

DSM Akulon® K224-HG3 Nylon 6- 15% Glass Reinforced (European and Asian Grade) (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 20% 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-HG3-Nylon-6-15-Glass-Reinforced-European-and-Asian-Grade-Dry.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|-----------|---------------------------|-------------------------------------|
| Density | 1.23 g/cc | 0.0444 lb/in ³ | ISO 1183 |
| Water Absorption | 7.6 % | 7.6 % | Sim. to ISO 62 |
| Moisture Absorption at Equilibrium | 2.3 % | 2.3 % | Humidity Absorption; Sim. to ISO 62 |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|-------------------------|----------------------------|--------------|
| Tensile Strength at Break | 130 MPa | 18900 psi | ISO 527-1/-2 |
| Elongation at Break | 3.5 % | 3.5 % | ISO 527-1/-2 |
| Tensile Modulus | 6.00 GPa | 870 ksi | ISO 527-1/-2 |
| Charpy Impact Unnotched | 4.50 J/cm ² | 21.4 ft-lb/in ² | ISO 179/1eU |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| Charpy Impact, Notched | 5.00 J/cm ² | 23.8 ft-lb/in ² | ISO 179/1eU |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |
| Charpy Impact, Notched | 0.700 J/cm ² | 3.33 ft-lb/in ² | ISO 179/1eA |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| Charpy Impact, Notched | 0.800 J/cm ² | 3.81 ft-lb/in ² | ISO 179/1eA |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |

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

| Thermal Properties | 30.0 µm/m-°C Metric | 16.7 µin/in-°F English | Comments |
|---|--------------------------------------|--|--------------------------|
| CTE, linear, Parallel to Flow | @Temperature 20.0 °C | @Temperature 68.0 °F | ISO 11359-1/-2 |
| CTE, linear, Transverse to Flow | 80.0 µm/m-°C @Temperature 20.0 °C | 44.4 µin/in-°F @Temperature 68.0 °F | ISO 11359-1/-2 |
| Melting Point | 220 °C | 428 °F | 10°C/min; ISO 11357-1/-3 |
| Deflection Temperature at 0.46 MPa (66 psi) | 215 °C | 419 °F | ISO 75-1/-2 |
| Deflection Temperature at 1.8 MPa (264 psi) | 195 °C | 383 °F | ISO 75-1/-2 |
| UL RTI, Electrical | 150 °C @Thickness 1.50 mm | 302 °F @Thickness 0.0591 in | UL746B |
| | 150 °C @Thickness 0.710 mm | 302 °F @Thickness 0.0280 in | UL746B |
| UL RTI, Mechanical with Impact | 120 °C @Thickness 0.710 mm | 248 °F @Thickness 0.0280 in | UL746B |
| | 125 °C @Thickness 1.50 mm | 257 °F @Thickness 0.0591 in | UL746B |
| UL RTI, Mechanical without Impact | 150 °C @Thickness 1.50 mm | 302 °F @Thickness 0.0591 in | UL746B |
| | 150 °C @Thickness 0.710 mm | 302 °F @Thickness 0.0280 in | UL746B |
| Flammability, UL94 | HB @Thickness 1.60 mm | HB @Thickness 0.0630 in | IEC 60695-11-10 |
| | HB @Thickness 0.710 mm | HB @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 @Frequency 100 Hz | 3.5 @Frequency 100 Hz | IEC 60250 |
| | 4.7 @Frequency 1e+6 Hz | 4.7 @Frequency 1e+6 Hz | IEC 60250 |

| Dielectric Strength Electrical Properties | 25.0 kV/mm Metric | 635 kV/in English | IEC 60243-1 Comments |
|--|----------------------|----------------------|-------------------------|
| Dissipation Factor | 0.0055 | 0.0055 | IEC 60250 |
| | @Frequency 100 Hz | @Frequency 100 Hz | |
| Comparative Tracking Index | 0.018 | 0.018 | IEC 60250 |
| | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz | |
| Comparative Tracking Index | 425 V | 425 V | IEC 60112 |
| | 400 - 599 V | 400 - 599 V | |

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

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