



# G1966 - Flexbase<sup>®</sup> Copper Polyester Laminates RoHS Compliant Flame Retardant Modified Epoxy Adhesive

## Description

Sheldahl Flexbase G1966 products use our proprietary high temperature, RoHS compliant flame retardant, modified epoxy adhesive to bond polyester film and copper foil, creating single sided and double sided composites. G1966 laminates are engineered for use in flex circuitry applications that require the safety of a flame retardant system. Sheldahl materials are suitable for roll to roll processing.

## Features

- **Dielectric:** High stability PET films.
- **Adhesive:** RoHS compliant flame-retardant modified polyester epoxy.
- **Available Coppers:**
  - **RA:** Rolled-Annealed. RA foils are suitable for dynamic flexing applications.
  - **ED:** Electro-deposited high-ductility. EDHD foils are suited for general use and flex to install applications.
- **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. Excessive exposure to heat and moisture may cause copper oxidation.

## 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, 3, 5 mils (23, 50, 75, 125 μm)
  - **Copper Thickness:** ½, 1, 2 oz (17, 35, 70 μm)
  - **Adhesive Thickness:** Standard thickness is 1.2mil (30μm)
  - **Width:** Standard roll width is 12” (305mm) and 24” (610mm)
- Specialty thicknesses and widths available; please contact your Sheldahl representative.

## Typical Constructions:



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PROPERTY TO BE TESTED AND TEST METHOD	Test Method (IPC-TM-650 unless noted)	Sheldahl Typical Mean Value
Peel Strength, minimum, lb./in - width,	Method 2.4.9 Method B as received	8.0
Tensile Strength, minimum, lb./in <sup>2</sup>	Method 2.4.19	20,000
Elongation, minimum percent	Method 2.4.19	70%
Dimensional Stability, maximum, percentage,	Method 2.2.4 Method B Method C	0.07 0.40
Flammability UL 94VTM-0	UL 94VTM-0	pass
Dielectric constant, maximum (at 1MHz)	Method 2.5.5.3	3.2
Chemical Resistance percentage	Method 2.3.2 Method A	90%
Dissipation factor, maximum (at 1 MHz)	Method 2.5.3	0.015
Volume Resistivity, minimum megohm-cm	Method 2.5.17	10 <sup>9</sup>
Surface resistance minimum, megohms	Method 2.5.17	10 <sup>5</sup>
Dielectric strength, minimum volts/mil	ASTM-D-149	3000
Moisture and Insulation Resistance, minimum, megohms	Method 2.6.3.2	10 <sup>5</sup>
Moisture Absorption, maximum, percent	Method 2.6.2	1.0%

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