

## LG Chemical IH830A PMMA, General Purpose Grade for Injection Molding

Category : Polymer , Thermoplastic , Acrylic (PMMA) , Acrylic, General Purpose, Molded

### Material Notes:

Highest of all grades in heat resistance  
Mechanical strength and surface hardness  
Particularly recommended for tail lamp, reflectors, and general lighting fixtures  
Features: Excellent transparency and elegance  
Weather resistance and chemical resistance  
Surface hardness and coloring property  
Superior electrical resistance and mechanical properties  
No harm caused  
Applications: Automotive Parts: Rear lamp cover  
Turn signal lamp cover  
Indoor lamp cover  
Rear quarter glass  
Automotive badge  
Electric or Electronic Parts: LCD light guide plate  
Microwave oven door/front panel  
Cassette door  
VCR cover/front panel  
Car stereo panel  
Dial scale  
Light pipe  
Sheet: Signboard  
Showcase  
Light dome  
Aquarium  
Picture frame  
Lighting and Miscellaneous: Solid surface  
Lighting cover  
Ornaments  
Watch crystal  
Optical lens  
Piano keyboard  
Information Provided by LG Chem

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_LG-Chemical-IH830A-PMMA-General-Purpose-Grade-for-Injection-Molding.php](http://www.lookpolymers.com/polymer_LG-Chemical-IH830A-PMMA-General-Purpose-Grade-for-Injection-Molding.php)

| Physical Properties    | Metric  | English   | Comments            |
|------------------------|---|---|---------------------|
| Specific Gravity       | 1.18 g/cc   | 1.18 g/cc   | ASTM D792           |
| Water Absorption       | 0.30 %  | 0.30 %  | 24 hours; ASTM D570 |
| Linear Mold Shrinkage  | 0.0020 - 0.0060 cm/cm                                 | 0.0020 - 0.0060 in/in                                 | ASTM D955           |
| Melt Index of Compound | 5.3 g/10 min<br>@Load 3.80 kg,<br>Temperature 230 Å°C | 5.3 g/10 min<br>@Load 8.38 lb,<br>Temperature 446 Å°F | ASTM D1238          |

| Mechanical Properties     | Metric     | English        | Comments  |
|---------------------------|------------|----------------|-----------|
| Hardness, Rockwell M      | 96         | 96             | ASTM D785 |
| Tensile Strength at Break | 70.0 MPa   | 10200 psi      | ASTM D638 |
| Elongation at Break       | 12 %       | 12 %           | ASTM D638 |
| Flexural Strength         | 134 MPa    | 19400 psi      | ASTM D790 |
| Flexural Modulus          | 3.588 GPa  | 520.4 ksi      | ASTM D790 |
| Izod Impact, Notched      | 0.147 J/cm | 0.275 ft-lb/in | ASTM D256 |

| Thermal Properties                          | Metric                                     | English                                   | Comments  |
|---|--|---|-----------|
| CTE, linear                                 | 60.0 Åµm/m-Å°C<br>@Temperature 20.0<br>Å°C | 33.3 Åµin/in-Å°F<br>@Temperature 68.0 Å°F | ASTM D696 |
| Deflection Temperature at 1.8 MPa (264 psi) | 99.0 Å°C                                   | 210 Å°F                                   | ASTM D648 |

| Thermal Properties | Metric          | English       | Comments  |
|--------------------|-----------------|---------------|-----------|
| Annealing Point    | 80.0 - 90.0 Â°C | 176 - 194 Â°F | 3-5 hours |

| Optical Properties    | Metric                       | English                       | Comments   |
|-----------------------|------------------------------|-------------------------------|------------|
| Refractive Index      | 1.49                         | 1.49                          | ASTM D542  |
| Haze                  | 0.50 %<br>@Thickness 3.20 mm | 0.50 %<br>@Thickness 0.126 in | ASTM D1003 |
| Transmission, Visible | 93 %<br>@Thickness 3.20 mm   | 93 %<br>@Thickness 0.126 in   | ASTM D1003 |

| Electrical Properties | Metric                    | English                   | Comments         |
|-----------------------|---------------------------|---------------------------|------------------|
| Volume Resistivity    | >= 1.00e+15 ohm-cm        | >= 1.00e+15 ohm-cm        | ASTM D257        |
| Dielectric Constant   | 4.0<br>@Frequency 60 Hz   | 4.0<br>@Frequency 60 Hz   | ASTM D150        |
| Dielectric Strength   | 20.0 kV/mm                | 508 kV/in                 | 4kV/s; ASTM D149 |
| Dissipation Factor    | 0.050<br>@Frequency 60 Hz | 0.050<br>@Frequency 60 Hz | ASTM D150        |

| Processing Properties  | Metric            | English           | Comments                               |
|------------------------|-------------------|-------------------|--|
| Processing Temperature | 220 - 260 Â°C     | 428 - 500 Â°F     | Injection molding cylinder temperature |
| Mold Temperature       | 70.0 - 80.0 Â°C   | 158 - 176 Â°F     |  |
| Drying Temperature     | 80.0 - 90.0 Â°C   | 176 - 194 Â°F     |  |
| Dry Time               | 4 - 6 hour        | 4 - 6 hour        |  |
| Injection Pressure     | 78.45 - 147.1 MPa | 11380 - 21340 psi |  |

## Contact Songhan Plastic Technology Co.,Ltd.

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