# EPO-TEK® OG154-1

### Epoxy; Epoxide

Epoxy Technology Inc.

#### Message:

Single component, UV curable epoxy for adhesive sealing and encapsulating applications found in semicondutor, electro-optics, fiber optics, medical and scientific/OEM industries. Replacement for EPO-TEK® OG154.

Formerly 90-108-5

Features         UV Curable           USes         Adhesives           Electrical/Electronic Applications         Medical/Healthcare Applications           Medical/Healthcare Applications         Medical/Healthcare Applications           Agency Ratings         EC 1907/2006 (REACH)           EU 2003/11/EC         EU 2006/122/EC           ROHS Compliance         ROHS Compliant           Forms         Uquid           Processing Method         Encapsulating           Thermal         Nominal Value         Unit           Glass Transition Temperature 1         > 100         "C           L1E - Elow        2         2.5E-5         cm/cm/"C           Optical         Nominal Value         Unit           Refractive Index	General Information		
Electrical/Electronic Applications Medical/Healthcare Applications Seals  Agency Ratings  EC 1907/2006 (REACH) EU 2003/11/EC EU 2003/11/EC EU 2003/11/EC EU 2003/11/EC EU 2006/122/EC  ROHS Compliance  ROHS Compliance  ROHS Compliance  Rohes Compliant  Forms  Liquid  Processing Method  Encapsulating  Themal  Nominal Value Unit  Glass Transition Temperature 1 > 100 "C  CLTE-Flow 2  5.5E-5  5.5E-5  5.5E-5  5.7E-5  7.3  Agency Ratings  Nominal Value Unit  Refractive Index 3  Agency Rohes  Nominal Value Unit  Refractive Index 4  1.5565  1.569  Transmittance (500 to 1660 nm) > 97.0  Nominal Value Unit  Themoset Nominal Value Unit  Additional Information Nominal Value Unit  Dies Shear Strength ->10 kg (23°C) 23.4  MPa  Operating Temperature Continuous -55 to 200  "C  Continuous -55 to 200  "C  Continuous -55 to 200  "C	Features	UV Curable	
Medical/Healthcare Applications   Seals   Se	Uses	Adhesives	
Agency Ratings         EC 1907/2006 (REACH)           EU 2003/11/EC         EU 2003/11/EC           EU 2006/122/EC           ROHS Compliance         RoHS Compliant           Forms         Liquid           Processing Method         Encapsulating           Therena         Nominal Value         Unit           Glass Transition Temperature 1         > 100         *C           CLTE - Flow         **C           ***-2         5.5E-5         cm/cm/*********************************		Electrical/Electronic Applications	
Agency Ratings         EC 1907/2006 (REACH)           EU 2003/11/EC         EU 2006/122/EC           RoHS Compliance         RoHS Compliant           Forms         Liquid           Processing Method         Encapsulating           Thermal         Nominal Value         Unit           Glass Transition Temperature 1         > 100         °C           CLTE - Flow         2.4E - 4         cm/cm/*C           3         2.4E - 4         cm/cm/*C           Optical         Nominal Value         Unit           Refractive Index             4         1.556            5         1.569            Transmittance (500 to 1660 nm)         > 97.0         %           Thermoset         Nominal Value         Unit           Shelf Life 6         52         wk           Additional Information         Nominal Value         Unit           Degradation Temperature         379         °C           Die Shear Strength -> 10 kg (23°C)         23.4         MPa           Operating Temperature         -55 to 200         °C           Continuous         -55 to 200         °C		Medical/Healthcare Applications	
EU 2003/11/EC   EU 2006/122/EC		Seals	
EU 2003/11/EC   EU 2006/122/EC			
RoHS Compliance RoHS Compliant  Forms Liquid  Processing Method Encapsulating  Thermal Nominal Value Unit  CLTE - Flow 2 S.5E-5 com/cm/°C 3 S.4E-4 com/cm/°C  Optical Nominal Value Unit  Refractive Index 4 S.556 5 S.56 5 S.56  Transmittance (500 to 1660 nm) > 97.0 %  Thermoset Nominal Value Unit  Thermoset Short information Nominal Value Unit  Shelf Life 6 S2 wk  Additional Information Nominal Value Unit  Degradation Temperature 379 °C  Die Shear Strength -> 10 kg (23°C) 23.4 MPa  Operating Temperature  Continuous -55 to 200 °C  Continuous -55	Agency Ratings	EC 1907/2006 (REACH)	
RoHS Compliance RoHS Compliant Forms Liquid Processing Method Encapsulating Thermal Nominal Value Unit Glass Transition Temperature 1 > 100 °C CLTE - Flow2 SEE-5 cm/cm/°C3 24E-4 cm/cm/°C Optical Nominal Value Unit Refractive Index4 1.5565 1.569 Transmittance (500 to 1660 nm) > 97.0 % Thermoset Nominal Value Unit Shelf Life 6 52 wk Additional Information Nominal Value Unit Degradation Temperature 379 cC Die Shear Strength -> 10 kg (23°C) 23.4 MPa Operating Temperature Continuous -55 to 200 °C		EU 2003/11/EC	
Forms Liquid  Processing Method Encapsulating  Thermal Nominal Value Unit  Glass Transition Temperature 1 > 100 °C  CLTE - Flow 2 5.5E-5 cm/cm/°C 3 2.4E-4 cm/cm/°C  Optical Nominal Value Unit  Refractive Index 4 1.556 5 1.569  Transmittance (500 to 1660 nm) > 97.0 %  Thermoset Nominal Value Unit  Shelf Life 6 52 wk  Additional Information Nominal Value Unit  Degradation Temperature 379 °C  Die Shear Strength -> 10 kg (23°C) 23.4 MPa  Operating Temperature  Continuous -55 to 200 °C  Intermittent Continuous -55 to 200 °C  Intermittent Continuous -55 to 300 °C		EU 2006/122/EC	
Forms Liquid  Processing Method Encapsulating  Thermal Nominal Value Unit  Glass Transition Temperature 1 > 100 °C  CLTE - Flow 2 5.5E-5 cm/cm/°C 3 2.4E-4 cm/cm/°C  Optical Nominal Value Unit  Refractive Index 4 1.556 5 1.569  Transmittance (500 to 1660 nm) > 97.0 %  Thermoset Nominal Value Unit  Shelf Life 6 52 wk  Additional Information Nominal Value Unit  Degradation Temperature 379 °C  Die Shear Strength -> 10 kg (23°C) 23.4 MPa  Operating Temperature  Continuous -55 to 200 °C  Intermittent Continuous -55 to 200 °C  Intermittent Continuous -55 to 300 °C	PoUS Compliance	PoUS Compliant	
Processing Method  Finansing  Thermal  Nominal Value  Unit  CLTE - Flow 2  5.5E-5  cm/cm/°C 3  2.4E-4  Optical  Nominal Value  Unit  Continuous  Nominal Value  Unit 4  1.556 5  1.569  Thermoset  Nominal Value  Unit  Unit  Continuous  Nominal Value  Unit			
Thermal         Nominal Value         Unit           Glass Transition Temperature ¹         > 100         °C           CLTE - Flow			
Glass Transition Temperature 1         > 100         "C           CLTE - Flow           2         5.5E - 5         cm/cm/*C           3         2.4E - 4         cm/cm/*C           Optical         Nominal Value         Unit           Refractive Index           4         1.556           5         1.569           Transmittance (500 to 1660 nm)         > 97.0         %           Thermoset         Nominal Value         Unit           Shelf Life 6         52         wk           Additional Information         Nominal Value         Unit           Degradation Temperature         379         "C           Die Shear Strength - >10 kg (23°C)         23.4         MPa           Operating Temperature           Continuous         -55 to 200         "C           Intermittent         -55 to 300         "C			11-9
CLTE - Flow          2         5.5E-5         cm/cm/°C          3         2.4E-4         cm/cm/°C           Optical         Nominal Value         Unit           Refractive Index        4         1.556          5         1.569			
<sup>2</sup> <sup>3</sup> 2.4E-4 Cm/cm/°C  Optical Nominal Value Unit  Refractive Index <sup>4</sup> <sup>5</sup> 1.556 1.569  Transmittance (500 to 1660 nm) > 97.0 %  Thermoset Nominal Value Unit  Shelf Life <sup>6</sup> 52 wk  Additional Information Nominal Value Unit  Degradation Temperature 0 is Shear Strength → >10 kg (23°C) 23.4 MPa  Operating Temperature Continuous -55 to 200 °C  Intermittent Continuous -55 to 300 °C  cm/cm/°C Cm/cm/°C Cmicw/°C Cm		> 100	°C
3   2.4E-4   Cm/cm/°C     Optical   Nominal Value   Unit     Refractive Index  4   1.556    5   1.569     Transmittance (500 to 1660 nm)   > 97.0   %     Thermoset   Nominal Value   Unit     Shelf Life 6   52   wk     Additional Information   Nominal Value   Unit     Degradation Temperature   379   °C     Die Shear Strength - >10 kg (23°C)   23.4   MPa     Operating Temperature     Continuous   -55 to 200   °C     Intermittent   -55 to 300   °C     Optical   Intermittent   Intermittent   -55 to 300   °C     Intermittent   -55 to 200   °C     Intermittent   -55 to 200   °C     Intermittent   -55 to 300   °C     Intermittent   -55 to 200   °C     Intermittent   -55			
Optical         Nominal Value         Unit           Refractive Index         4         1.556           5         1.569         ***           Transmittance (500 to 1660 nm)         > 97.0         %           Thermoset         Nominal Value         Unit           Shelf Life 6         52         wk           Additional Information         Nominal Value         Unit           Degradation Temperature         379         **C           Die Shear Strength - >10 kg (23°C)         23.4         MPa           Operating Temperature         -55 to 200         **C           Intermittent         -55 to 300         **C			
Refractive Index         4       1.556         5       1.569         Transmittance (500 to 1660 nm)       > 97.0       %         Thermoset       Nominal Value       Unit         Shelf Life 6       52       wk         Additional Information       Nominal Value       Unit         Degradation Temperature       379       °C         Die Shear Strength - > 10 kg (23°C)       23.4       MPa         Operating Temperature         Continuous       -55 to 200       °C         Intermittent       -55 to 300       °C			cm/cm/°C
4       1.556         5       1.569         Transmittance (500 to 1660 nm)       > 97.0       %         Thermoset       Nominal Value       Unit         Shelf Life 6       52       wk         Additional Information       Nominal Value       Unit         Degradation Temperature       379       °C         Die Shear Strength - >10 kg (23°C)       23.4       MPa         Operating Temperature       -55 to 200       °C         Intermittent       -55 to 300       °C	Optical	Nominal Value	Unit
5       1.569         Transmittance (500 to 1660 nm)       > 97.0       %         Thermoset       Nominal Value       Unit         Shelf Life 6       52       wk         Additional Information       Nominal Value       Unit         Degradation Temperature       379       °C         Die Shear Strength - >10 kg (23°C)       23.4       MPa         Operating Temperature       -55 to 200       °C         Intermittent       -55 to 300       °C			
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ThermosetNominal ValueUnitShelf Life 652wkAdditional InformationNominal ValueUnitDegradation Temperature379°CDie Shear Strength - >10 kg (23°C)23.4MPaOperating Temperature-55 to 200°CIntermittent-55 to 300°C	5	1.569	
Shelf Life 652wkAdditional InformationNominal ValueUnitDegradation Temperature379°CDie Shear Strength - > 10 kg (23°C)23.4MPaOperating Temperature-55 to 200°CIntermittent-55 to 300°C	Transmittance (500 to 1660 nm)	> 97.0	%
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Degradation Temperature 379 °C  Die Shear Strength - >10 kg (23°C) 23.4 MPa  Operating Temperature  Continuous -55 to 200 °C  Intermittent -55 to 300 °C	Shelf Life <sup>6</sup>	52	wk
Die Shear Strength - >10 kg (23°C)  23.4  MPa  Operating Temperature  Continuous  -55 to 200  °C  Intermittent  -55 to 300  °C	Additional Information	Nominal Value	Unit
Operating Temperature  Continuous -55 to 200 °C  Intermittent -55 to 300 °C	Degradation Temperature	379	°C
Continuous -55 to 200 °C Intermittent -55 to 300 °C	Die Shear Strength - >10 kg (23°C)	23.4	MPa
Intermittent -55 to 300 °C	Operating Temperature		
	Continuous	-55 to 200	°C
Storage Modulus 1.83 GPa	Intermittent	-55 to 300	°C
	Storage Modulus	1.83	GPa

Weight Loss on Heating		
200°C	0.17	%
250°C	0.66	%
300°C	1.5	%
Uncured Properties	Nominal Value	Unit
Color	Clear/Transparent	
Density	1.10	g/cm³
Viscosity <sup>7</sup> (23°C)	26 to 34	Pa·s
Cured Properties	Nominal Value	Unit
Shore Hardness (Shore D)	80	
NOTE		
NOTE		
NOTE	Dynamic Cure 20-200°C/ISO 25	
1.	Dynamic Cure 20-200°C/ISO 25 Min; Ramp -10-200°C @ 20°C/Min	
1.	Min; Ramp -10-200°C @ 20°C/Min	
1.	Min; Ramp -10-200°C @ 20°C/Min Below Tg	
1. 2. 3.	Min; Ramp -10-200°C @ 20°C/Min Below Tg Above Tg	
1. 2. 3. 4.	Min; Ramp -10-200°C @ 20°C/Min  Below Tg  Above Tg  589 nm (uncured)	

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#### Recommended distributors for this material

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