

## VALOX™ RESIN 508

REGION EUROPE

### 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>                           |                |                   |                |
| Taber Abrasion, CS-17, 1 kg                 | 50             | mg/1000cy         | SABIC method   |
| Tensile Stress, break, 5 mm/min             | 115            | MPa               | ISO 527        |
| Tensile Strain, break, 5 mm/min             | 2              | %                 | ISO 527        |
| Tensile Modulus, 1 mm/min                   | 9000           | MPa               | ISO 527        |
| Flexural Stress, break, 2 mm/min            | 170            | MPa               | ISO 178        |
| Flexural Modulus, 2 mm/min                  | 8000           | MPa               | ISO 178        |
| Ball Indentation Hardness, H358/30          | 122            | MPa               | ISO 2039-1     |
| Hardness, Rockwell R                        | 119            | -                 | ISO 2039-2     |
| <b>IMPACT</b>                               |                |                   |                |
| Izod Impact, unnotched 80*10*4 +23°C        | 45             | kJ/m <sup>2</sup> | ISO 180/1U     |
| Izod Impact, unnotched 80*10*4 -30°C        | 40             | kJ/m <sup>2</sup> | ISO 180/1U     |
| Izod Impact, notched 80*10*4 +23°C          | 8              | kJ/m <sup>2</sup> | ISO 180/1A     |
| Izod Impact, notched 80*10*4 -30°C          | 7              | kJ/m <sup>2</sup> | ISO 180/1A     |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm  | 7              | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm | 6              | kJ/m <sup>2</sup> | ISO 179/1eA    |
| Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm  | 45             | kJ/m <sup>2</sup> | ISO 179/1eU    |
| Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm | 45             | kJ/m <sup>2</sup> | ISO 179/1eU    |
| <b>THERMAL</b>                              |                |                   |                |
| <b>CTE</b>                                  |                |                   |                |
| 23°C to 80°C, flow                          | 2.5E-05        | 1/°C              | ISO 11359-2    |
| 23°C to 80°C, xflow                         | 1.E-04         | 1/°C              | ISO 11359-2    |
| 23°C to 150°C, xflow                        | 1.05E-04       | 1/°C              | ISO 11359-2    |
| <b>Ball Pressure Test</b>                   |                |                   |                |
| 125°C +/- 2°C                               | PASSES         | -                 | IEC 60695-10-2 |
| Vicat Softening Temp, Rate A/50             | 217            | °C                | ISO 306        |
| Vicat Softening Temp, Rate B/50             | 170            | °C                | ISO 306        |
| Vicat Softening Temp, Rate B/120            | 175            | °C                | ISO 306        |
| HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm     | 206            | °C                | ISO 75/Be      |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm     | 160            | °C                | ISO 75/Ae      |
| 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>                             |                |                   |                |
| Mold Shrinkage on Tensile Bar, flow         | 0.4 – 0.6      | %                 | SABIC method   |

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CHEMISTRY THAT MATTERS™



| PROPERTIES                                       | TYPICAL VALUES                | UNITS                   | TEST METHODS   |
|--------------------------------------------------|-------------------------------|-------------------------|----------------|
| Mold Shrinkage on Tensile Bar, xflow             | 0.5 – 0.9                     | %                       | SABIC method   |
| Density                                          | 1.5                           | g/cm <sup>3</sup>       | ISO 1183       |
| Water Absorption, (23°C/saturated)               | 0.09                          | %                       | ISO 62-1       |
| Moisture Absorption (23°C / 50% RH)              | 0.06                          | %                       | ISO 62         |
| Melt Volume Rate, MVR at 250°C/2.16 kg           | 8                             | cm <sup>3</sup> /10 min | ISO 1133       |
| <b>ELECTRICAL</b>                                |                               |                         |                |
| Volume Resistivity                               | >1.E+15                       | Ω.cm                    | IEC 60093      |
| Surface Resistivity, ROA                         | >1.E+15                       | Ω                       | IEC 60093      |
| Dielectric Strength, shorttime, 1.0mm            | 24                            | kV/mm                   | IEC 60243-1    |
| Dielectric Strength, in oil, 0.8 mm              | 30                            | kV/mm                   | IEC 60243-1    |
| Dielectric Strength, in oil, 1.6 mm              | 23                            | kV/mm                   | IEC 60243-1    |
| Dielectric Strength, in oil, 3.2 mm              | 16                            | kV/mm                   | IEC 60243-1    |
| Relative Permittivity, 100 Hz                    | 3.6                           | -                       | IEC 60250      |
| Relative Permittivity, 1 MHz                     | 3.2                           | -                       | IEC 60250      |
| Dissipation Factor, 50/60 Hz                     | 0.001                         | -                       | IEC 60250      |
| Dissipation Factor, 100 Hz                       | 0.0014                        | -                       | IEC 60250      |
| Dissipation Factor, 1 MHz                        | 0.013                         | -                       | IEC 60250      |
| Comparative Tracking Index                       | 250                           | V                       | IEC 60112      |
| Comparative Tracking Index, M                    | 150                           | V                       | IEC 60112      |
| Relative Permittivity, 50/60 Hz                  | 3.3                           | -                       | IEC 60250      |
| <b>FLAME CHARACTERISTICS</b>                     |                               |                         |                |
| UL Yellow Card Link                              | <a href="#">E45329-236608</a> | -                       | -              |
| UL Recognized, 94HB Flame Class Rating           | 1.5                           | mm                      | UL 94          |
| UL Recognized, 94HB Flame Class Rating 2nd value | 3                             | mm                      | UL 94          |
| Glow Wire Flammability Index 750°C, passes at    | 1                             | mm                      | IEC 60695-2-12 |
| Oxygen Index (LOI)                               | 21                            | %                       | ISO 4589       |
| <b>INJECTION MOLDING</b>                         |                               |                         |                |
| Drying Temperature                               | 110 – 120                     | °C                      |                |
| Drying Time                                      | 2 – 4                         | Hrs                     |                |
| Maximum Moisture Content                         | 0.02                          | %                       |                |
| Melt Temperature                                 | 250 – 270                     | °C                      |                |
| Nozzle Temperature                               | 240 – 260                     | °C                      |                |
| Front - Zone 3 Temperature                       | 245 – 265                     | °C                      |                |
| Middle - Zone 2 Temperature                      | 240 – 255                     | °C                      |                |
| Rear - Zone 1 Temperature                        | 230 – 245                     | °C                      |                |
| Hopper Temperature                               | 40 – 60                       | °C                      |                |
| Mold Temperature                                 | 40 – 100                      | °C                      |                |

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