

ETP700

Preliminary Technical Datasheet

Material Description & Properties

Technical information

Density (kg/m³)	1100 (ASTM F1315)
Thermal conductivity (W/mK)	0,175 (ISO 8301)
Compressibility at 1,3 MPa (%) (1)	14,3 ± 0,9 (internal procedure)
Compressibility at 2,5 MPa (%) (1)	20,4 ± 0,9 (internal procedure)
Hardness (Shore A)	65 - 80 (ASTM D2240)
Dieletric strength (kV/mm)	9,1±0,7 (ASTM D149)
$\Delta T/\Delta t$ (°c/min) (2)	31,5 ± 1,6 (internal procedure)
Flame resistance	V0 (UL94)
Compression set (%)	29 (ASTM D 395, method B, 25%, 100°, 22h)
Compression set (%)	36 (ASTM D 395, method B, 50%, 100°, 22h)

The presented values are based on 2 mm sheets.

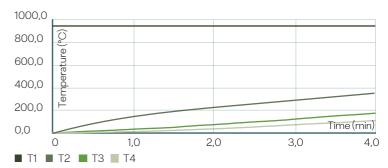
 $^{^{(2)}}$ Value determined assuming T3(T3f - T30), f is the final time and 0 is the initial time; $\Delta T/\Delta t$ gives an indication of the thermal insulation capability.



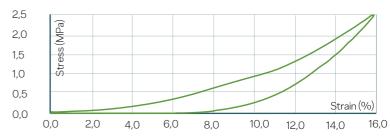


ETP700 is a cork-silicone based material designed for thermal management of battery components, with UL94-VO flame resistance properties.

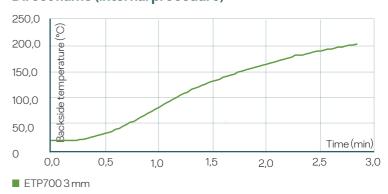
Insulation test (internal procedure)



Compressibility test



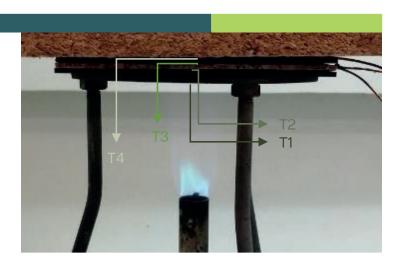
Direct flame (internal procedure)



 $^{^{\}rm (i)}$ Compression trials performed at 0,3 mm/min. Compressibility and hardness of the material can be adjusted.

Insulation test (internal procedure)

- Flame temperature ≈ 1000 °C
- Distance flame/steel plate: 55 mm
- Steel plates thickness: 2 mm
- Cork sample size: 100 x 100 x 2 mm
- Temperature's description:
 - T1 flame temperature on the steel plate
 - T2 lower steel plate/ cork interface
 - T3 cork/upper steel plate
 - T4 outer upper steel plate
- Upper weight (4,8 kg) and insulative cork block (50 mm) to ensure full cork steel contact and to decrease heat losses.



Direct flame (internal procedure)

- Flame temperature ~ 1000 °C
- The temperature measurements are made on the back of the material.





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