

## Spartech Polycast SAR HP 1.25 (UL 752 Level 3) Cell Cast Acrylic

Category : Polymer , Thermoplastic , Acrylic (PMMA)

### Material Notes:

Description: Cell Cast Acrylic Information provided by Spartech.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Spartech-Polycast-SAR-HP-125-UL-752-Level-3-Cell-Cast-Acrylic.php](http://www.lookpolymers.com/polymer_Spartech-Polycast-SAR-HP-125-UL-752-Level-3-Cell-Cast-Acrylic.php)

| Physical Properties | Metric | English | Comments        |
|---------------------|--------|---------|-----------------|
| Water Absorption    | 0.20 % | 0.20 %  | 24 hr immersion |

| Mechanical Properties          | Metric   | English  | Comments   |
|--------------------------------|----------|----------|--|
| Tensile Strength, Yield        | 65.5 MPa | 9500 psi | ASTM D638  |
| Tensile Modulus                | 2.76 GPa | 400 ksi  | ASTM D638  |
| Compressive Modulus            | 2.76 GPa | 400 ksi  | ASTM D695  |
| Taber Abrasion, mg/1000 Cycles | 1.5      | 1.5      | 500 g each wheel, 100 rev ANSI Z26.1; ASTM D1044 |

| Thermal Properties               | Metric   | English   | Comments  |
|----------------------------------|--|---|---|
| CTE, linear                      | 75.6 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ | 42.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$  | ASTM D696   |
|                                  | @Temperature 20.0 $\text{Å}^\circ\text{C}$             | @Temperature 68.0 $\text{Å}^\circ\text{F}$                |   |
| Specific Heat Capacity           | 1.46 J/g- $\text{Å}^\circ\text{C}$                     | 0.350 BTU/lb- $\text{Å}^\circ\text{F}$                    | Dupont 900 (Therm. An. Cal.)                              |
|                                  | @Temperature 25.0 $\text{Å}^\circ\text{C}$             | @Temperature 77.0 $\text{Å}^\circ\text{F}$                |   |
| Thermal Conductivity             | 0.187 W/m-K  | 1.30 BTU-in/hr-ft $\text{Å}^2\cdot\text{Å}^\circ\text{F}$ | Cento-Fitch   |
| Maximum Service Temperature, Air | 76.7 $\text{Å}^\circ\text{C}$                          | 170 $\text{Å}^\circ\text{F}$                              |   |
| Minimum Service Temperature, Air | -32.2 $\text{Å}^\circ\text{C}$                         | -26.0 $\text{Å}^\circ\text{F}$                            | Lowest Temp Tested for Bullet Resistance                  |
| Flame Spread                     | 30 mm/min  | 1.2 in/min  | Burning Rate UL 94 HB; ASTM D635                          |
| Flash Point                      | 466 $\text{Å}^\circ\text{C}$                           | 870 $\text{Å}^\circ\text{F}$                              | Self Ignition Temperature; ASTM D1929                     |
| Shrinkage                        | 2.2 %  | 2.2 %   | Residual Shrinkage (Internal Strain) Polycast; ASTM D4802 |

| Optical Properties | Metric       | English      | Comments            |
|--------------------|--------------|--------------|---------------------|
| Haze               | $\leq 1.0$ % | $\leq 1.0$ % | As Cast; ASTM D1003 |

| Optical Properties    | Metric                       | English                      | Comments            |
|-----------------------|------------------------------|------------------------------|---------------------|
| Yellow Index          | <= 0.70 %                    | <= 0.70 %                    | As Cast; ASTM D1925 |
| Transmission, Visible | >= 90 %                      | >= 90 %                      | As Cast; ASTM D1003 |
| UV Transmittance      | 0.00 %<br>@Wavelength 320 nm | 0.00 %<br>@Wavelength 320 nm |                     |

| Processing Properties  | Metric  | English | Comments                |
|------------------------|---------|---------|-------------------------|
| Processing Temperature | 160 Â°C | 320 Â°F | Hot Forming Temperature |

| Descriptive Properties | Value             | Comments   |
|------------------------|-------------------|------------|
| Ballistic Protection   | .357 Magnum       |            |
| Mar Resistance         | 2.3               | ASTM D637  |
| Smoke Density          | Max 8%; Rating 5% | ASTM D2843 |

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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