



## Valox\* Resin 260HPR

### Europe-Africa-Middle East: COMMERCIAL

VALOX 260HPR is compliant with food contact regulations acc. to 90/128/EEC. VALOX 260HPR is an unreinforced PBT injection moulding resin which contains internal mould release. Applications: food contact and medical applications.

| TYPICAL PROPERTIES <sup>1</sup>             | TYPICAL VALUE | UNIT              | STANDARD       |
|---------------------------------------------|---------------|-------------------|----------------|
| <b>MECHANICAL</b>                           |               |                   |                |
| Tensile Stress, yield, 50 mm/min            | 55            | MPa               | ISO 527        |
| Tensile Strain, yield, 50 mm/min            | 6             | %                 | ISO 527        |
| Tensile Strain, break, 50 mm/min            | 25            | %                 | ISO 527        |
| Tensile Modulus, 1 mm/min                   | 2400          | MPa               | ISO 527        |
| Flexural Stress, yield, 2 mm/min            | 80            | MPa               | ISO 178        |
| Flexural Modulus, 2 mm/min                  | 2300          | MPa               | ISO 178        |
| Hardness, H358/30                           | 108           | MPa               | ISO 2039-1     |
| <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          | 4             | 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 -30°C, V-notch Edgew 80*10*4 sp=62mm | 4             | 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>                              |               |                   |                |
| CTE, 23°C to 60°C, flow                     | 1.3E-04       | 1/°C              | ISO 11359-2    |
| CTE, 23°C to 60°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 A/50             | 215           | °C                | ISO 306        |
| Vicat Softening Temp, Rate B/50             | 175           | °C                | ISO 306        |
| Vicat Softening Temp, Rate B/120            | 175           | °C                | ISO 306        |



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|------------------------------------------------------|---------------|-------------------------|-------------|
| <b>THERMAL</b>                                       |               |                         |             |
| HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm              | 110           | °C                      | ISO 75/Be   |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm              | 50            | °C                      | ISO 75/Ae   |
| Relative Temp Index, Elec                            | 75            | °C                      | UL 746B     |
| Relative Temp Index, Mech w/impact                   | 75            | °C                      | UL 746B     |
| Relative Temp Index, Mech w/o impact                 | 75            | °C                      | UL 746B     |
| <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)                         | 0.35          | %                       | ISO 62      |
| Moisture Absorption (23°C / 50% RH)                  | 0.08          | %                       | ISO 62      |
| Melt Volume Rate, MVR at 250°C/2.16 kg               | 15            | 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   |
| Comparative Tracking Index, M                        | 350           | V                       | IEC 60112   |
| <b>FLAME CHARACTERISTICS</b>                         |               |                         |             |
| UL Recognized, 94HB Flame Class Rating (3)           | 1.5           | mm                      | UL 94       |
| UL Recognized, 94HB Flame Class Rating 2nd value (3) | 3             | mm                      | UL 94       |



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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   |