

## LG Chemical XR490 ABS, Heat Resistance, Low Emission

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

### Material Notes:

Feature: Injection Molding, Heat Resistance, Low Emission  
Application: Automotives Interior Housing (Glove Box Etc)  
CAS No. 25120-20-1, 9003-56-9, 31621-07-5, and 9003-54-7  
Information provided by LG Chemical

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_LG-Chemical-XR490-ABS-Heat-Resistance-Low-Emission.php](http://www.lookpolymers.com/polymer_LG-Chemical-XR490-ABS-Heat-Resistance-Low-Emission.php)

| Physical Properties         | Metric                                                | English                                               | Comments          |
|-----------------------------|-------------------------------------------------------|-------------------------------------------------------|-------------------|
| Specific Gravity            | 1.07 g/cc                                             | 1.07 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                   | 3.0 g/10 min<br>@Load 10.0 kg,<br>Temperature 220 Â°C | 3.0 g/10 min<br>@Load 22.0 lb,<br>Temperature 428 Â°F | ASTM D1238        |

| Mechanical Properties   | Metric                                                   | English                                                       | Comments             |
|-------------------------|----------------------------------------------------------|---------------------------------------------------------------|----------------------|
| Hardness, Rockwell R    | 114                                                      | 114                                                           | ASTM D785            |
| Tensile Strength, Yield | 47.1 MPa<br>@Thickness 3.20 mm                           | 6830 psi<br>@Thickness 0.126 in                               | 50 mm/min; ASTM D638 |
| Elongation at Break     | 15 %<br>@Thickness 3.20 mm                               | 15 %<br>@Thickness 0.126 in                                   | 50 mm/min; ASTM D638 |
| Flexural Yield Strength | 76.5 MPa<br>@Thickness 3.20 mm                           | 11100 psi<br>@Thickness 0.126 in                              | 15 mm/min; ASTM D790 |
| Flexural Modulus        | 2.65 GPa<br>@Thickness 3.20 mm                           | 384 ksi<br>@Thickness 0.126 in                                | 15 mm/min; ASTM D790 |
| Izod Impact, Notched    | 1.08 J/cm<br>@Thickness 6.40 mm,<br>Temperature 23.0 Â°C | 2.02 ft-lb/in<br>@Thickness 0.252 in,<br>Temperature 73.4 Â°F | ASTM D256            |
|                         | 1.18 J/cm<br>@Thickness 3.20 mm,<br>Temperature 23.0 Â°C | 2.20 ft-lb/in<br>@Thickness 0.126 in,<br>Temperature 73.4 Â°F | ASTM D256            |
|                         | 0.588 J/cm                                               | 1.10 ft-lb/in                                                 |                      |

| Izod Impact, Unnotched<br>Mechanical Properties | Metric                                        | English                                        | ASTM D256<br>Comments |
|-------------------------------------------------|-----------------------------------------------|------------------------------------------------|-----------------------|
|                                                 | @ Thickness 6.40 mm,<br>Temperature -30.0 Â°C | @ Thickness 0.252 in,<br>Temperature -22.0 Â°F |                       |
|                                                 | 0.588 J/cm                                    | 1.10 ft-lb/in                                  | ASTM D256             |
|                                                 | @Thickness 3.20 mm,<br>Temperature -30.0 Â°C  | @Thickness 0.126 in,<br>Temperature -22.0 Â°F  |                       |

| Thermal Properties                             | Metric                        | English                        | Comments              |
|------------------------------------------------|-------------------------------|--------------------------------|-----------------------|
| Deflection Temperature at 0.46 MPa<br>(66 psi) | 113 Â°C<br>@Thickness 6.40 mm | 235 Â°F<br>@Thickness 0.252 in | Unannealed; ASTM D648 |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 105 Â°C<br>@Thickness 6.40 mm | 221 Â°F<br>@Thickness 0.252 in | Unannealed; ASTM D648 |
| Vicat Softening Point                          | 113 Â°C<br>@Load 5.00 kg      | 235 Â°F<br>@Load 11.0 lb       | 50Â°C/h; ASTM D1525   |

| Processing Properties     | Metric           | English          | Comments          |
|---------------------------|------------------|------------------|-------------------|
| Rear Barrel Temperature   | 180 - 220 Â°C    | 356 - 428 Â°F    | Injection Molding |
| Middle Barrel Temperature | 220 - 240 Â°C    | 428 - 464 Â°F    | Injection Molding |
| Front Barrel Temperature  | 230 - 250 Â°C    | 446 - 482 Â°F    | Injection Molding |
| Nozzle Temperature        | 240 - 250 Â°C    | 464 - 482 Â°F    | Injection Molding |
| Melt Temperature          | 230 - 250 Â°C    | 446 - 482 Â°F    | Injection Molding |
| Mold Temperature          | 60.0 - 80.0 Â°C  | 140 - 176 Â°F    | Injection Molding |
| Drying Temperature        | 80.0 - 90.0 Â°C  | 176 - 194 Â°F    | Injection Molding |
| Dry Time                  | 3.00 - 4.00 hour | 3.00 - 4.00 hour | Injection Molding |
| Back Pressure             | 29.4 - 58.8 MPa  | 4260 - 8530 psi  | Injection Molding |
| Screw Speed               | 50 - 100 rpm     | 50 - 100 rpm     | Injection Molding |

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