

## Sumitomo Bakelite North America E 9405H-1 Glass Filled Electrical Encapsulation Grade Epoxy

Category : Polymer , Thermoset , Epoxy , Epoxy, Encapsulating, Glass or Mineral Filled , Filled/Reinforced Thermoset

### Material Notes:

E-9504H-1 is glass fiber filled epoxy molding compound designed for encapsulation of delicate electrical components as well as large coils. Excellent thermal shock, moldability, and retention of electrical properties under humid conditions are the outstanding features of this material. Information provided by Sumitomo Bakelite North America, Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Sumitomo-Bakelite-North-America-E-9405H-1-Glass-Filled-Electrical-Encapsulation-Grade-Epoxy.php](http://www.lookpolymers.com/polymer_Sumitomo-Bakelite-North-America-E-9405H-1-Glass-Filled-Electrical-Encapsulation-Grade-Epoxy.php)

| Physical Properties   | Metric   | English   | Comments  |
|-----------------------|--|---|-----------|
| Density               | 1.70 g/cc  | 0.0614 lb/in <sup>3</sup>                         | ASTM D792 |
| Water Absorption      | 0.11 %<br>@Temperature 50.0<br>Â°C,<br>Time 173000 sec | 0.11 %<br>@Temperature 122 Â°F,<br>Time 48.0 hour | ASTM D570 |
| Linear Mold Shrinkage | 0.0050 - 0.0070 cm/cm                                  | 0.0050 - 0.0070 in/in                             | ASTM D955 |

| Mechanical Properties     | Metric     | English        | Comments              |
|---------------------------|------------|----------------|-----------------------|
| Tensile Strength at Break | 82.0 MPa   | 11900 psi      | ASTM D638             |
| Flexural Strength         | 123 MPa    | 17800 psi      | at rupture; ASTM D790 |
| Flexural Modulus          | 11.7 GPa   | 1700 ksi       | ASTM D790             |
| Compressive Strength      | 220 MPa    | 31900 psi      | ASTM D695             |
| Izod Impact, Notched      | 0.310 J/cm | 0.581 ft-lb/in | ASTM D256             |

| Thermal Properties            | Metric         | English          | Comments  |
|-------------------------------|----------------|------------------|-----------|
| CTE, linear, Parallel to Flow | 32.0 Âµm/m-Â°C | 17.8 Âµin/in-Â°F | ASTM E831 |

| Electrical Properties | Metric                           | English                         | Comments                     |
|-----------------------|----------------------------------|---------------------------------|------------------------------|
| Dielectric Constant   | 3.7<br>@Frequency 1.00e+6<br>Hz  | 3.7<br>@Frequency 1.00e+6<br>Hz | wet; ASTM D150               |
| Dielectric Strength   | 12.8 kV/mm<br>@Frequency 60.0 Hz | 325 kV/in<br>@Frequency 60.0 Hz | step-by-step, wet; ASTM D149 |

| Electrical Properties | 13.3 kV/mm<br>Metric     | 338 kV/in<br>English     | Comments wet; ASTM D149 |
|-----------------------|--------------------------|--------------------------|-------------------------|
|                       | @Frequency 60.0 Hz       | @Frequency 60.0 Hz       |                         |
| Dissipation Factor    | 0.020                    | 0.020                    | wet; ASTM D150          |
|                       | @Frequency 1.00e+6<br>Hz | @Frequency 1.00e+6<br>Hz |                         |
| Arc Resistance        | 190 sec                  | 190 sec                  | ASTM D495               |

| Descriptive Properties | Value       | Comments |
|------------------------|-------------|----------|
| Color                  | Black       |          |
| Form                   | Granular    |          |
| Molding Method         | Compression |          |
|                        | Transfer    |          |

## Contact Songhan Plastic Technology Co.,Ltd.

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