

G1860

Flexbase™ Copper Polyimide Laminate

Non-Flame Retardant Modified Epoxy Adhesive on Polyimide Film

Description

Flexbase™ G1860 products use our proprietary high temperature non-flame-retardant modified epoxy adhesive, polyimide film, and copper foil, creating a single or double sided composite. G1860 laminates are engineered for use in flex circuitry applications where soldering and high temperature resistance is key.

Sheldahl™ Brand materials are processable in rolls.

Features

- Flexible circuit applications where dynamic flex, high temperature solder, gold bath resistance, and greater dielectric strength are required.
- Highly stable PI films and Sheldahl's superior manufacturing process ensures consistent dimensional stability.
- Modified polyester epoxy adhesive that is halogen free.
- G1860 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, or 5 mils (25, 50, 125 µm).
- **Copper Thickness:** ½, 1, 2 oz (18, 35, 70 µm).
- **Adhesive Thickness:** standard thickness is 0.7mil (18µm).
- **Width*:** Standard roll width is 24" (610mm)
*Specialty widths are available. Please contact your Sheldahl representative.

Single sided:

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

Double sided:

Copper: 18, 35, 70 µm
Adhesive: 18 µm
Polyimide: 25, 50, 125 µm
Adhesive: 18 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)	9.0 (1.57) 12.0 (2.10) 10.0 (1.75) 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 Method B
Solderability		Pass	J-STD-003 Test A
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 ⁶	IPC-TM-650 2.5.17
Surface resistance	M ohm/sq	10 ⁴	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 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



A Flex Company

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.