Sheldahl®
A Flex Company

Product Bulletin

ACRYLAM™
T1647
Flame-Retardant Modified Acrylic Adhesive on Polyimide Film

Description

Acrylam™ T1647 products use our proprietary flame-retardant, high temperature, modified acrylic adhesive, and polyimide film, creating a single or double sided composite. T1647 tapes are engineered for use in applications where soldering and temperature resistance are key. Sheldahl® Brand materials are able to be processed in rolls.

Features

- Service Temperature: 150 °C
- Dielectric: High stability PI films.
- Adhesive: RoHs compliant flame-retardant modified acrylic.
- Stability: Sheldahl's superior manufacturing process ensures consistent dimensional stability.
- Processing: High quality flexible circuits can be produced using standard manufacturing procedures.
- Quality: Products are manufactured using quality systems that conform to ISO, QS, and TS quality standards.
- IPC: Meets IPC 4203/1

Constructions

- Film Thickness: *1, 2, or 5 mils (25, 50, 125 µm)
- Adhesive Thickness: *Standard thickness is 1.0, 1.5, or 2.0 mils (25, 38, 50 µm)
- Width: *Standard roll width is 12" (305mm) or 24" (610mm)

*Specialty thicknesses and widths available please contact your Sheldahl representative.

Platen Press*

	SAE	Metric
Platen temperature	365 - 385°F	185 - 195°C
Pressure	300 - 400 PSI	2.0 - 2.7 MPa
Time (at temperature)	50 - 60 min	50 - 60 min
Cool under pressure	< 120°F	< 50°C

*Oven-dry at 250-275°F (120-135°C) for >1 hour, prior to solder exposure.

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Technical Properties

PROPERTY	UNITS	TYPICAL VALUE	TEST METHOD
Dimensional Stability	%	0.06	IPC-TM-650 2.2.4, A
Peel Strength	lb/in (N/mm)	9.0 (1.57) 12.0 (2.10) 12.0 (2.10) 12.0 (2.10)	IPC-TM-650 2.4.9 Method A Method B Method D Method F
Solder Float		Pass	IPC-TM-650 2.4.13, B
Service Temperature		Pass	IPC-TM-650 2.4.9 150 °C Heat Age Peels
Dielectric Constant (1KHz)		3.4(A)	ASTM-D-150
Dissipation Factor (1KHz)		0.0036(A)	ASTM-D-150
Dielectric strength	v/mil (kV/mm)	4000 (157)(A)	ASTM-D-149
Volume Resistivity	ohm/cm	10^{9}(A)	IPC-TM-650 2.5.17
Surface resistance	ohm/sq	10^{8}(A)	IPC-TM-650 2.5.17
Chemical Resistance	%	90	IPC-TM-650 2.3.2, A
Fungus Resistance		Non-nutrient	IPC-TM-650 2.6.1
Moisture and Insulation Resistance	ohm	10^{5}	IPC-TM-650 2.6.3.2
Volatile Content	%	1.0	IPC-TM-650 2.3.37
Moisture Absorption, maximum	%	4.5	IPC-TM-650 2.6.2

(A) Based on film alone at 1 mil thickness.

The information contained herein is based upon typical data. Sheldahl makes no warranty expressed or implied as to its accuracy and assumes no liability arising out of its use by others. The user should determine suitability of Sheldahl® materials, a Flex company, for each individual application.

Storage and Shelf Life

Guaranteed shelf life and material warranty is 12 months from date of shipment when stored at 40-80°F (4-26°C) and below 70%RH.