**Flame retardant grades / Medium viscosity**

MVR 12 cm³/10 min; Flame retardant; UL 94 V-0/3.0 mm; Medium viscosity; UV stabilized; Easy release; Injection molding; Available in transparent, translucent and opaque colors

| Property | Test Condition | Unit | Standard | Value |
|---|---|---|---|---|
| **Rheological properties** | | | | |
| Melt mass-flow rate | 300 °C; 1.2 kg | g/(10 min) | ASTM D 1238 | 13 |
| Mold shrinkage, flow/cross to flow | | in/in | ASTM D 955 | 0.006-0.008 |
| **Mechanical properties (23 °C/50 % r. h.)** | | | | |
| Tensile modulus | 1 mm/min | lb/in² | ASTM D 638 | 350000 |
| Tensile stress at yield | - | lb/in² | ASTM D 638 | 9400 |
| Tensile elongation at yield | - | % | ASTM D 638 | 6.0 |
| Tensile elongation at break | - | % | ASTM D 638 | 110 |
| Tensile stress at break | - | lb/in² | ASTM D 638 | 9400 |
| Izod notched impact strength | 73 °F, 0.125 in | ft·lb/in | ASTM D 256 | 15 |
| Flexural modulus | - | lb/in² | ASTM D 790 | 340000 |
| Flexural stress at 5 % strain | | lb/in² | ASTM D 790 | 13200 |
| Rockwell hardness | | M Scale | ASTM D 785 | 75 |
| Rockwell hardness | | R Scale | ASTM D 785 | 120 |
| **Thermal properties** | | | | |
| Deflection temperature under load, Unannealed | 264 psi; 0.250 in | °F | ASTM D 648 | 264 |
| Deflection temperature under load, Unannealed | 66 psi; 0.250 in | °F | ASTM D 648 | 277 |
| Vicat softening temperature | 50 N, 50 °C/h | °F | ASTM D 1525 | 291 |
| Coefficient of linear thermal expansion, flow/cross-flow | | in/in/°F | ASTM D 696 | 3.34E-05 |
| UL94 Flame Class | Thickness tested: 1.5 mm | Class | UL 94 | V-2 |
| UL94 Flame Class | Thickness tested: 3.0 mm | Class | UL 94 | V-0 |
| UL94 Flame Class | Thickness tested: 6.0 mm | Class | UL 94 | V-0 |
| Oxygen index | | % | ASTM D 2863 | 37 |
| Thermal conductivity | | Btu*in/(h*ft²*°F) | ASTM C 177 | 1.39 |
| Specific heat | | Btu/(lb·°F) | ASTM D 2766 | 0.28 |
| Relative temperature index (Tensile impact strength) | Thickness tested: 1.5 mm | °C | UL 746B | 115 |
| Relative temperature index (Tensile strength) | Thickness tested: 1.5 mm | °C | UL 746B | 125 |
| Relative temperature index (Electric strength) | Thickness tested: 1.5 mm | °C | UL 746B | 125 |
| **Electrical properties (23 °C/50 % r. h.)** | | | | |
| Dissipation factor, Tinfoil electrodes | 60 Hz | - | ASTM D 150 | 0.0009 |
| Dissipation factor, Tinfoil electrodes | 1 MHz | - | ASTM D 150 | 0.01 |
| Dielectric constant, Tinfoil electrodes | 60 Hz | - | ASTM D 150 | 3.0 |
| Dielectric constant, Tinfoil electrodes | 1 MHz | - | ASTM D 150 | 2.9 |
| Volume resistivity, Tinfoil electrodes | | Ohm·m | ASTM D 257 | 1.0 E+14 |
| Surface resistivity | | Ohm | ASTM D 257 | 1.0 E+16 |
| Dielectric strength | Short time under oil at 73 °F | V/mil | ASTM D 149 | 810 |
| **Other properties (23 °C)** | | | | |
| Water absorption | 73 °F; immersion to saturation | % | ASTM D 570 | 0.3 |
| Water absorption | 73 °F; immersion 24 h | % | ASTM D 570 | 0.12 |
| Density | | lb/in³ | ASTM D 792 | 0.043 |
| Specific volume | | in³/lb | ASTM D 792 | 23.1 |
| Specific gravity | | - | ASTM D 792 | 1.2 |
| **Material specific properties** | | | | |
| Refractive index | | - | ASTM D 542 | 1.586 |
| Luminous transmittance (clear transparent materials) | 0.125 in | % | ASTM D 1003 | 87 |

## Disclaimer

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Flammability results are based on small-scale laboratory tests for purposes of relative comparison and are not intended to reflect the hazards presented by this or any other material under actual fire conditions.

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