



A Multek Brand

G1859 Flexbase™ Copper Polyester Laminate

Non-Flame Retardant Modified Epoxy Adhesive on Polyester Film

Description

Flexbase™ G1859 products use our proprietary high temperature non-flame retardant modified epoxy adhesive, polyester film, and copper foil, creating a single or double-sided composite. G1859 laminates are suited for use in flex circuitry applications using standard manufacturing procedures and where cost and volume are key. Sheldahl™ Brand materials are processable in rolls.

Typical Applications

Automotive Dashboard Circuitry, RFID Tags, Cell Phone Antennas, etc

Features

- Heat stable PET films and Multek’s superior manufacturing process ensures consistent dimensional stability.
- Modified polyester epoxy adhesive that is clear and halogen free.
- G1859 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.
- As-Rolled Untreated - ARNT foils are valuable for high frequency applications that require a smooth copper surface on both sides.

Constructions

- **Film Thickness:** 1, 2, 3, or 5 mils (25, 50, 75, or 125 µm)
- **Copper Thickness:** 0.5, 1, 2 oz (18, 35, 70 µm)
- **Adhesive Thickness:** standard thickness is 0.7mil (18µm)
- **Width*:** standard roll width is 24” (610mm)
*Specialty widths available. Please contact your Multek representative.

Single sided:

Copper: 18, 35, 70 µm
Adhesive: 18 µm
Polyester: 25, 50, 75, 125 µm

Double sided:

Copper: 18, 35, 70 µm
Adhesive: 18 µm
Polyester: 25, 50, 75, 125 µm
Adhesive: 18 µm
Copper: 18, 35, 70 µm



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Technical Properties

PROPERTY	UNITS	TYPICAL DATA	TEST METHOD
Dimensional Stability	%	MD - 0.1	IPC-TM-650 2.2.4
		TD - 0.3	
Peel Strength	lb/in (N/mm)	10.0 (1.75) 10.0 (1.75) 9.0 (1.57)	IPC-TM-650 2.4.9 Method A Method B Method F
Solderability		Pass	J-STD Test A
Solder Float		Pass	IPC-TM-650 2.4.13 B
Dielectric constant (1MHz)		3.5	IPC-TM-650 2.5.5.3
Dissipation factor (1MHz)		0.015	IPC-TM-650 2.5.3
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	ohm/cm	10 ⁶	IPC-TM-650 2.5.17
Surface resistance	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	%	0.5%	IPC-TM-650 2.6.2

The information contained herein is based upon typical data. Multek 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 Multek brand, 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.