

# laminates

## DELMAT POLYESTER 68010 GPO-3

- ▶ UL approved, file number E 70284, classified GPO-3 according to NEMA LI 1
- ▶ Flammability UL 94 = V-0 from 0,8mm to 60mm
- ▶ Good mechanical properties at high temperatures
- ▶ Temperature Index 155
- ▶ Halogen free
- ▶ Fire classification acc.to NF F 16-101 : M1 I1 F1
- ▶ Easy to cold punch up to 6mm

### General description

Delmat Polyester 68010 GPO-3 are sheet laminates based on glass mat and polyester resin systems.

### 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

Switchboards  
LV- and HV circuit breakers  
Phase barriers  
Switchboard bottom plates  
Arc chute chambers panels  
Connection supports  
Protection panels  
Insulation carriers  
Cable clamps  
Bus bars supports  
Power electronics...

### Standards

NEMA LI 1 : GPO-3 for all thicknesses from 0,8 to 60mm  
IEC 60893-3-5 : UP GM 203  
EN 60893-3-5 : UP GM 203  
NF C 26-153 : Vm P2e  
DIN 7735 : Hm 2471

### Form of delivery

Sheet size : 2000 +/-10mm x 1000 +/-10mm  
Thicknesses : 0,8mm to 60mm

The sheets are untrimmed. Homogeneity on a width of 13mm from the edges is not guaranteed.

This product can be delivered in machined parts according to specific drawings.

### Colour

Red, RAL 3003

		Value	Test norm
<b>Mechanical properties</b>			
Tensile strength, //, at 23°C	MPa	100	ISO 527
Flexural strength at 23°C, flatwise	MPa	160	ISO 178
Flexural strength at 130°C, flatwise	MPa	95	ISO 178
Modulus of elasticity in flexure at 23°C, flatwise	MPa	10000	ISO 178
Modulus of elasticity in flexure at 130°C, flatwise	MPa	5000	ISO 178
Compressive strength at 23°C, flatwise	MPa	280	ISO 604
Bonding strength (10mm thick)	N	5000	ASTM D 229
<b>Electrical properties</b>			
Insulation resistance, as received	MOhm	10 <sup>7</sup>	IEC 60167
Insulation resistance, after 24h immersion in water at 23°C	MOhm	10 <sup>3</sup>	IEC 60167
Edgewise breakdown voltage, step by step, in oil at 23° C after immersion 48h/50°C/water	kV	20	IEC 60243-1
Edgewise breakdown voltage, step by step, in oil at 90° C, as received	kV	80	IEC 60243-1
Flatwise electric strength, step by step test, in oil at 90°C	kV/mm	12	IEC 60243-1
Dissipation factor at 1 MHz		<0.05	IEC 60250
Relative permittivity at 1 MHz		<4.5	IEC 60250
Comparative tracking index - CTI		600	IEC 60112
Tracking and erosion resistance		1 B 2.5	IEC 60587
Arc resistance	s	180	ASTM D 495
<b>Thermal properties</b>			
Temperature index (TI)		155	IEC 60216
<b>Physical properties</b>			
Water absorption after 24h immersion at 23°C, thickness 4mm	mg	<50	ISO 62 (method 1)
Density	g/cm <sup>3</sup>	1.8 ± 0.1	ISO 1183 (method A)
Flammability		V-0	UL 94

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