

## Epoxy Technology EPO-TEK® H31D-LV Epoxy

Category : Polymer , Thermoset , Epoxy

### Material Notes:

Material Description: A single component, silver-filled, electrically conductive epoxy designed for semiconductor die attach applications found in hybrids, JEDEC, and optoelectronic packaging. It is a NASA approved low outgassing epoxy. It is a lower viscosity version of EPO-TEK® H31D. Information Provided by Epoxy Technology

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Epoxy-Technology-EPO-TEK-H31D-LV-Epoxy.php](http://www.lookpolymers.com/polymer_Epoxy-Technology-EPO-TEK-H31D-LV-Epoxy.php)

Physical Properties	Metric	English	Comments
Specific Gravity	2.13 g/cc	2.13 g/cc	
Particle Size	<= 20 µm	<= 20 µm	
Viscosity	10000 - 15000 cP @Temperature 23.0 °C	10000 - 15000 cP @Temperature 73.4 °F	20 rpm

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	85	85	
Tensile Modulus	2.14 GPa	310 ksi	Storage
Shear Strength	9.31 MPa	1350 psi	Lap
	>= 11.7 MPa	>= 1700 psi	Die

Thermal Properties	Metric	English	Comments
CTE, linear	35.0 µm/m-°C	19.4 µin/in-°F	Below Tg
	143 µm/m-°C	79.4 µin/in-°F	Above Tg
Thermal Conductivity	0.890 W/m-K	6.18 BTU-in/hr-ft <sup>2</sup> -°F	
Maximum Service Temperature, Air	250 °C	482 °F	Continuous
	350 °C	662 °F	Intermittent
Minimum Service Temperature, Air	-55.0 °C	-67.0 °F	Continuous
	-55.0 °C	-67.0 °F	Intermittent
Glass Transition Temp, Tg	>= 110 °C	>= 230 °F	Dynamic Cure 20–200°C /ISO 25 Min; Ramp -10–250°C @ 20°C/Min
Decomposition Temperature	456 °C	853 °F	Degradation Temperature

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 0.0080 ohm-cm	<= 0.0080 ohm-cm	

Chemical Properties	Metric	English	Comments
Ionic Impurities - Na (Sodium)	145 ppm	145 ppm	
Ionic Impurities - K (Potassium)	33 ppm	33 ppm	
Ionic Impurities - Cl (Chloride)	17 ppm	17 ppm	

Processing Properties	Metric	English	Comments
Cure Time	60.0 min @Temperature 150 °C	1.00 hour @Temperature 302 °F	Minimum
Pot Life	40320 min	40320 min	
Shelf Life	6.00 Month	6.00 Month	refrigerated

Descriptive Properties	Value	Comments
Color	Silver	
Consistency	Smooth paste	
Number of Components	Single	
Thixotropic Index	1.6	
Weight Loss	<0.5%	200°C
	0.08%	300°C

## Contact Songhan Plastic Technology Co.,Ltd.

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