

LG Chemical SG175G ABS, Super Surface Gloss, High Flow

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

Material Notes:

Feature: Injection Molding, Super Surface Gloss, High Flow
 Application: Electric & Electronic Products
 CAS No. 9003-56-9
 Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-SG175G-ABS-Super-Surface-Gloss-High-Flow.php

| Physical Properties | Metric | English | Comments |
|-----------------------------|---|---|-------------------|
| Specific Gravity | 1.04 g/cc | 1.04 g/cc | ASTM D792 |
| Maximum Moisture Content | 0.010 | 0.010 | Injection Molding |
| Linear Mold Shrinkage, Flow | 0.0040 - 0.0070 cm/cm @Thickness 3.20 mm | 0.0040 - 0.0070 in/in @Thickness 0.126 in | ASTM D955 |
| Melt Flow | 37 g/10 min @Load 10.0 kg, Temperature 220 °C | 37 g/10 min @Load 22.0 lb, Temperature 428 °F | ASTM D1238 |

| Mechanical Properties | Metric | English | Comments |
|-------------------------|---|--|----------------------|
| Hardness, Rockwell R | 108 | 108 | ASTM D785 |
| Tensile Strength, Yield | 46.1 MPa @Thickness 3.20 mm | 6680 psi @Thickness 0.126 in | 50 mm/min; ASTM D638 |
| Elongation at Break | 30 % @Thickness 3.20 mm | 30 % @Thickness 0.126 in | 50 mm/min; ASTM D638 |
| Elongation at Yield | >= 5.0 % @Thickness 3.20 mm | >= 5.0 % @Thickness 0.126 in | 50 mm/min; ASTM D638 |
| Flexural Yield Strength | 73.5 MPa @Thickness 3.20 mm | 10700 psi @Thickness 0.126 in | 15 mm/min; ASTM D790 |
| Flexural Modulus | 2.55 GPa @Thickness 3.20 mm | 370 ksi @Thickness 0.126 in | 15 mm/min; ASTM D790 |
| Izod Impact, Notched | 2.26 J/cm @Thickness 3.20 mm, Temperature 23.0 °C | 4.22 ft-lb/in @Thickness 0.126 in, Temperature 73.4 °F | ASTM D256 |
| | 2.35 J/cm | 4.41 ft-lb/in | ASTM D256 |

| Mechanical Properties | Metric @Thickness 6.40 mm, Temperature 23.0 °C | English @Thickness 0.252 in, Temperature 73.4 °F | Comments |
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| Thermal Properties | Metric | English | Comments |
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| Deflection Temperature at 1.8 MPa (264 psi) | 85.0 °C @Thickness 6.40 mm | 185 °F @Thickness 0.252 in | Unannealed; ASTM D648 |
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| Vicat Softening Point | 92.0 °C @Load 5.00 kg | 198 °F @Load 11.0 lb | 50°C/h; ASTM D1525 |
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| UL RTI, Electrical | 60.0 °C @Thickness >=1.50 mm | 140 °F @Thickness >=0.0591 in | UL 746B |
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| | 60.0 °C @Thickness >=3.00 mm | 140 °F @Thickness >=0.118 in | |
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| UL RTI, Mechanical with Impact | 60.0 °C @Thickness >=1.50 mm | 140 °F @Thickness >=0.0591 in | UL 746B |
|--------------------------------|---------------------------------|----------------------------------|---------|

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|--|---------------------------------|---------------------------------|--|
| | 60.0 °C @Thickness >=3.00 mm | 140 °F @Thickness >=0.118 in | |
|--|---------------------------------|---------------------------------|--|

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|-----------------------------------|---------------------------------|----------------------------------|---------|
| UL RTI, Mechanical without Impact | 60.0 °C @Thickness >=1.50 mm | 140 °F @Thickness >=0.0591 in | UL 746B |
|-----------------------------------|---------------------------------|----------------------------------|---------|

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|--|---------------------------------|---------------------------------|--|
| | 60.0 °C @Thickness >=3.00 mm | 140 °F @Thickness >=0.118 in | |
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| Flammability, UL94 | HB @Thickness >=1.50 mm | HB @Thickness >=0.0591 in | |
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|--|----------------------------|-----------------------------|--|
| | HB @Thickness >=3.00 mm | HB @Thickness >=0.118 in | |
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| Electrical Properties | Metric | English | Comments |
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| Volume Resistivity | 1.00e+16 ohm-cm | 1.00e+16 ohm-cm | |
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| Dielectric Strength | 28.0 kV/mm | 711 kV/in | |
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| Arc Resistance | 60 - 120 sec | 60 - 120 sec | ASTM D495 |
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| Comparative Tracking Index | >= 600 V | >= 600 V | Solution A; IEC 60112 |
|----------------------------|----------|----------|-----------------------|

| Electrical Properties Hot Wire Ignition, HWI | Metric 7.0 - 15 sec | English 7.0 - 15 sec | Comments |
|---|------------------------|-------------------------|----------|
| | @Thickness >=1.50 mm | @Thickness >=0.0591 in | |
| | 15 - 30 sec | 15 - 30 sec | |
| | @Thickness >=3.00 mm | @Thickness >=0.118 in | |
| High Amp Arc Ignition, HAI | 30 - 60 arcs | 30 - 60 arcs | |
| | @Thickness 1.50 mm | @Thickness 0.0591 in | |
| | >= 120 arcs | >= 120 arcs | |
| | @Thickness 3.00 mm | @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 °C | 356 - 392 °F | Injection Molding |
| Middle Barrel Temperature | 190 - 210 °C | 374 - 410 °F | Injection Molding |
| Front Barrel Temperature | 200 - 220 °C | 392 - 428 °F | Injection Molding |
| Nozzle Temperature | 200 - 230 °C | 392 - 446 °F | Injection Molding |
| Melt Temperature | 210 - 240 °C | 410 - 464 °F | Injection Molding |
| Mold Temperature | 40.0 - 70.0 °C | 104 - 158 °F | Injection Molding |
| Drying Temperature | 80.0 °C | 176 °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 |

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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