

## Epoxy Technology EPO-TEK® ED1020 Epoxy

Category : Polymer , Thermoset , Epoxy

### Material Notes:

Preliminary Product Information Sheet  
**Material Description:** A single component, silver-filled epoxy designed for low power semiconductor LED die attach applications. Its unique features include excellent adhesion and stress relief through mechanical reliability testing. Other attributes include long pot-life, low viscosity and high thixotropy making it ideal for a wide range of application methods including wafer level stamping and syringe dispensing.  
**Information Provided by Epoxy Technology**

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Epoxy-Technology-EPO-TEK-ED1020-Epoxy.php](http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-ED1020-Epoxy.php)

Physical Properties	Metric	English	Comments
Specific Gravity	2.89 g/cc	2.89 g/cc	
Particle Size	<= 20 µm	<= 20 µm	
Viscosity	1479 cP	1479 cP	100 rpm
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	9569 cP	9569 cP	10 rpm
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	28583 cP	28583 cP	1 rpm
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	40	40	
Tensile Modulus	0.24892 GPa	36.103 ksi	Storage

Thermal Properties	Metric	English	Comments
CTE, linear	45.0 µm/m-°C	25.0 µin/in-°F	Below Tg
	181 µm/m-°C	101 µin/in-°F	Above Tg
Thermal Conductivity	1.88 W/m-K	13.0 BTU-in/hr-ft <sup>2</sup> -°F	
Maximum Service Temperature, Air	150 °C	302 °F	Continuous
	250 °C	482 °F	Intermittent
Minimum Service Temperature, Air	-55.0 °C	-67.0 °F	Continuous
	-55.0 °C	-67.0 °F	Intermittent

Glass Transition Temp, Tg Thermal Properties	$\geq 46.0$ °C Metric	$\geq 115$ °F English	Dynamic Cure 20–200°C /ISO 25 Min; Ramp: 10–200°C @ 20°C/Min Comments
Decomposition Temperature	333 °C	631 °F	Degradation Temperature

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\leq 0.00040$ ohm-cm	$\leq 0.00040$ ohm-cm	

Chemical Properties	Metric	English	Comments
Ionic Impurities - Na (Sodium)	0.00 ppm	0.00 ppm	
Ionic Impurities - K (Potassium)	4.0 ppm	4.0 ppm	
Ionic Impurities - Cl (Chloride)	169 ppm	169 ppm	

Processing Properties	Metric	English	Comments
Cure Time	60.0 min @Temperature 150 °C	1.00 hour @Temperature 302 °F	
Pot Life	40320 min	40320 min	
Shelf Life	12.0 Month @Temperature -40.0 °C	12.0 Month @Temperature -40.0 °F	

Descriptive Properties	Value	Comments
Color	Silver	
Consistency	Smooth thixotropic paste	
Die Shear	15.4 kg	Initial
	9.3 kg	After 1000hrs 85°C/85% RH
Ionic Impurities NH4	67 ppm	
Number of Components	Single	
Thixotropic Index	3	
Weight Loss	0.68%	200°C
	1.24%	250°C
	1.71%	300°C

Contact Songhan Plastic Technology Co.,Ltd.

**Website : [www.lookpolymers.com](http://www.lookpolymers.com)**

**Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)**

**Tel : +86 021-51131842**

**Mobile : +86 13061808058**

**Skype : lookpolymers**

**Address : United North Road 215,Fengxian District, Shanghai City,China**