

MX-400 Panel Sensor

Two-part toughened epoxy adhesive · high-shear · -55 to +180 °C

Part numbers **LX-5-50, LX-5-400, LX-5-BULK**

Category **Structural adhesive**

Model **LX-5**

LX-5 is a two-part, toughened epoxy for structural bonding of metals, composites and ceramics. It cures at room temperature to a high-shear, impact-resistant bond line and holds its strength from -55 to +180 °C, suiting it to aerospace, automotive and general industrial assembly.

PERFORMANCE DATA

Lap-shear strength (steel) **31 MPa**

Glass transition (Tg) **82 °C**

T-peel strength **8 N/mm**

Service temperature **-55 to +180 °C**

Tensile modulus **2.9 GPa**

Mix ratio (A:B) **2:1 by volume**

Elongation at break **4.5%**

Pot life (100 g, 23 °C) **45 min**

BOND STRENGTH BY SUBSTRATE & METHOD

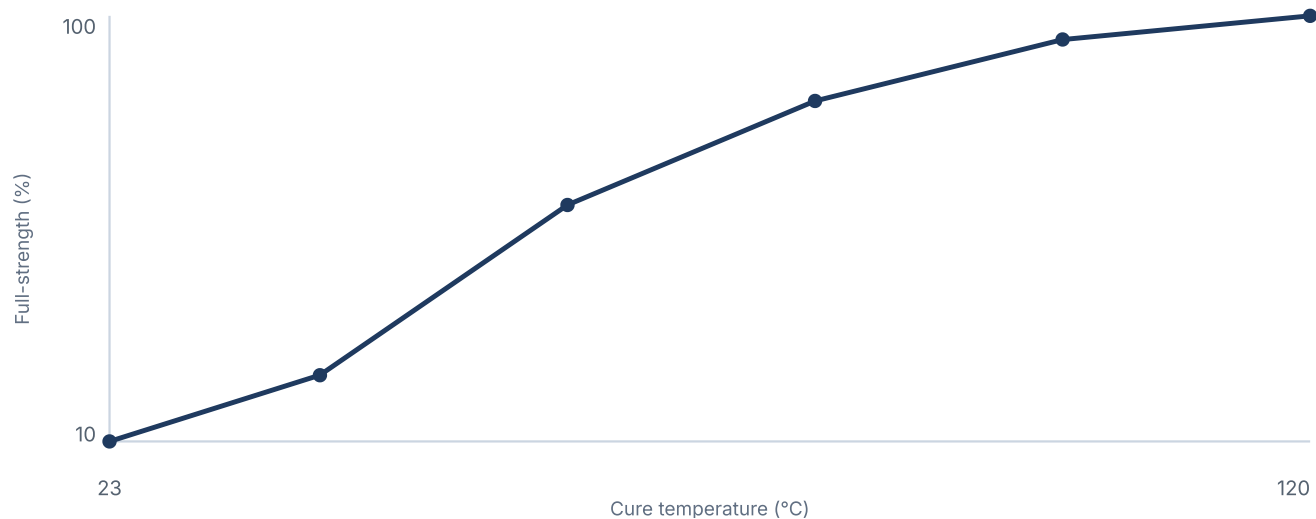
PROPERTY	VALUE	UNIT	METHOD
Lap-shear (aluminium)	26	MPa	ASTM D1002
Lap-shear (steel)	31	MPa	ASTM D1002
Lap-shear (CFRP)	22	MPa	ASTM D1002
T-peel	8	N/mm	ASTM D1876

BOND STRENGTH BY SUBSTRATE & METHOD (CONTINUED)

PROPERTY	VALUE	UNIT	METHOD
Impact (block shear)	18	MPa	ASTM D950

STRENGTH DEVELOPMENT VS CURE TEMPERATURE

CURE PROFILE



CHEMICAL & ENVIRONMENTAL RESISTANCE

EXPOSURE	RESISTANCE	NOTES
Water / humidity	Excellent	No loss after 1000 h at 40 °C / 95% RH
Mineral oils & fuels	Excellent	Full retention after 30-day immersion
Dilute acids / alkalis	Good	Minor softening above pH 12
Ketones & chlorinated solvents	Limited	Not recommended for continuous exposure

CHEMICAL & ENVIRONMENTAL RESISTANCE (CONTINUED)

EXPOSURE	RESISTANCE	NOTES
UV / weathering	Good	Slight chalking; overcoat for appearance

APPLICATION NOTES

Abrade and solvent-degrease both faying surfaces. Dispense through a static mixer, apply within the 45-minute pot life and clamp to a 0.10–0.20 mm bond line. Handling strength is reached in 10 hours at 23 °C; a 60-minute post-cure at 80 °C develops full strength and raises the glass transition.

STANDARDS & REFERENCES

Lap-shear method	ASTM D1002
T-peel method	ASTM D1876
Block-shear method	ASTM D950
Safety data sheet	SDS-LX5-EN