

# VALOX<sup>TM</sup> RESIN EH7020

REGION AMERICAS

## DESCRIPTION

MINERAL FILLED, METALLIZABLE

## TYPICAL PROPERTY VALUES

Revision 20181114

| PROPERTIES                                   | TYPICAL VALUES | UNITS | TEST METHODS |
|--|----------------|-------|--------------|
| <b>MECHANICAL</b>                            |                |       |              |
| Tensile Stress, brk, Type I, 5 mm/min        | 57             | MPa   | ASTM D 638   |
| Flexural Stress, brk, 1.3 mm/min, 50 mm span | 103            | MPa   | ASTM D 790   |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 4130           | MPa   | ASTM D 790   |
| <b>IMPACT</b>                                |                |       |              |
| Izod Impact, unnotched, 23°C                 | 389            | J/m   | ASTM D 4812  |
| Izod Impact, notched, 23°C                   | 32             | J/m   | ASTM D 256   |
| <b>THERMAL</b>                               |                |       |              |
| HDT, 0.45 MPa, 6.4 mm, unannealed            | 187            | °C    | ASTM D 648   |
| HDT, 1.82 MPa, 6.4 mm, unannealed            | 105            | °C    | ASTM D 648   |
| CTE, -40°C to 40°C, flow                     | 5.58E-05       | 1/°C  | ASTM E 831   |
| <b>PHYSICAL</b>                              |                |       |              |
| Specific Gravity                             | 1.49           | -     | ASTM D 792   |
| Mold Shrinkage, flow, 1.5-3.2 mm             | 1.4 – 1.6      | %     | SABIC method |
| Mold Shrinkage, flow, 3.2-4.6 mm             | 1.5 – 1.6      | %     | SABIC method |
| Mold Shrinkage, xflow, 1.5-3.2 mm            | 1.3 – 1.4      | %     | SABIC method |
| Mold Shrinkage, xflow, 3.2-4.6 mm            | 1.4 – 1.5      | %     | SABIC method |
| <b>ELECTRICAL</b>                            |                |       |              |
| Dielectric Strength, in oil, 3.2 mm          | 16.9           | kV/mm | ASTM D 149   |
| Relative Permittivity, 50/60 Hz              | 3.1            | -     | ASTM D 150   |
| Relative Permittivity, 1 MHz                 | 2.9            | -     | ASTM D 150   |
| Dissipation Factor, 50/60 Hz                 | 0.0039         | -     | ASTM D 150   |
| Dissipation Factor, 1 MHz                    | 0.014          | -     | ASTM D 150   |
| <b>INJECTION MOLDING</b>                     |                |       |              |
| Drying Temperature                           | 120            | °C    |              |
| Drying Time                                  | 3 – 4          | hrs   |              |
| Drying Time (Cumulative)                     | 12             | hrs   |              |
| Maximum Moisture Content                     | 0.02           | %     |              |
| Melt Temperature                             | 250 – 265      | °C    |              |
| Nozzle Temperature                           | 245 – 260      | °C    |              |
| Front - Zone 3 Temperature                   | 250 – 265      | °C    |              |
| Middle - Zone 2 Temperature                  | 245 – 260      | °C    |              |
| Rear - Zone 1 Temperature                    | 240 – 255      | °C    |              |
| Mold Temperature                             | 65 – 90        | °C    |              |
| Back Pressure                                | 0.3 – 0.7      | MPa   |              |

| PROPERTIES            | TYPICAL VALUES | UNITS | TEST METHODS |
|-----------------------|----------------|-------|--------------|
| Screw Speed           | 50 – 80        | rpm   |              |
| Shot to Cylinder Size | 40 – 80        | %     |              |
| Vent Depth            | 0.025 – 0.038  | mm    |              |

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