

## Permabond ET505 Epoxy Resin

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

**Material Notes:**

PERMABOND ET505 is a two-part, 1:1 mixable epoxy adhesive. ET505 is a semi-flexible toughened epoxy adhesive with good adhesion to a variety of substrates such as wood, metal, ceramics and some plastics and composites. Permabond ET505 forms tough bonds providing high peel resistance and high shear strength. The extended work life of this product allows for adjustment and makes it more suitable for larger applications. Features & Benefits: Adhesion to a wide variety of substrates Full cure at room temperature Easy to apply High shear and peel strength Good impact strength Good chemical resistance Information provided by Permabond.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Permabond-ET505-Epoxy-Resin.php](http://www.lookpolymers.com/polymer_Permabond-ET505-Epoxy-Resin.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.14 g/cc	1.14 g/cc	ET505B, Amine Hardener
	1.17 g/cc	1.17 g/cc	ET505A, Epoxy Resin
Viscosity	17500 cP	17500 cP	ET505B, Amine Hardener
	@Temperature 25.0 °C	@Temperature 77.0 °F	
	20000 cP	20000 cP	ET505A, Epoxy Resin
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Storage Temperature	5.00 - 25.0 °C	41.0 - 77.0 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	73	73	
Elongation at Break	10 %	10 %	
Adhesive Bond Strength	18.0 - 21.0 MPa	2610 - 3050 psi	Mild steel, Shear
Peel Strength	2.40 - 3.20 kN/m	13.7 - 18.3 pli	ISO 4578

Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.350 W/m-K	2.43 BTU-in/hr-ft <sup>2</sup> -°F	
Maximum Service Temperature, Air	80.0 °C	176 °F	
Minimum Service Temperature, Air	-40.0 °C	-40.0 °F	
Glass Transition Temp, Tg	50.0 °C	122 °F	

Processing Properties	Metric	English	Comments
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Cure Time Processing Properties	120 - 180 min Metric	2.00 - 3.00 hour English	Handling Time Comments
	4320 min	72.0 hour	full cure
Pot Life	60.0 - 120 min @Temperature 20.0 °C	60.0 - 120 min @Temperature 68.0 °F	
Shelf Life	12.0 Month	12.0 Month	

Descriptive Properties	Value	Comments
Appearance	Amber for Amine Hardener	
	Colorless for Epoxy Resin	
Maximum Gap Fill (mm)	2	
Strength Retention	10% at 150°C	Relative to 0°C
	100% at 0°C	Relative to 0°C
	30% at 100°C	Relative to 0°C
	93% at 50°C	Relative to 0°C

## Contact Songhan Plastic Technology Co.,Ltd.

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