

## DSM Akulon® K224-HG6 Nylon 6-30% Glass Reinforced (European and Asian Grade) (Cond)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 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-K224-HG6-Nylon-6-30-Glass-Reinforced-European-and-Asian-Grade-Cond.php](http://www.lookpolymers.com/polymer_DSM-Akulon-K224-HG6-Nylon-6-30-Glass-Reinforced-European-and-Asian-Grade-Cond.php)

| Physical Properties                | Metric    | English                   | Comments                                  |
|------------------------------------|-----------|---------------------------|-------------------------------------------|
| Density                            | 1.35 g/cc | 0.0488 lb/in <sup>3</sup> | (DAM); ISO 1183                           |
| Water Absorption                   | 6.3 %     | 6.3 %                     | DAM; Sim. to ISO 62                       |
| Moisture Absorption at Equilibrium | 1.9 %     | 1.9 %                     | Humidity Absorption (DAM); Sim. to ISO 62 |

| Mechanical Properties         | Metric                 | English                    | Comments     |
|-------------------------------|------------------------|----------------------------|--------------|
| Tensile Strength at Break     | 110 MPa                | 16000 psi                  | ISO 527-1/-2 |
| Elongation at Break           | 5.0 %                  | 5.0 %                      | ISO 527-1/-2 |
| Tensile Modulus               | 6.50 GPa               | 943 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      |              |
|                               | 11.0 J/cm <sup>2</sup> | 52.4 ft-lb/in <sup>2</sup> | ISO 179/1eU  |
|                               | @Temperature 23.0 °C   | @Temperature 73.4 °F       |              |
| Charpy Impact, Notched        | 1.10 J/cm <sup>2</sup> | 5.24 ft-lb/in <sup>2</sup> | ISO 179/1eA  |
|                               | @Temperature -30.0 °C  | @Temperature -22.0 °F      |              |
|                               | 3.00 J/cm <sup>2</sup> | 14.3 ft-lb/in <sup>2</sup> | ISO 179/1eA  |
|                               | @Temperature 23.0 °C   | @Temperature 73.4 °F       |              |
| Tensile Creep Modulus, 1 hour | 9200 MPa               | 1.33e+6 psi                | ISO 899-1    |

| Thermal Properties                | Metric              | English              | Comments                       |
|-----------------------------------|---------------------|----------------------|--------------------------------|
| Melting Point                     | 220 °C              | 428 °F               | 10°C/min (DAM); ISO 11357-1/-3 |
| UL RTI, Electrical                | 140 °C              | 284 °F               | UL746B                         |
|                                   | @Thickness 1.50 mm  | @Thickness 0.0591 in |                                |
|                                   | 140 °C              | 284 °F               | UL746B                         |
|                                   | @Thickness 0.750 mm | @Thickness 0.0295 in |                                |
| UL RTI, Mechanical with Impact    | 120 °C              | 248 °F               | UL746B                         |
|                                   | @Thickness 0.750 mm | @Thickness 0.0295 in |                                |
|                                   | 125 °C              | 257 °F               | UL746B                         |
|                                   | @Thickness 1.50 mm  | @Thickness 0.0591 in |                                |
| UL RTI, Mechanical without Impact | 140 °C              | 284 °F               | UL746B                         |
|                                   | @Thickness 0.750 mm | @Thickness 0.0295 in |                                |
|                                   | 150 °C              | 302 °F               | UL746B                         |
|                                   | @Thickness 1.50 mm  | @Thickness 0.0591 in |                                |

| Electrical Properties      | Metric             | English            | Comments       |
|----------------------------|--------------------|--------------------|----------------|
| Volume Resistivity         | 1.00e+12 ohm-cm    | 1.00e+12 ohm-cm    | IEC 60093      |
| Surface Resistance         | 1.00e+13 ohm       | 1.00e+13 ohm       | IEC 60093      |
| Dielectric Constant        | 5.0                | 5.0                | IEC 60250      |
|                            | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |                |
|                            | 20                 | 20                 | IEC 60250      |
|                            | @Frequency 100 Hz  | @Frequency 100 Hz  |                |
| Dielectric Strength        | 25.0 kV/mm         | 635 kV/in          | IEC 60243-1    |
| Dissipation Factor         | 0.12               | 0.12               | IEC 60250      |
|                            | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |                |
|                            | 0.30               | 0.30               | IEC 60250      |
|                            | @Frequency 100 Hz  | @Frequency 100 Hz  |                |
| Comparative Tracking Index | 400 - 599 V        | 400 - 599 V        | PLC 1; UL 746A |
|                            | 500 V              | 500 V              |                |

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

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

## Contact Songhan Plastic Technology Co.,Ltd.

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