

## Plaskolite West Optix® CP - 41 HF General Purpose Acrylic Resin

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

### Material Notes:

Generally unaffected by alkalis, hydrocarbons, non-oxidizing acids, and salt water. Transparent, translucent, opaque, and custom colors in various grades of melt flow rate and heat resistance are available. Information provided by Plaskolite West, Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Plaskolite-West-Optix-CP-41-HF-General-Purpose-Acrylic-Resin.php](http://www.lookpolymers.com/polymer_Plaskolite-West-Optix-CP-41-HF-General-Purpose-Acrylic-Resin.php)

| Physical Properties   | Metric                                              | English                                             | Comments    |
|-----------------------|-----------------------------------------------------|-----------------------------------------------------|-------------|
| Density               | 1.19 g/cc                                           | 0.0430 lb/in <sup>3</sup>                           | ASTM D-792  |
| Water Absorption      | 0.30 %                                              | 0.30 %                                              | ASTM D-570  |
| Linear Mold Shrinkage | 0.0020 - 0.0060 cm/cm                               | 0.0020 - 0.0060 in/in                               | ASTM D-955  |
| Melt Flow             | 30 g/10 min<br>@Load 3.80 kg,<br>Temperature 230 °C | 30 g/10 min<br>@Load 8.38 lb,<br>Temperature 446 °F | ASTM D-1238 |

| Mechanical Properties | Metric                           | English                               | Comments                       |
|-----------------------|----------------------------------|---------------------------------------|--------------------------------|
| Hardness, Rockwell M  | 74                               | 74                                    | ASTM D-785                     |
| Tensile Strength      | 53.0 MPa                         | 7680 psi                              | ASTM D-638                     |
| Elongation at Break   | 2.4 %                            | 2.4 %                                 | ASTM D-638                     |
| Modulus of Elasticity | 2.727 GPa                        | 395.5 ksi                             | ASTM D-638                     |
| Flexural Strength     | 76.19 MPa                        | 11050 psi                             | ASTM D-790                     |
| Izod Impact, Notched  | 0.160 J/cm<br>@Thickness 6.35 mm | 0.300 ft-lb/in<br>@Thickness 0.250 in | ASTM D-256                     |
| Gardner Impact        | 0.226 J<br>@Thickness 3.17 mm    | 0.167 ft-lb<br>@Thickness 0.125 in    | Falling Weight; ASTM D-3029 GB |

| Thermal Properties                          | Metric       | English        | Comments    |
|---------------------------------------------|--------------|----------------|-------------|
| CTE, linear                                 | 60.0 µm/m-°C | 33.3 µin/in-°F | ASTM D-696  |
| Deflection Temperature at 1.8 MPa (264 psi) | 71.7 °C      | 161 °F         | ASTM D-648  |
| Vicat Softening Point                       | 88.9 °C      | 192 °F         | ASTM D-1525 |
| Flammability, UL94                          | HB           | HB             |             |

| Optical Properties    | Metric   | English  | Comments    |
|-----------------------|----------|----------|-------------|
| Refractive Index      | 1.49     | 1.49     | ASTM D-542  |
| Haze                  | <= 1.0 % | <= 1.0 % | ASTM D-1003 |
| Transmission, Visible | 92 %     | 92 %     | ASTM D-1003 |

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