



DUPONT™ TEMPRION™ EIF YA025012S-A/S

ELECTRICALLY INSULATING FILM

DESCRIPTION

DuPont™ Temprion™ EIF Y Series is a flexible laminate film comprising an electrically insulating, puncture resistant Kapton® polyimide core coated with heat-cured thermally conductive adhesive on one or both sides.

Temprion™ EIF features Kapton® MT+ polyimide as a core to achieve best-in-class thermal performance for an electrically insulating film, where electrical isolation of components within a package is critical to operation.

Two variants of the EIF Y films are available, denoted by the letter at the end of the product name. The "A" version uses an electrically insulating filler in the adhesive, whereas the "S" version uses an electrically conductive filler to achieve superior thermal performance. Both versions have a Kapton® MT+ core to provide electrical insulation properties.

APPLICATIONS

- Thermal Interface Material
- Flexible Heaters
- Power Electronics

FEATURES

- Low thermal resistance
- High puncture resistance
- Electrical isolation of components
- UL 94 flammability rating (pending)
- RoHS Compliance

Table 1 – Typical Properties of DuPont™ Temprion™ EIF Y Series Electrically Insulating Film

Property	YA025012S -A	YA025012-S	Test Method
Thickness, mil (mm)	1.5 (0.038)	1.5 (0.038)	ASTM D374
Reinforcement Carrier	Kapton® MT+	Kapton® MT+	N/A
Thermal Conductivity, W/m•K	0.56	0.7	ASTM D5470
Breakdown Voltage, Vac	5600	5600 ^(A)	ASTM D149
Dielectric Constant, @ 1 MHz	TBD	TBD	ASTM D150
Volume Resistivity, Ω•cm	> 10 ¹⁵	> 10 ^{15(A)}	ASTM D257
Electrically Insulating/Conducting	Electrically Insulating	Electrically Conducting ^(B)	DuPont Method
Peel Strength*, lb/in (kg/cm)	7.0 (1.2)		See Below
Flammability	Pending		UL94
RoHS Compliant	Yes		N/A

*Laminating Conditions: 14 kg/cm² (200 psi), 182°C (360°F), 1 hour to treated side of 1 oz RA copper foil.

Note A: The breakdown voltage and volume resistivity values are that of the Kapton® 100MT+, it is an electrically insulating substrate. The electrically conductive thermally cured adhesive does not add any appreciable effects.

Note B: Electrically Conducting refers to the thermally cured adhesive and not of the Kapton® 100MT+ substrate, which is electrically insulating.

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CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications, see "DuPont Medical Caution Statement," H-50102-4. K-29542 (7/17)