

## Permabond ES578 Epoxy Resin

Category : Polymer , Adhesive , Thermoset , Epoxy , Epoxy Adhesive

### Material Notes:

PERMABOND® ES578 is a single-part heat cured epoxy adhesive with excellent adhesion to metal surfaces, ceramics as well as composite materials. ES578 provides excellent thermal conductivity and bond strength. ES578 was designed for application requiring heat dissipation such as bonding aluminum heat sinks to ceramic headers. The cured adhesive has been designed to meet the fire retardancy requirements of UL94 V-0. Features & Benefits: Very good thermal conductivity Excellent resistance to vibration Easy to use – no mixing required High shear and peel strength High temperature resistance Good resistance to chemicals Designed to meet the requirements of UL94 Information provided by Permabond.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Permabond-ES578-Epoxy-Resin.php](http://www.lookpolymers.com/polymer_Permabond-ES578-Epoxy-Resin.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.55 g/cc	1.55 g/cc	Uncured
Viscosity	600000 - 800000 cP @Temperature 25.0 °C	600000 - 800000 cP @Temperature 77.0 °F	Uncured
Storage Temperature	2.00 - 7.00 °C	35.6 - 44.6 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	84	84	
Adhesive Bond Strength	14.0 - 27.0 MPa	2030 - 3920 psi	Zinc, Shear; ASTM D1002
	17.0 - 31.0 MPa	2470 - 4500 psi	Aluminum, Shear; ASTM D1002
	27.0 - 41.0 MPa	3920 - 5950 psi	Steel, Shear; ASTM D1002

Thermal Properties	Metric	English	Comments
CTE, linear	45.0 µm/m-°C	25.0 µin/in-°F	
Thermal Conductivity	1.30 W/m-K	9.02 BTU-in/hr-ft²-°F	

Processing Properties	Metric	English	Comments
Cure Time	<= 3.00 min	<= 0.0500 hour	Induction
	30.0 min @Temperature 150 °C	0.500 hour @Temperature 302 °F	Oven
	60.0 min @Temperature 130 °C	1.00 hour @Temperature 266 °F	Oven

Processing Properties	Metric	English	Comments
Shelf Life	12.0 Month	12.0 Month	

Descriptive Properties	Value	Comments
Appearance	Black	Uncured
Maximum Gap Fill (mm)	5	
Strength Retention	100% at 0°C	Relative to 0°C
	25% at 200°C	Relative to 0°C
	65% at 150°C	Relative to 0°C
	85% at 100°C	Relative to 0°C
	95% at 50°C	Relative to 0°C

## Contact Songhan Plastic Technology Co.,Ltd.

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