

## DSM Akulon® K-FHG6 (Dry) 30% Glass Reinforced Nylon 6 (North America) (discontinued \*\*)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 30% Glass Fiber Filled

### Material Notes:

Description: The Akulon portfolio is engineered for optimum performance to suit different processing techniques and end use markets. Unfilled Extrusion Resins Akulon resins are available with melt viscosities to suit all extrusion processes: barrier and coating film, tube and hose, monofilament, stock shapes. Akulon resins are characterized by: consistent quality high purity for film applications, low gel contents. Molding Resins Suited to all engineering demands: Unfilled low and medium viscosity grades Toughened unfilled grades Glass reinforced from 20-45% filled Low warpage reinforced grades Flame retardant; UL V0 rated and glow wire types Halogen free FR grades Blow moldable materials Laser markable resins Laser weldable, high burst pressure grades Toughened, reinforced resins High stiffness grades for metal replacement Akulon Ultraflow resins have high flow with mechanical properties similar to standard materials. Exceptional flow allows: productivity gains in molding lower built in stresses better surface appearances system cost reductions Applications for Molding resins There is an Akulon resin available suitable for any application requiring polyamides. Key areas where DSM has specific application knowledge are Automotive Under the hood and engine components Exterior and interior applications Electrical components and connectors Electrical Low voltage power distribution Lighting Power connectors Consumer Durables Power and lawn and garden tools Small Appliances Sports and leisure equipment Furniture accessories Industrial Goods Transportation (railways) Information provided by DSM.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DSM-Akulon-K-FHG6-Dry-30-Glass-Reinforced-Nylon-6-North-America-nbspdiscontinued-.php](http://www.lookpolymers.com/polymer_DSM-Akulon-K-FHG6-Dry-30-Glass-Reinforced-Nylon-6-North-America-nbspdiscontinued-.php)

| Physical Properties                | Metric       | English                   | Comments                            |
|------------------------------------|--------------|---------------------------|-------------------------------------|
| Density                            | 1.33 g/cc    | 0.0480 lb/in <sup>3</sup> | ISO 1183                            |
| Water Absorption                   | 6.0 %        | 6.0 %                     | Sim. to ISO 62                      |
| Moisture Absorption at Equilibrium | 1.8 %        | 1.8 %                     | Humidity Absorption; Sim. to ISO 62 |
| Linear Mold Shrinkage, Flow        | 0.0030 cm/cm | 0.0030 in/in              | ISO 294-4                           |
| Linear Mold Shrinkage, Transverse  | 0.011 cm/cm  | 0.011 in/in               | ISO 294-4                           |

| Mechanical Properties     | Metric                                          | English                                             | Comments     |
|---------------------------|-------------------------------------------------|-----------------------------------------------------|--------------|
| Tensile Strength at Break | 175 MPa                                         | 25400 psi                                           | ISO 527-1/-2 |
| Elongation at Break       | 3.5 %                                           | 3.5 %                                               | ISO 527-1/-2 |
| Tensile Modulus           | 9.50 GPa                                        | 1380 ksi                                            | ISO 527-1/-2 |
| Flexural Strength         | 270 MPa                                         | 39200 psi                                           | ISO 178      |
| Flexural Modulus          | 8.60 GPa                                        | 1250 ksi                                            | ISO 178      |
| Charpy Impact Unnotched   | 6.50 J/cm <sup>2</sup><br>@Temperature -30.0 °C | 30.9 ft-lb/in <sup>2</sup><br>@Temperature -22.0 °F | ISO 179/1eU  |

| Mechanical Properties  | Metric                | English               | Comments    |
|------------------------|-----------------------|-----------------------|-------------|
|                        | @Temperature 23.0 °C  | @Temperature 73.4 °F  | ISO 179/1eJ |
| Charpy Impact, Notched | 1.10 J/cm²            | 5.24 ft-lb/in²        | ISO 179/1eA |
|                        | @Temperature -30.0 °C | @Temperature -22.0 °F |             |
|                        | 1.40 J/cm²            | 6.66 ft-lb/in²        | ISO 179/1eA |
|                        | @Temperature 23.0 °C  | @Temperature 73.4 °F  |             |

| Thermal Properties                          | Metric               | English              | Comments                 |
|---------------------------------------------|----------------------|----------------------|--------------------------|
| CTE, linear, Parallel to Flow               | 20.0 µm/m-°C         | 11.1 µin/in-°F       | ISO 11359-1/-2           |
|                                             | @Temperature 20.0 °C | @Temperature 68.0 °F |                          |
| CTE, linear, Transverse to Flow             | 70.0 µm/m-°C         | 38.9 µin/in-°F       | ISO 11359-1/-2           |
|                                             | @Temperature 20.0 °C | @Temperature 68.0 °F |                          |
| Melting Point                               | 220 °C               | 428 °F               | 10°C/min; ISO 11357-1/-3 |
| Deflection Temperature at 0.46 MPa (66 psi) | 220 °C               | 428 °F               | ISO 75-1/-2              |
| Deflection Temperature at 1.8 MPa (264 psi) | 210 °C               | 410 °F               | ISO 75-1/-2              |
| Flammability, UL94                          | HB                   | HB                   | IEC 60695-11-10          |
|                                             | @Thickness 1.60 mm   | @Thickness 0.0630 in |                          |

| Electrical Properties      | Metric             | English            | Comments  |
|----------------------------|--------------------|--------------------|-----------|
| Volume Resistivity         | >= 1.00e+15 ohm-cm | >= 1.00e+15 ohm-cm | IEC 60093 |
| Dielectric Constant        | 3.3                | 3.3                | IEC 60250 |
|                            | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |           |
|                            | 3.5                | 3.5                | IEC 60250 |
|                            | @Frequency 100 Hz  | @Frequency 100 Hz  |           |
| Dissipation Factor         | 0.0050             | 0.0050             | IEC 60250 |
|                            | @Frequency 100 Hz  | @Frequency 100 Hz  |           |
|                            | 0.015              | 0.015              | IEC 60250 |
|                            | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |           |
| Comparative Tracking Index | 500 V              | 500 V              | IEC 60112 |

| Descriptive Properties | Value | Comments |
|------------------------|-------|----------|
|------------------------|-------|----------|

| Heat stabilized or stable to heat<br>Descriptive Properties | Yes<br>Value | Comments |
|-------------------------------------------------------------|--------------|----------|
| Injection molding                                           | Yes          |          |
| With Fillers                                                | Yes          |          |

## Contact Songhan Plastic Technology Co.,Ltd.

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