ASTALON™ S2000R

Polycarbonate

Marplex Australia Pty. Ltd.

Message:

ASTALON[™] S2000R / S2001R / S2003R are the standard medium viscosity (medium melt flow) grades in the ASTALON[™] range and are suited to general purpose injection moulding applications which require a mould release agent (R). Offering an exceptional combination of transparency, toughness, heat resistance, flame retardancy and processability, typical applications include computer and electrical appliances, water bottles, filter housings and automotive heater fans.

Note: [Standard grade = S2000R] / [FDA approved = S2001R] / [Steam resistant = S2003R].

| General Information | | | | |
|--|------------------------------------|----------|-------------|--|
| Additive | Mold Release | | | |
| Features | Flame Retardant | | | |
| | General Purpose | | | |
| | Good Processability | | | |
| | Good Toughness | | | |
| | Medium Clarity | | | |
| | Medium Flow | | | |
| | Medium Heat Resistance | | | |
| | Medium Viscosity | | | |
| | | | | |
| Uses | Appliances | | | |
| | Automotive Applications | | | |
| | Bottles | | | |
| | Computer Components | | | |
| | Electrical/Electronic Applications | | | |
| | General Purpose | | | |
| | Housings | | | |
| | | | | |
| Processing Method | Injection Molding | | | |
| Physical | Nominal Value | Unit | Test Method | |
| Specific Gravity | 1.20 | g/cm³ | ASTM D792 | |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg) | 12 | g/10 min | ASTM D1238 | |
| Molding Shrinkage - Flow (3.00 mm) | 0.60 | % | ASTM D955 | |
| Water Absorption (24 hr) | 0.24 | % | ASTM D570 | |
| Hardness | Nominal Value | Unit | Test Method | |
| Rockwell Hardness (R-Scale) | 123 | | ASTM D785 | |
| Mechanical | Nominal Value | Unit | Test Method | |
| Tensile Strength ¹ (3.20 mm) | 64.0 | MPa | ASTM D638 | |
| Tensile Elongation ² (Break, 3.20 mm) | 120 | % | ASTM D638 | |
| Flexural Modulus ³ (6.40 mm) | 2350 | MPa | ASTM D790 | |
| | | | | |

| Flexural Strength ⁴ (6.40 mm) | 89.0 | MPa | ASTM D790 |
|--|----------------|----------|-------------|
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact (3.20 mm) | 880 | J/m | ASTM D256 |
| Gardner Impact (3.20 mm) | > 85.0 | J | ASTM D3029 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, Unannealed, 6.40 mm | 153 | °C | |
| 1.8 MPa, Unannealed, 6.40 mm | 138 | °C | |
| CLTE - Flow | 6.5E-5 | cm/cm/°C | ASTM D696 |
| Electrical | Nominal Value | Unit | Test Method |
| Volume Resistivity | 2.1E+16 | ohms∙cm | ASTM D257 |
| Dielectric Constant | 2.85 | | ASTM D150 |
| Flammability | Nominal Value | Unit | Test Method |
| Flame Rating (1.60 mm) | V-2 | | UL 94 |
| Optical | Nominal Value | Unit | Test Method |
| Transmittance (Total, 3000 µm) | 85.0 | % | ASTM D1003 |
| Injection | Nominal Value | Unit | |
| Drying Temperature | 120 to 125 | °C | |
| Drying Time | 4.0 to 6.0 | hr | |
| Rear Temperature | 245 to 265 | °C | |
| Middle Temperature | 260 to 280 | °C | |
| Front Temperature | 275 to 295 | °C | |
| Processing (Melt) Temp | 270 to 300 | °C | |
| Mold Temperature | 60.0 to 110 | °C | |
| Injection Pressure | 60.0 to 140 | MPa | |
| Injection Rate | Moderate | | |
| Back Pressure | 0.100 to 0.500 | MPa | |
| Screw Speed | 40 to 60 | rpm | |
| Clamp Tonnage | 4.0 to 8.0 | kN/cm² | |
| NOTE | | | |
| 1. | 20 mm/min | | |
| 2. | 20 mm/min | | |
| 3. | 2.8 mm/min | | |
| 4. | 2.8 mm/min | | |
| | | | |

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