

# ASTALON™ S1000U

Polycarbonate  
Marplex Australia Pty. Ltd.

Message:

ASTALON™ S1000U / S1001U / S1003U are the medium viscosity (low/medium melt flow) grades in the ASTALON™ range and are suited to general purpose injection moulding applications which require UV stabilisation (U). Offering an exceptional combination of transparency, toughness, heat resistance, flame retardancy and processability, typical applications include emergency vehicle lighting, electrical junction box covers and marine navigation lamp lenses.  
Note: [Standard grade = S1000U] / [FDA approved = S1001U] / [Steam resistant = S1003U].

| General Information                              |                                    |                   |             |
|--------------------------------------------------|------------------------------------|-------------------|-------------|
| Additive                                         | UV Stabilizer                      |                   |             |
| Features                                         | Flame Retardant                    |                   |             |
|                                                  | General Purpose                    |                   |             |
|                                                  | Good Processability                |                   |             |
|                                                  | Good Toughness                     |                   |             |
|                                                  | Medium Clarity                     |                   |             |
|                                                  | Medium Flow                        |                   |             |
|                                                  | Medium Heat Resistance             |                   |             |
|                                                  | Medium Viscosity                   |                   |             |
| Uses                                             | Electrical/Electronic Applications |                   |             |
|                                                  | General Purpose                    |                   |             |
|                                                  | Lenses                             |                   |             |
|                                                  | Marine Applications                |                   |             |
| Processing Method                                | Injection Molding                  |                   |             |
| Physical                                         | Nominal Value                      | Unit              | Test Method |
| Specific Gravity                                 | 1.20                               | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)         | 8.5                                | 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 <sup>1</sup> (3.20 mm)          | 65.0                               | MPa               | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Break, 3.20 mm) | 120                                | %                 | ASTM D638   |
| Flexural Modulus <sup>3</sup> (6.40 mm)          | 2350                               | MPa               | ASTM D790   |
| Flexural Strength <sup>4</sup> (6.40 mm)         | 90.0                               | MPa               | ASTM D790   |
| Impact                                           | Nominal Value                      | Unit              | Test Method |
| Notched Izod Impact (3.20 mm)                    | 900                                | 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/cm <sup>2</sup> |             |
| NOTE                              |                |                    |             |
| 1.                                | 20 mm/min      |                    |             |
| 2.                                | 20 mm/min      |                    |             |
| 3.                                | 2.8 mm/min     |                    |             |
| 4.                                | 2.8 mm/min     |                    |             |

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



WECHAT