

## DSM Akulon® S223-HG6 Nylon 66-30% Glass Reinforced (European and Asian Grade) (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 30% Glass Fiber Filled

### Material Notes:

The Akulon® product portfolio is engineered for optimum performance to suit different processing techniques and end use markets. Akulon Nylon 6 is used for extrusion applications including barrier film, stock shapes, convoluted tubes, and monofilament. Akulon XP is a high-productivity, high-performance PA6 grade for film extrusion processes. Medium viscosity, unreinforced or reinforced Akulon grades are used for various injection molding and blow molding applications. Akulon® Ultraflow® is a high-productivity, high-performance PA6 family for molding processes. Key applications for Akulon: Automotive: Intake manifold, Engine, Powertrain, Airbag containers, Exterior trim, Interior trim, Electrical components and connectors Consumer durables: Power tools, Lawn and garden tools, Small appliances, Sports and leisure equipment, Furniture, Industrial Goods, Transportation E&E: Low voltage switch gear/power distribution, Lighting, Power connectors Film: Specialty and barrier films Information provided by DSM.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DSM-Akulon-S223-HG6-Nylon-66-30-Glass-Reinforced-European-and-Asian-Grade-Dry.php](http://www.lookpolymers.com/polymer_DSM-Akulon-S223-HG6-Nylon-66-30-Glass-Reinforced-European-and-Asian-Grade-Dry.php)

| Physical Properties                | Metric    | English                   | Comments                            |
|------------------------------------|-----------|---------------------------|-------------------------------------|
| Density                            | 1.36 g/cc | 0.0491 lb/in <sup>3</sup> | ISO 1183                            |
| Water Absorption                   | 6.0 %     | 6.0 %                     | Sim. to ISO 62                      |
| Moisture Absorption at Equilibrium | 1.6 %     | 1.6 %                     | Humidity Absorption; Sim. to ISO 62 |

| Mechanical Properties     | Metric                 | English                    | Comments     |
|---------------------------|------------------------|----------------------------|--------------|
| Tensile Strength at Break | 190 MPa                | 27600 psi                  | ISO 527-1/-2 |
| Elongation at Break       | 3.0 %                  | 3.0 %                      | ISO 527-1/-2 |
| Tensile Modulus           | 9.50 GPa               | 1380 ksi                   | ISO 527-1/-2 |
| Charpy Impact Unnotched   | 7.00 J/cm <sup>2</sup> | 33.3 ft-lb/in <sup>2</sup> | ISO 179/1eU  |
|                           | @Temperature -30.0 °C  | @Temperature -22.0 °F      |              |
| Charpy Impact, Notched    | 8.00 J/cm <sup>2</sup> | 38.1 ft-lb/in <sup>2</sup> | ISO 179/1eU  |
|                           | @Temperature 23.0 °C   | @Temperature 73.4 °F       |              |
| Charpy Impact, Notched    | 1.00 J/cm <sup>2</sup> | 4.76 ft-lb/in <sup>2</sup> | ISO 179/1eA  |
|                           | @Temperature -30.0 °C  | @Temperature -22.0 °F      |              |
| Charpy Impact, Notched    | 1.20 J/cm <sup>2</sup> | 5.71 ft-lb/in <sup>2</sup> | ISO 179/1eA  |
|                           | @Temperature 23.0 °C   | @Temperature 73.4 °F       |              |

| Thermal Properties | Metric | English | Comments |
|--------------------|--------|---------|----------|
|--------------------|--------|---------|----------|

| Thermal Properties                          | 20.0 µm/m-°C<br>Metric               | 11.1 µin/in-°F<br>English              | Comments                 |
|---|--------------------------------------|--|--------------------------|
| CTE, linear, Parallel to Flow               | @Temperature 20.0 °C                 | @Temperature 68.0 °F                   | ISO 11359-1/-2           |
| CTE, linear, Transverse to Flow             | 70.0 µm/m-°C<br>@Temperature 20.0 °C | 38.9 µin/in-°F<br>@Temperature 68.0 °F | ISO 11359-1/-2           |
| Melting Point                               | 260 °C                               | 500 °F                                 | 10°C/min; ISO 11357-1/-3 |
| Deflection Temperature at 0.46 MPa (66 psi) | 260 °C                               | 500 °F                                 | ISO 75-1/-2              |
| Deflection Temperature at 1.8 MPa (264 psi) | 250 °C                               | 482 °F                                 | ISO 75-1/-2              |
| Flammability, UL94                          | HB<br>@Thickness 1.60 mm             | HB<br>@Thickness 0.0630 in             | IEC 60695-11-10          |
|   | HB<br>@Thickness 0.710 mm            | HB<br>@Thickness 0.0280 in             | IEC 60695-11-10          |

| Electrical Properties      | Metric                      | English                     | Comments    |
|----------------------------|-----------------------------|-----------------------------|-------------|
| Volume Resistivity         | 1.00e+14 ohm-cm             | 1.00e+14 ohm-cm             | IEC 60093   |
| Dielectric Constant        | 3.5<br>@Frequency 1e+6 Hz   | 3.5<br>@Frequency 1e+6 Hz   | IEC 60250   |
|                            | 3.8<br>@Frequency 100 Hz    | 3.8<br>@Frequency 100 Hz    | IEC 60250   |
| Dielectric Strength        | 30.0 kV/mm                  | 762 kV/in                   | IEC 60243-1 |
| Dissipation Factor         | 0.0090<br>@Frequency 100 Hz | 0.0090<br>@Frequency 100 Hz | IEC 60250   |
|                            | 0.016<br>@Frequency 1e+6 Hz | 0.016<br>@Frequency 1e+6 Hz | IEC 60250   |
| Comparative Tracking Index | 500 V                       | 500 V                       | IEC 60112   |

| Descriptive Properties            | Value | Comments |
|-----------------------------------|-------|----------|
| Heat stabilized or stable to heat | Yes   |          |
| Injection molding                 | Yes   |          |
| Release Agent                     | Yes   |          |
| With Fillers                      | Yes   |          |

## **Contact Songhan Plastic Technology Co.,Ltd.**

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