

## LG Chemical HF380I ABS, High Flow

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

### Material Notes:

Feature: Injection Molding, High Flow, Good Paintability  
Application: Painting Products of Motor Cycle)  
CAS No. 9003-56-9  
Information provided by LG Chemical

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_LG-Chemical-HF380I-ABS-High-Flow.php](http://www.lookpolymers.com/polymer_LG-Chemical-HF380I-ABS-High-Flow.php)

| Physical Properties         | Metric                                               | English                                              | Comments          |
|-----------------------------|------------------------------------------------------|------------------------------------------------------|-------------------|
| Specific Gravity            | 1.05 g/cc                                            | 1.05 g/cc                                            | ASTM D792         |
| Maximum Moisture Content    | 0.010                                                | 0.010                                                | Injection Molding |
| Linear Mold Shrinkage, Flow | 0.0040 - 0.0070 cm/cm<br>@Thickness 3.20 mm          | 0.0040 - 0.0070 in/in<br>@Thickness 0.126 in         | ASTM D955         |
| Melt Flow                   | 40 g/10 min<br>@Load 10.0 kg,<br>Temperature 220 Â°C | 40 g/10 min<br>@Load 22.0 lb,<br>Temperature 428 Â°F | ASTM D1238        |

| Mechanical Properties   | Metric                                                   | English                                                       | Comments             |
|-------------------------|----------------------------------------------------------|---------------------------------------------------------------|----------------------|
| Hardness, Rockwell R    | 105                                                      | 105                                                           | ASTM D785            |
| Tensile Strength, Yield | 44.1 MPa<br>@Thickness 3.20 mm                           | 6400 psi<br>@Thickness 0.126 in                               | 50 mm/min; ASTM D638 |
| Elongation at Break     | 40 %<br>@Thickness 3.20 mm                               | 40 %<br>@Thickness 0.126 in                                   | 50 mm/min; ASTM D638 |
| Tensile Modulus         | 1.96 GPa<br>@Thickness 3.20 mm                           | 284 ksi<br>@Thickness 0.126 in                                | 1 mm/min; ASTM D638  |
| Flexural Yield Strength | 68.6 MPa<br>@Thickness 3.20 mm                           | 9960 psi<br>@Thickness 0.126 in                               | 15 mm/min; ASTM D790 |
| Flexural Modulus        | 2.30 GPa<br>@Thickness 3.20 mm                           | 334 ksi<br>@Thickness 0.126 in                                | 15 mm/min; ASTM D790 |
| Izod Impact, Notched    | 2.84 J/cm<br>@Thickness 6.40 mm,<br>Temperature 23.0 Â°C | 5.33 ft-lb/in<br>@Thickness 0.252 in,<br>Temperature 73.4 Â°F | ASTM D256            |
|                         | 3.14 J/cm                                                | 5.88 ft-lb/in                                                 | ASTM D256            |

| Mechanical Properties  | Metric<br>@Thickness 3.20 mm,<br>Temperature 23.0 Â°C      | English<br>@Thickness 0.126 in,<br>Temperature 73.4 Â°F        | Comments  |
|------------------------|------------------------------------------------------------|----------------------------------------------------------------|-----------|
| Izod Impact, Unnotched | 0.981 J/cm<br>@Thickness 6.40 mm,<br>Temperature -30.0 Â°C | 1.84 ft-lb/in<br>@Thickness 0.252 in,<br>Temperature -22.0 Â°F | ASTM D256 |
|                        | 0.981 J/cm<br>@Thickness 3.20 mm,<br>Temperature -30.0 Â°C | 1.84 ft-lb/in<br>@Thickness 0.126 in,<br>Temperature -22.0 Â°F | ASTM D256 |

| Thermal Properties                             | Metric                           | English                           | Comments              |
|------------------------------------------------|----------------------------------|-----------------------------------|-----------------------|
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 87.0 Â°C<br>@Thickness 6.40 mm   | 189 Â°F<br>@Thickness 0.252 in    | Unannealed; ASTM D648 |
|                                                | 92.0 Â°C<br>@Thickness 6.40 mm   | 198 Â°F<br>@Thickness 0.252 in    | ASTM D648             |
| Vicat Softening Point                          | 93.0 Â°C<br>@Load 5.00 kg        | 199 Â°F<br>@Load 11.0 lb          | 50Â°C/h; ASTM D1525   |
| UL RTI, Electrical                             | 60.0 Â°C<br>@Thickness >=1.50 mm | 140 Â°F<br>@Thickness >=0.0591 in | UL 746B               |
|                                                | 60.0 Â°C<br>@Thickness >=3.00 mm | 140 Â°F<br>@Thickness >=0.118 in  |                       |
| UL RTI, Mechanical with Impact                 | 60.0 Â°C<br>@Thickness >=1.50 mm | 140 Â°F<br>@Thickness >=0.0591 in | UL 746B               |
|                                                | 60.0 Â°C<br>@Thickness >=3.00 mm | 140 Â°F<br>@Thickness >=0.118 in  |                       |
| UL RTI, Mechanical without Impact              | 60.0 Â°C<br>@Thickness >=1.50 mm | 140 Â°F<br>@Thickness >=0.0591 in | UL 746B               |
|                                                | 60.0 Â°C<br>@Thickness >=3.00 mm | 140 Â°F<br>@Thickness >=0.118 in  |                       |
| Flammability, UL94                             | HB<br>@Thickness >=1.50 mm       | HB<br>@Thickness >=0.0591 in      |                       |
|                                                | HB                               | HB                                |                       |

| Thermal Properties                   | @Thickness >=3.00 mm<br>Metric      | @Thickness >=0.118 in<br>English      | Comments              |
|--------------------------------------|-------------------------------------|---------------------------------------|-----------------------|
| Electrical Properties                | Metric                              | English                               | Comments              |
| Volume Resistivity                   | 1.00e+13 ohm-cm                     | 1.00e+13 ohm-cm                       |                       |
| Dielectric Strength                  | 34.0 kV/mm                          | 864 kV/in                             |                       |
| Arc Resistance                       | 60 - 120 sec                        | 60 - 120 sec                          | ASTM D495             |
| Comparative Tracking Index           | 400 - 600 V                         | 400 - 600 V                           | Solution A; IEC 60112 |
| Hot Wire Ignition, HWI               | 15 - 30 sec<br>@Thickness >=1.50 mm | 15 - 30 sec<br>@Thickness >=0.0591 in |                       |
|                                      | 15 - 30 sec<br>@Thickness >=3.00 mm | 15 - 30 sec<br>@Thickness >=0.118 in  |                       |
| High Amp Arc Ignition, HAI           | >= 120 arcs<br>@Thickness 1.50 mm   | >= 120 arcs<br>@Thickness 0.0591 in   |                       |
|                                      | >= 120 arcs<br>@Thickness 3.00 mm   | >= 120 arcs<br>@Thickness 0.118 in    |                       |
| High Voltage Arc-Tracking Rate, HVTR | 10.0 - 25.4 mm/min                  | 0.394 - 1.00 in/min                   |                       |

| Processing Properties     | Metric           | English          | Comments          |
|---------------------------|------------------|------------------|-------------------|
| Rear Barrel Temperature   | 180 - 200 Â°C    | 356 - 392 Â°F    | Injection Molding |
| Middle Barrel Temperature | 190 - 210 Â°C    | 374 - 410 Â°F    | Injection Molding |
| Front Barrel Temperature  | 200 - 220 Â°C    | 392 - 428 Â°F    | Injection Molding |
| Nozzle Temperature        | 200 - 230 Â°C    | 392 - 446 Â°F    | Injection Molding |
| Melt Temperature          | 210 - 240 Â°C    | 410 - 464 Â°F    | Injection Molding |
| Mold Temperature          | 40.0 - 70.0 Â°C  | 104 - 158 Â°F    | Injection Molding |
| Drying Temperature        | 80.0 Â°C         | 176 Â°F          | Injection Molding |
| Dry Time                  | 2.00 - 4.00 hour | 2.00 - 4.00 hour | Injection Molding |
| Back Pressure             | 29.4 - 58.8 MPa  | 4260 - 8530 psi  | Injection Molding |
| Screw Speed               | 30 - 60 rpm      | 30 - 60 rpm      | Injection Molding |

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