

## Sumitomo Bakelite Durez® 22257 Phenolic, Compression Grade

Category : Polymer , Thermoset , Phenolic , Phenolic, Novolac, Impact Grade, Filled

### Material Notes:

Durez 22257 Black Phenolic is a two-stage, asbestos-free, medium impact molding material. It is designed for appliance and electrical applications where additional mechanical strength is required. Typical applications include circuit breakers, small motor bases and housings, appliance panels, terminal blocks, barrier strips, etc. Durez 22257 is fungus resistant per Mil-I-631D and Mil-810 A/E-2572. Information provided by Sumitomo Bakelite North America, Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Sumitomo-Bakelite-Durez-22257-Phenolic-Compression-Grade.php](http://www.lookpolymers.com/polymer_Sumitomo-Bakelite-Durez-22257-Phenolic-Compression-Grade.php)

| Physical Properties   | Metric       | English                   | Comments   |
|-----------------------|--------------|---------------------------|------------|
| Density               | 1.40 g/cc    | 0.0506 lb/in <sup>3</sup> | ASTM D792  |
| Apparent Bulk Density | 0.570 g/cc   | 0.0206 lb/in <sup>3</sup> | ASTM D1895 |
| Water Absorption      | 0.60 %       | 0.60 %                    | ASTM D570  |
| Linear Mold Shrinkage | 0.0070 cm/cm | 0.0070 in/in              | ASTM D955  |

| Mechanical Properties      | Metric     | English        | Comments  |
|----------------------------|------------|----------------|-----------|
| Tensile Strength, Ultimate | 52.0 MPa   | 7540 psi       | ASTM D638 |
| Tensile Modulus            | 7.60 GPa   | 1100 ksi       | ASTM D638 |
| Flexural Strength          | 69.0 MPa   | 10000 psi      |           |
| Compressive Strength       | 189 MPa    | 27400 psi      | ASTM D695 |
| Shear Strength             | 76.0 MPa   | 11000 psi      | as molded |
| Izod Impact, Notched       | 0.251 J/cm | 0.470 ft-lb/in | ASTM D256 |

| Thermal Properties                          | Metric                                         | English                                         | Comments             |
|---------------------------------------------|------------------------------------------------|-------------------------------------------------|----------------------|
| CTE, linear                                 | 42.2 Åµm/m-Å°C<br>@Temperature 23.0 - 60.0 Å°C | 23.4 Åµin/in-Å°F<br>@Temperature 73.4 - 140 Å°F |                      |
| Specific Heat Capacity                      | 1.42 J/g-Å°C                                   | 0.339 BTU/lb-Å°F                                |                      |
| Thermal Conductivity                        | 0.402 W/m-K                                    | 2.79 BTU-in/hr-ftÅ²-Å°F                         |                      |
| Maximum Service Temperature, Air            | 150 Å°C                                        | 302 Å°F                                         | UL temperature Index |
| Deflection Temperature at 1.8 MPa (264 psi) | 171 Å°C                                        | 340 Å°F                                         | ASTM D648            |

| Thermal Properties | Metric             | English             | Comments |
|--------------------|--------------------|---------------------|----------|
| Flammability, UL94 | @Thickness 3.00 mm | @Thickness 0.118 in |          |
|                    | V-0                | V-0                 |          |
|                    | @Thickness 6.00 mm | @Thickness 0.236 in |          |

| Electrical Properties  | Metric             | English            | Comments                |
|------------------------|--------------------|--------------------|-------------------------|
| Electrical Resistivity | 1.00e+12 ohm-cm    | 1.00e+12 ohm-cm    | ASTM D257               |
| Dielectric Constant    | 4.5                | 4.5                | ASTM D150               |
|                        | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |                         |
| Dielectric Strength    | 12.8 kV/mm         | 325 kV/in          | Step by step; ASTM D149 |
|                        | 14.7 kV/mm         | 373 kV/in          | Short Time; ASTM D149   |
| Dissipation Factor     | 0.040              | 0.040              | ASTM D150               |
|                        | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |                         |

## 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