

G1932

Flexbase™ Copper Polyimide Laminate

Flame Retardant RoHS Compliant Modified Epoxy Adhesive on Polyimide Film

Description

Flexbase™ G1932 products use our proprietary high temperature, RoHS compliant flame retardant, modified epoxy adhesive to bond polyimide film and copper foil, creating single sided and double-sided composites. G1932 laminates are engineered for use in flex circuitry applications that require the safety of a flame-retardant system. Sheldahl® Brand materials are suitable for roll to roll processing.

Features

- Flexible circuit applications where dynamic flex, high temperature solder, gold bath resistance, and greater dielectric strength are required.
- G1932 is registered UL 94 V-0 (E39696).
- Highly stable PI films and Sheldahl's superior manufacturing process ensures consistent dimensional stability.
- RoHS compliant flame-retardant modified polyester epoxy.
- G1932 laminates are manufactured using quality systems that conform to ISO, QS, and TS quality standards.

Available Coppers

- Rolled-Annealed - RA foils are suitable for dynamic flexing applications.
- Electro-Deposited High-Ductility - EDHD foils are suited for general use and flex to install applications.
- Rolled Untreated - ARNT foils are valuable for high frequency applications that require a smooth copper surface on both sides.

Constructions

- **Film Thickness:** 1, 2, 5 mils (25, 50, 125 µm)
- **Copper Thickness:** ½, 1, 2 oz (18, 35, 70 µm)
- **Adhesive Thickness:** standard thickness is 1.2mil (30µm)
- **Width*:** Standard roll width is 24" (610mm)
*Specialty thicknesses and widths available. Please contact your Sheldahl representative.

Single sided:

Copper: 18, 35, 70 µm
Adhesive: 30 µm
Polyimide: 25, 50, 125 µm

Double sided:

Copper: 18, 35, 70 µm
Adhesive: 30 µm
Polyimide: 25, 50, 125 µm
Adhesive: 30 µm
Copper: 18, 35, 70 µm

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Technical Properties

PROPERTY	UNITS	TYPICAL DATA	TEST METHOD
Dimensional Stability	%	0.06 0.10	IPC-TM-650 2.2.4 Method B Method C
Peel Strength	lb/in (N/mm)	10.0 (1.75) 12.0 (2.10) 9.0 (1.57) 9.0 (1.57)	IPC-TM-650 2.4.9 Method A Method B Method D Method F
Solder Float		Pass	IPC-TM-650 2.4.13 Method A
Flammability		Pass	UL 94 V-0 (E39696)
Dielectric Constant (1KHz)		3.4	ASTM-D-150-92
Dissipation Factor (1KHz)		0.002	ASTM-D-150-92
Dielectric strength	V/mil (kV/mm)	3500 (139)	ASTM-D-149
Low Temperature Flexibility	5 Cycles	Pass	IPC-TM-650 2.6.18
Volume Resistivity	M ohm/cm	10 ⁷	IPC-TM-650 2.5.17
Surface resistance	M ohm/sq	10 ⁵	IPC-TM-650 2.5.17
Chemical Resistance	%	90	IPC-TM-650 2.3.2 Method A
Fungus Resistance		Non-nutrient	IPC-TM-650 2.6.1
Moisture and Insulation Resistance	ohm	10 ⁴	IPC-TM-650 2.6.3.2
Moisture Absorption, maximum	%	2.0	IPC-TM-650 2.6.2

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. Excessive exposure to heat and moisture may cause copper oxidation.