



Adhesive Films and Preforms

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E3015 ELECTRICALLY CONDUCTIVE ADHESIVE

Description:

TechFilm E3015 is an electrically conductive screen printable liquid adhesive. E3015 features good chemical, heat, and moisture resistance with good adhesion to gold and nickel substrates.

Applications:

TechFilm E3015 is a liquid adhesive that is designed for electrically conductive applications.

Shelf Life:

One day (see viscosity information) @ 25°C one week @ -10°C Six months @ -40°C

Cure Schedules:

Cure Schedule 5 minutes at 150°C
Alternate Cure Schedules 3 minutes at 165°C

Cured Properties*:

<u>Property</u>	<u>Method</u>	<u>Value Obtained</u>
Color	Visual	Silver
Lap Shear Strength to Aluminum at 25°C, psi	ASTM D1002	1400
Lap Shear Strength to Gold at 25°C, psi	ASTM D1002	1400
Thermal Conductivity, W/m-°K	ASTM E1461	1.3
Glass Transition, DSC, °C	ASTM E1356	80
Volume Resistivity, Ohm-cm at 25°C	TFTEST004A	5 x 10 ⁻⁴
Volume Resistivity, Ohm-cm at 25°C after 1500 hours at 150°C	TFTEST004A	3 x 10 ⁻⁴
Weight Loss at 150°C, TGA, 20°C/min, N ₂ , %	ASTM D3850	0.06
at 200°C	and MIL-STD-883	0.15
at 250°C	Section 3.8.5.1	0.41

* Except for the glass Transition temperature all properties were measured after a cure of 15 minutes at 150°C. This was done to allow for the substrate to heat to 150°C.

All values reported above are typical values from the recommended cure, and are reported as a means of reference. Individual testing should be done to determine actual results, tested at specific conditions.

Rev. 082807A PLC

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Liquid Properties:

T3015 in its uncured state has the following properties:

Viscosity at 25°C, TE , 1 RPM, cP	TFTEST001B	900,000
Viscosity at 25°C, TE, 10 RPM, cP	TFTEST001B	310,000
Viscosity at 25°C, TE, 10 RPM, after 8 h at 25°C, cP	TFTEST001B	400,000
Viscosity at 25°C, TE 10 RPM, after 12 h at 25°C, cP	TFTEST001B	575,000
Thixotropic Index	TFTEST001B	2.9

Warnings:

Use with adequate ventilation. Wear protective clothing and safety goggles.

Medical Conditions Aggravated by Exposure: Exposure may aggravate preexisting skin conditions and/or eye disorders.

Eye Contact: Contains materials that may cause moderate eye irritation. Use good hygiene, wear protective gloves and do not touch eyes. Molten material may cause thermal burns.

Skin Contact: Contains materials that cause moderate skin irritation. Prolonged or repeated exposure to the film may cause dermatitis in susceptible individuals. This product may cause skin sensitization/allergic skin reactions that may be severe, symptoms may include rash, swelling, itching and hives.

Inhalation: At ambient conditions vapors are unlikely to cause harm. Heating can generate vapors that could cause respiratory irritation if inhaled. If abraded dust may cause irritation of the respiratory passages.

Ingestion: Harmful if swallowed.

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