

## **CALMICAFAFAB® 3293, 3294**

### Description:

CALMICAFAFAB® 3293 and CALMICAFAFAB® 3294 consist of mica paper based on calcined muscovite, a special glass cloth and thermosetting epoxy-novolac.

### Properties:

CALMICAFAFAB® 3293 and CALMICAFAFAB® 3294 is a very flexible glass mica paper combination, which can be easily wrapped in total width by hand or taped on automatic taping machines. After curing in a hot press an insulation with excellent dielectric, thermal, mechanical and chemical properties is obtained. Due to the special glass cloth the thermal, electrical and mechanical properties of the final insulation are excellent.

### Application:

CALMICAFAFAB® 3293 and CALMICAFAFAB® 3294 are used for the insulation of bars and coils of motors and generators up to highest output and highest nominal voltage.

The preheating cycle at minimum pressure ( $< 0,3 \text{ N/mm}^2$ ), depending upon the size of the bars or coils, is given from 20 Minutes at  $135^\circ \text{ C}$  up to 5 Minutes at  $160^\circ \text{ C}$ . Please note, that a fast ascent of the pressure can influence the laminating quality. Kneading is not recommended. Curing is possible up to  $180^\circ \text{ C}$  in combination with release-film VOTAFILM 2646.

### Materials:

CALMICAFAFAB® 3293 and CALMICAFAFAB® 3294 consist of mica paper based on calcined muscovite, a special glass-cloth and thermosetting epoxy-novolac.

Type 3294 is interleaved and is specially used when temperatures  $> (30^\circ \text{ C})$  may occur during transportation or storage.

### Formats:

Rolls: max. width 1000 mm

Tapes: from 10 mm width upwards

### Storability:

min. 6 months at  $20^\circ \text{ C}$

min. 12 months at  $5^\circ \text{ C}$

Pressing condition: (to achieve formed stability):

e. g. 1 hour, 160° C, 2 N / mm<sup>2</sup>

Temperature: 130° C - 180° C

Pressure: 2 - 3 N / mm<sup>2</sup>

Time: 8.0 - 0.5 hours

Full curing is achieved after 4 hours at 160° C.

Technical Data (as delivered)

<b>CALMICAFAFAB® 3293, 3294</b>			
<b>Properties</b>	<b>Test method</b>	<b>Unit</b>	<b>Value</b>
Nominal thickness		mm	0.15
Tolerance		mm	± 0.02
Total substance	IEC 371-2	g/m <sup>2</sup>	292 ± 21
Mica paper	IEC 371-2	g/m <sup>2</sup>	120 ± 8
Glass cloth	IEC 371-2	g/m <sup>2</sup>	26 ± 3
Resin content	IEC 371-2	g/m <sup>2</sup>	85 ± 10
Tensile strength	IEC 371-2	N/10mm	≥ 150
Volatile content (15 min 150° C)	IEC 371-2	%	≤ 0.5