

LG Chemical HI-121 ABS, High Impact

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Impact Grade, Molded

Material Notes:

Feature: Injection Molding, Well Balanced Mechanical Properties
 Application: Electric & Electronic Products, Miscellaneous Goods
 CAS No. 9003-56-9
 Information Provided by LG Chem

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-HI-121-ABS-High-Impact.php

| Physical Properties | Metric | English | Comments |
|------------------------|--|--|----------|
| Density | 1.04 g/cc | 0.0376 lb/in ³ | ISO 1183 |
| Water Absorption | 0.30 % | 0.30 % | ISO 62 |
| Linear Mold Shrinkage | 0.0030 - 0.0060 cm/cm | 0.0030 - 0.0060 in/in | ISO 2577 |
| Melt Index of Compound | 19.76 g/10 min @Load 10.0 kg, Temperature 220 °C | 19.76 g/10 min @Load 22.0 lb, Temperature 428 °F | ISO 1133 |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|--|--|--------------------|
| Tensile Strength, Yield | 48.0 MPa | 6960 psi | 50 mm/min; ISO 527 |
| Elongation at Break | 25 % | 25 % | 50 mm/min; ISO 527 |
| Elongation at Yield | 5.0 % | 5.0 % | 50 mm/min; ISO 527 |
| Tensile Modulus | 2.25 GPa | 326 ksi | 1 mm/min; ISO 527 |
| Flexural Yield Strength | 71.0 MPa | 10300 psi | 2 mm/min; ISO 178 |
| Flexural Modulus | 2.20 GPa | 319 ksi | 2 mm/min; ISO 178 |
| Izod Impact, Notched (ISO) | 15.0 kJ/m ² @Temperature -30.0 °C | 7.14 ft-lb/in ² @Temperature -22.0 °F | ISO 180 |
| | 38.0 kJ/m ² @Temperature 23.0 °C | 18.1 ft-lb/in ² @Temperature 73.4 °F | ISO 80 |
| Charpy Impact Unnotched | NB @Temperature -30.0 °C | NB @Temperature -22.0 °F | ISO 179 |
| | NB @Temperature 23.0 | NB | ISO 179 |

| Mechanical Properties | Metric | English | Comments |
|------------------------|--------------------------|----------------------------|----------|
| Charpy Impact, Notched | 1.80 J/cm ² | 8.57 ft-lb/in ² | ISO 179 |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| | 4.10 J/cm ² | 19.5 ft-lb/in ² | ISO 179 |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |

| Thermal Properties | Metric | English | Comments |
|--|-------------------------|----------------------|----------------------------------|
| CTE, linear | 93.0 μm/m-°C | 51.7 μin/in-°F | ISO 11359 |
| | @Temperature 20.0 °C | @Temperature 68.0 °F | |
| CTE, linear, Transverse to Flow | 99.0 μm/m-°C | 55.0 μin/in-°F | ISO 11359 |
| | @Temperature 20.0 °C | @Temperature 68.0 °F | |
| Deflection Temperature at 0.46 MPa (66 psi) | 97.0 °C | 207 °F | Annealed, 80°C, 4 hours; ISO 75 |
| Deflection Temperature at 1.8 MPa (264 psi) | 94.0 °C | 201 °F | Annealed, 80°C, 4 hours; ISO 175 |
| Vicat Softening Point | 96.0 °C | 205 °F | 50 N, 50°C/h; ISO 306 |
| Flammability, UL94 | HB | HB | |
| | @Thickness 3.00 mm | @Thickness 0.118 in | |
| | HB | HB | |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |

| Electrical Properties | Metric | English | Comments |
|-----------------------|--------------------|--------------------|----------|
| Volume Resistivity | >= 1.00e+13 ohm-cm | >= 1.00e+13 ohm-cm | IEC 93 |
| Surface Resistance | >= 1.00e+15 ohm | >= 1.00e+15 ohm | IEC 93 |
| Dielectric Constant | 2.9 | 2.9 | IEC 250 |
| | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz | |
| | 3.0 | 3.0 | IEC 250 |
| | @Frequency 100 Hz | @Frequency 100 Hz | |
| Dielectric Strength | 48.0 kV/mm | 1220 kV/in | IEC 243 |
| Dissipation Factor | 0.010 | 0.010 | IEC 250 |
| | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz | |

| Electrical Properties | Metric | English | Comments |
|-----------------------|-----------------|---------------|-----------|
| Processing Properties | Metric | English | Comments |
| Melt Temperature | 220 - 250 Â°C | 428 - 482 Â°F | |
| Mold Temperature | 40.0 - 80.0 Â°C | 104 - 176 Â°F | |
| Drying Temperature | 75.0 - 85.0 Â°C | 167 - 185 Â°F | |
| Dry Time | 2 - 4 hour | 2 - 4 hour | Predrying |

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