



# Flexbase<sup>®</sup>™ T1647 RoHS Compliant Flame-Retardant Polyimide Modified Acrylic Adhesive Tape

## Description

Sheldahl Flexbase<sup>®</sup> 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 materials are able to be processed in rolls.

## Features

- **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.

## Storage

Material stored in original packaging, at temperatures of 40-80°F (4-26°C), and below 70% RH will retain their properties for a minimum of 1 year.

## Quality

Sheldahl products are manufactured using quality systems that conform to ISO, QS, and TS quality standards. Key product characteristic are tested and monitored in accordance to IPC standards. Certifications are available with product shipments.

## 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.

## Lamination Conditions:

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

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

<b>PROPERTY TO BE TESTED AND TEST METHOD</b>	<b>Test Method IPC-TM-650</b> Unless specified otherwise	<b>Sheldahl Typical Mean Value*</b>
Dimensional Stability, maximum, percentage,	2.2.4 Method A	0.06
Peel Strength, minimum, lb./in. - width	2.4.9	>25 $\mu$ m
	Method A as rec'd	9.0
	Method B as rec'd	12.0
	Method D After solder float	12.0
	Method F After temperature cycling	12.0
Flow, maximum	2.3.17.1	2.5:1
Volatile Content, maximum	2.3.37	1.0
Chemical Resistance percentage	2.3.2 Method A	90%
Solder Float	2.4.13 Method B	Pass
Dielectric constant, maximum (at 1MHz)	2.5.5.3	3.75
Dissipation factor, maximum (at 1 MHz)		
	2.5.3	0.03
Volume Resistivity, minimum megohm-cm		
	2.5.17	10 <sub>9</sub>
Surface resistance minimum, megohms		
	2.5.17	10 <sub>8</sub>
Dielectric strength, minimum V/ $\mu$ m (V/mil)	ASTM-D-149	(4000)
Fungus Resistance	2.6.1	Non-nutrient
Moisture Absorption, maximum, percent	2.6.2	4.5%
Flammability, 94 VTM-0	Pass	Pass
Moisture and Insulation Resistance, minimum, megohms	2.6.3.2	10 <sub>5</sub>

\*The information contained herein is based upon typical data, Sheldahl makes no warranties 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 for each individual application.