

L-313

**Epoxy Film Adhesive,
High Temperature Resistant**



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Product Data Sheet

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Description

L-313 is an intermediate cure temperature modified epoxy film adhesive suitable for a wide variety of aerospace structural bonding. Typical applications include metals such as 2024-T81 or 6AL-4UV annealed and non-metallics such as pre-cured graphite epoxy laminates, pre-cured fiberglass-epoxy laminates, and various honeycomb core materials including aluminum fiberglass and Aramid phenolic. L-313 provides excellent bond strength over a wide range of processing cycles with high temperature performance up to 400°F (204°C).

Advantages of L-313

- ❖ Cure cycles as low as 295°F (146°C), varying heat-up rates, vacuum or positive pressure may be used without a significant reduction in bond joint strength.
- ❖ Low volatile content makes L-313 ideally suited for large area sandwich or metal to metal bond applications.
- ❖ L-313 exhibits excellent environmental resistance to salt spray, high humidity, and standard test fluids.

Physical Properties

- *Standard Weight:* 0.150 lbs/ft² (732 g/m²)
- *Optional Weights:* 0.075 lbs/ft², 0.090 lbs/ft², 0.120 lbs/ft² (other weights are available)
- *Standard Thickness:* 0.018-0.020" (0.46-0.51 mm)
- *Volatile Content:* Less than 0.5%
- *Tack:* Medium

Availability

- *48" Wide Rolls x 40 Yards Long (127 cm x 37 m)*

Shelf Life

- *6 months at 0°F (-18°C)*
- *14 days at Room Temperature (75°F or 24°C)*

Cure Cycles

- *180 minutes at 275°F (135°C), or*
- *120 minutes at 295°F (146°C), or*
- *60 minutes at 350°F (176°C).*
- *Note: Post curing can slightly improve elevated temperature performance*

Adhesive Primers

L-313 is compatible with:

- *L-309 Corrosion Inhibiting Primer*
- *L-319-1 Corrosion Inhibiting Adhesive Primer*

Applicable Documents

- *MMM-A-132*
- *MIL-A-25463*
- *FMS 1013*
- *FMS 3018*

Mechanical Properties

0.150 PSF (732 GSM) FILM			
PROPERTY	295°F CURE	350°F CURE	TEST METHOD
DOUBLE OVERLAP SHEAR STRENGTH			
-67°F (-55°C)	6,750 PSI (46.5 MPa)	6,850 PSI (47.2 MPa)	FMS 3018
ROOM TEMP	7,250 PSI (50.0 MPa)	7,300 PSI (50.3 MPa)	FMS 3018
270°F (132°C)	5,100 PSI (35.2 MPa)	5,250 PSI (36.2 MPa)	FMS 3018
350°F (176°C)	---	3,700 PSI (25.5 MPa)	FMS 3018
FLATWISE TENSILE STRENGTH			
-67°F (-55°C)	5,750 PSI (39.6 MPa)	5,950 PSI (41.0 MPa)	FMS 3018
ROOM TEMP	5,400 PSI (37.2 MPa)	5,550 PSI (38.3 MPa)	FMS 3018
270°F (132°C)	3,900 PSI (26.9 MPa)	4,400 PSI (30.3 MPa)	FMS 3018
350°F (176°C)	---	2,900 PSI (20.0 MPa)	FMS 3018
BEAM SHEAR STRENGTH			
ROOM TEMP	850 PSI (5.9 MPa)	860 PSI (5.9 MPa)	FMS 3018
270°F (132°C)	775 PSI (5.3 MPa)	790 PSI (5.4 MPa)	FMS 3018
350°F (176°C)	---	700 PSI (4.8 MPa)	FMS 3018
SINGLE OVERLAP SHEAR STRENGTH			
-67°F (-55°C)	3,600 PSI (24.8 MPa)	3,700 PSI (25.4 MPa)	FMS 3018
ROOM TEMP	3,600 PSI (24.8 MPa)	3,650 PSI (25.1 MPa)	FMS 3018
270°F (132°C)	3,000 PSI (20.7 MPa)	3,100 PSI (21.4 MPa)	FMS 3018
350°F (176°C)	---	2,490 PSI (17.2 MPa)	FMS 3018

NOTICE:

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