EST™ M Paper

Product Data Sheet

Product Description

EST M Paper is a mica laminated paper specifically developed for module-module and pack level protection in lithium ion battery packs.

EST M Paper is designed to offer excellent performance when exposed to high temperature environments. The mica facing allows for higher dielectric strength values often required for usage in the pack.

Superwool® fibres provide stability and resistance to chemical attack. Exceptions include hydrofluoric acid, phosphoric acid and strong alkalis (i.e. NaOH, KOH). Superwool is unaffected by incidental spills of oil or water. Thermal and physical properties are restored after drying.

Benefits

- Meets UL94 V-0 requirements
- Excellent surface finish
- Easily cut to shape
- Adhesive capable design

Applications

- Lithium ion Module-Module protection
- Pack level protection of Lithium Ion batteries

Environmental & Health Safety

Superwool low biopersistent fibres manufactured by Morgan Advanced Materials are not classified as carcinogenic by IARC or under any national regulations on a global basis. They have no requirements for warning labels under GHS (Globally Harmonised System for the classification and labelling of chemicals).

In Europe, Superwool fibres meet the requirements specified under Note Q of European Regulation EC/1272/2008 (on Classification, Labelling and Packaging of substances and mixtures). All Morgan Advanced Materials Superwool low biopersistent fibre products are therefore exonerated from classification and labelling as hazardous in Europe.

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Thermal Ceramics is a business of Morgan Advanced Materials

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	EST M Paper
Colour	Gold / White
Classification Temperature, °C (°F)	1100 - 1300 (2010 - 2370)
Density, kg/m^3 (pcf)	Thickness dependent
Dielectric Breakdown, kΩ	>2
Dielectric Resistance, Ω/V	>2 x 10^9
Volume Resistivity, Ω•cm	>10 x 10^{11}
Withstand Voltage, kV, 2 minutes	>2
Thickness, mm (in)	1 - 6 (0.04 - 0.24)
Thermal Performance @ 600°C (1112°F), 20 minutes	
1mm (0.04) thickness	<230°C (<446°F)
3mm (0.12) thickness	<200°C (<392°F)
6mm (0.24) thickness	<140°C (<284°F)
UL94 Rating	UL94V-0
Thermal Conductivity, W/m•K (BTU•in/hr•ft^2•°F), Descending, thickness dependent	
200°C (392°F)	0.04 (0.29) - 0.04 (0.32)
400°C (752°F)	0.06 (0.42) - 0.06 (0.46)
600°C (1112°F)	0.08 (0.58) - 0.09 (0.63)
800°C (1472°F)	0.11 (0.77) - 0.12 (0.82)
1000°C (1832°F)	0.14 (1.00) - 0.15 (1.04)

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