life expectancy of the thermal insulation materials offered by Von Roll.

The products are based on glass fabric, glass roving, glass mat and mica paper as well as high temperature resistant resins. Our products are free of asbestos, high temperature resistant, and possess a good mechanical resistance even at elevated temperature. From a mechanical point of view, these materials can be easily machined. In addition to our CNC capabilities in our fabrication centers, we also can drill, turn, sand and in general meet all customer requirements in our modern machining centers.

By sanding the pressed sheets, we are able to achieve tight thickness tolerances and parallelism.

Call our customer or technical departments for specific information. Our departments will be able to recommend the optimal use of the products and to provide the technical assistance you may need.

### RoHS Directive

Hazardous products listed in the EU-directive 2002/95/CE (ROHS-directive), §4 section 1, are not used as ingredients in this material.

### Application

Insulation for presses, thermal machined insulator parts, insulation of die-casting machines and presses, glass industry, cast rubber molds,...

### Form of delivery

Sheet sizes of 2950 +/-10mm x 1335 +/-10mm or 2350 +/- 10mm x 1335 +/-10mm

Standard thicknesses : from 3mm to 50mm. Other thicknesses available on request.

Sheets sanded both sides.

Thickness tolerances :

$e < 10\text{mm} = \pm 0,1\text{mm}$

$10\text{mm} < e < 15\text{mm} = \pm 0,15\text{mm}$

$e > 15\text{mm} = 1\%$  of the thickness.

		Value	Test norm
<b>Physical properties</b>			
Density	g/cm <sup>3</sup>	1.9 ±0.1	ISO 1183
Water absorption 24h 23°C	%	0.08	ISO 62
<b>Mechanical properties</b>			
Flexural strength	MPa	420	ISO 178
Compressive strength at 23°C, flatwise	MPa	520	ISO 604
Compressive strength at 200°C, flatwise	MPa	350	ISO 604
<b>Electrical properties</b>			
Flatwise electrical strength	kV/mm	15	IEC 60243-1
<b>Thermal properties</b>			
Maximum heat resistance (for short periods)	°C	280	
Heat resistance	°C	240	
Thermal conductivity	W/m.K	0.24	DIN 52612
Coefficient of linear expansion //	10E-6 / K	15	

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