

## VALOX™ RESIN 508

REGION AMERICAS

### DESCRIPTION

30% GR PBT+PC. Excellent mechanical and thermal performance. Non-flame retardant. Reduced warpage characteristics. Applications same as VALOX 420.

### TYPICAL PROPERTY VALUES

Revision 20260509

| PROPERTIES                                   | TYPICAL VALUES | UNITS    | TEST METHODS |
|----------------------------------------------|----------------|----------|--------------|
| <b>MECHANICAL</b>                            |                |          |              |
| Tensile Stress, brk, Type I, 5 mm/min        | 110            | MPa      | ASTM D638    |
| Flexural Stress, brk, 1.3 mm/min, 50 mm span | 189            | MPa      | ASTM D790    |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 6890           | MPa      | ASTM D790    |
| Hardness, Rockwell R                         | 119            | -        | ASTM D785    |
| <b>IMPACT</b>                                |                |          |              |
| Izod Impact, unnotched, 23°C                 | 640            | J/m      | ASTM D4812   |
| Izod Impact, notched, 23°C                   | 90             | J/m      | ASTM D256    |
| Izod Impact, notched, -30°C                  | 80             | J/m      | ASTM D256    |
| <b>THERMAL</b>                               |                |          |              |
| HDT, 0.45 MPa, 6.4 mm, unannealed            | 215            | °C       | ASTM D648    |
| HDT, 1.82 MPa, 6.4 mm, unannealed            | 176            | °C       | ASTM D648    |
| <b>CTE</b>                                   |                |          |              |
| -40°C to 40°C, flow                          | 2.34E-05       | 1/°C     | ASTM E831    |
| 60°C to 138°C, flow                          | 1.62E-05       | 1/°C     | ASTM E831    |
| Relative Temp Index, Elec                    | 125            | °C       | UL 746B      |
| Relative Temp Index, Mech w/impact           | 110            | °C       | UL 746B      |
| Relative Temp Index, Mech w/o impact         | 125            | °C       | UL 746B      |
| <b>PHYSICAL</b>                              |                |          |              |
| Specific Gravity                             | 1.5            | -        | ASTM D792    |
| Specific Volume                              | 0.66           | cm³/g    | ASTM D792    |
| Water Absorption, (23°C/24hrs)               | 0.06           | %        | ASTM D570    |
| Mold Shrinkage, flow, 1.5-3.2 mm             | 0.3 – 0.5      | %        | SABIC method |
| Mold Shrinkage, flow, 3.2-4.6 mm             | 0.5 – 0.8      | %        | SABIC method |
| Mold Shrinkage, xflow, 1.5-3.2 mm            | 0.4 – 0.6      | %        | SABIC method |
| Mold Shrinkage, xflow, 3.2-4.6 mm            | 0.6 – 0.9      | %        | SABIC method |
| <b>ELECTRICAL</b>                            |                |          |              |
| Volume Resistivity                           | 5.9E+16        | Ω.cm     | ASTM D257    |
| Dielectric Strength, in air, 3.2 mm          | 23.6           | kV/mm    | ASTM D149    |
| Dielectric Strength, in oil, 1.6 mm          | 29.1           | kV/mm    | ASTM D149    |
| Relative Permittivity, 100 Hz                | 3.6            | -        | ASTM D150    |
| Relative Permittivity, 1 MHz                 | 3.6            | -        | ASTM D150    |
| Dissipation Factor, 100 Hz                   | 0.0014         | -        | ASTM D150    |
| Dissipation Factor, 1 MHz                    | 0.02           | -        | ASTM D150    |
| Arc Resistance, Tungsten {PLC}               | 6              | PLC Code | ASTM D495    |

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CHEMISTRY THAT MATTERS™



| PROPERTIES                             | TYPICAL VALUES | UNITS    | TEST METHODS |
|----------------------------------------|----------------|----------|--------------|
| Hot Wire Ignition (PLC)                | 1              | PLC Code | UL 746A      |
| High Voltage Arc Track Rate (PLC)      | 2              | PLC Code | UL 746A      |
| High Ampere Arc Ign, surface (PLC)     | 3              | PLC Code | UL 746A      |
| Comparative Tracking Index (UL) (PLC)  | 4              | PLC Code | UL 746A      |
| FLAME CHARACTERISTICS                  |                |          |              |
| UL Yellow Card Link                    | E121562-220801 | -        | -            |
| UL Recognized, 94HB Flame Class Rating | 1.47           | mm       | UL 94        |
| UV-light, water exposure/immersion     | F2             | -        | UL 746C      |
| INJECTION MOLDING                      |                |          |              |
| 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      |              |
| Screw Speed                            | 50 – 80        | rpm      |              |
| Shot to Cylinder Size                  | 40 – 80        | %        |              |
| Vent Depth                             | 0.025 – 0.038  | mm       |              |

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