



## Valox\* Resin FXV310SK

### Europe-Africa-Middle East: COMMERCIAL

VALOX FXV310SK is an unreinforced PBT injection moulding resin with high flow characteristics and containing a metal sparkle Visual FX. Applications: automotive bezels and appliances. VALOX FXV310SK is the Visual FX version of VALOX V3001MC.

| TYPICAL PROPERTIES <sup>1</sup>             | TYPICAL VALUE | UNIT              | STANDARD    |
|---------------------------------------------|---------------|-------------------|-------------|
| <b>MECHANICAL</b>                           |               |                   |             |
| Taber Abrasion, CS-17, 1 kg                 | 9             | mg/1000cy         | GE Method   |
| Tensile Stress, yield, 50 mm/min            | 60            | MPa               | ISO 527     |
| Tensile Stress, break, 50 mm/min            | 58            | MPa               | ISO 527     |
| Tensile Strain, yield, 50 mm/min            | 7             | %                 | ISO 527     |
| Tensile Strain, break, 50 mm/min            | 15            | %                 | ISO 527     |
| Tensile Modulus, 1 mm/min                   | 2750          | MPa               | ISO 527     |
| Flexural Stress, yield, 2 mm/min            | 90            | MPa               | ISO 178     |
| Flexural Modulus, 2 mm/min                  | 2750          | MPa               | ISO 178     |
| Hardness, H358/30                           | 85            | MPa               | ISO 2039-1  |
| Hardness, Rockwell R                        | 117           | -                 | ISO 2039-2  |
| <b>IMPACT</b>                               |               |                   |             |
| Izod Impact, unnotched 80*10*4 +23°C        | NB            | kJ/m <sup>2</sup> | ISO 180/1U  |
| Izod Impact, unnotched 80*10*4 -30°C        | NB            | kJ/m <sup>2</sup> | ISO 180/1U  |
| Izod Impact, notched 80*10*4 +23°C          | 5             | kJ/m <sup>2</sup> | ISO 180/1A  |
| Izod Impact, notched 80*10*4 -30°C          | 5             | kJ/m <sup>2</sup> | ISO 180/1A  |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm  | 6             | kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy Impact, notched, 23°C                | 3             | kJ/m <sup>2</sup> | ISO 179/2C  |
| Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm | 3             | kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm  | NB            | kJ/m <sup>2</sup> | ISO 179/1eU |
| Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm | NB            | kJ/m <sup>2</sup> | ISO 179/1eU |
| <b>THERMAL</b>                              |               |                   |             |
| Thermal Conductivity                        | 0.16          | W/m-°C            | ISO 8302    |
| CTE, 23°C to 80°C, flow                     | 1.3E-04       | 1/°C              | ISO 11359-2 |



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| <b>THERMAL</b>                                         |               |                         |                |
| CTE, 23°C to 80°C, xflow                               | 1.3E-04       | 1/°C                    | ISO 11359-2    |
| Ball Pressure Test, 125°C +/- 2°C                      | PASSES        | -                       | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50                        | 185           | °C                      | ISO 306        |
| Vicat Softening Temp, Rate B/120                       | 187           | °C                      | ISO 306        |
| HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm                | 160           | °C                      | ISO 75/Be      |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm                | 55            | °C                      | ISO 75/Ae      |
| <b>PHYSICAL</b>                                        |               |                         |                |
| Mold Shrinkage on Tensile Bar, flow (2)                | 1.1 - 1.8     | %                       | GE Method      |
| Mold Shrinkage on Tensile Bar, xflow (2)               | 0.9 - 1.8     | %                       | GE Method      |
| Density                                                | 1.31          | g/cm <sup>3</sup>       | ISO 1183       |
| Water Absorption, (23°C/sat)                           | 0.34          | %                       | ISO 62         |
| Moisture Absorption (23°C / 50% RH)                    | 0.08          | %                       | ISO 62         |
| Melt Volume Rate, MVR at 250°C/2.16 kg                 | 18            | cm <sup>3</sup> /10 min | ISO 1133       |
| <b>ELECTRICAL</b>                                      |               |                         |                |
| Volume Resistivity                                     | >1.E+15       | Ohm-cm                  | IEC 60093      |
| Surface Resistivity, ROA                               | >1.E+15       | Ohm                     | IEC 60093      |
| Dielectric Strength, in oil, 3.2 mm                    | 18            | kV/mm                   | IEC 60243-1    |
| Relative Permittivity, 50/60 Hz                        | 3.3           | -                       | IEC 60250      |
| Relative Permittivity, 1 MHz                           | 3.1           | -                       | IEC 60250      |
| Dissipation Factor, 50/60 Hz                           | 0.002         | -                       | IEC 60250      |
| Dissipation Factor, 1 MHz                              | 0.02          | -                       | IEC 60250      |
| Comparative Tracking Index                             | 600           | V                       | IEC 60112      |
| <b>FLAME CHARACTERISTICS</b>                           |               |                         |                |
| UL Compliant, 94HB Flame Class Rating (3)(4)           | 1.47          | mm                      | UL 94 by GE    |
| UL Compliant, 94HB Flame Class Rating 2nd value (3)(4) | 3.12          | mm                      | UL 94 by GE    |
| Oxygen Index (LOI)                                     | 20            | %                       | ISO 4589       |



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| PROCESSING PARAMETERS       | TYPICAL VALUE | UNIT |
|-----------------------------|---------------|------|
| <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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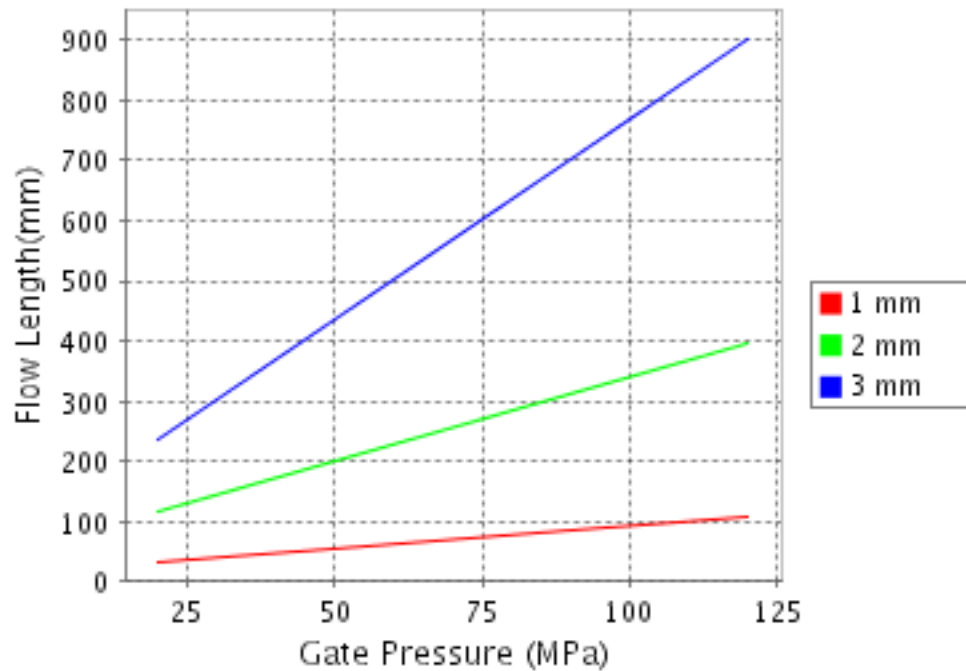
### CALCULATED FLOW LENGTH INDICATION

Moldflow® Radial Flow Analysis

Valox® FXV310SK

Melt Temperature : 260°C

Mold Temperature : 70°C



**Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.**

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