

DSM Akulon® S223-D (Cond.) Nylon 66 (North America)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66 , Unreinforced

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 appearance 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-S223-D-Cond-Nylon-66-North-America.php

| Physical Properties | Metric | English | Comments |
|------------------------------------|--------------|---------------------------|---|
| Density | 1.14 g/cc | 0.0412 lb/in ³ | (DAM); ISO 1183 |
| Water Absorption | 8.5 % | 8.5 % | (DAM); Sim. to ISO 62 |
| Moisture Absorption at Equilibrium | 2.3 % | 2.3 % | Humidity Absorption (DAM); Sim. to ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0095 cm/cm | 0.0095 in/in | DAM; ISO 294-4 |
| Linear Mold Shrinkage, Transverse | 0.0095 cm/cm | 0.0095 in/in | DAM; ISO 294-4 |

| Mechanical Properties | Metric | English | Comments |
|-------------------------|-----------------------|-----------------------|--------------|
| Tensile Strength, Yield | 60.0 MPa | 8700 psi | ISO 527-1/-2 |
| Elongation at Break | >= 50 % | >= 50 % | ISO 527-1/-2 |
| Elongation at Yield | 20 % | 20 % | ISO 527-1/-2 |
| Tensile Modulus | 1.50 GPa | 218 ksi | ISO 527-1/-2 |
| Charpy Impact Unnotched | NB | NB | ISO 179/1eU |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| | NB | NB | ISO 179/1eU |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |

| Mechanical Properties | Metric | English | Comments |
|-------------------------------|-------------------------|----------------------------|-------------|
| Charpy Impact, Notched | 0.610 J/cm ² | 2.12 ft-lb/in ² | ISO 179/1eA |
| | @Temperature -30.0 °C | @Temperature -22.0 °F | |
| | 1.20 J/cm ² | 5.71 ft-lb/in ² | ISO 179/1eA |
| | @Temperature 23.0 °C | @Temperature 73.4 °F | |
| Tensile Creep Modulus, 1 hour | 3400 MPa | 493000 psi | ISO 899-1 |

| Thermal Properties | Metric | English | Comments |
|--------------------|--------|---------|--------------------------------|
| Melting Point | 260 °C | 500 °F | 10°C/min (DAM); ISO 11357-1/-3 |

| Electrical Properties | Metric | English | Comments |
|----------------------------|--------------------|--------------------|-------------|
| Volume Resistivity | 1.00e+12 ohm-cm | 1.00e+12 ohm-cm | IEC 60093 |
| Surface Resistance | 1.00e+14 ohm | 1.00e+14 ohm | IEC 60093 |
| Dielectric Constant | 4.3 | 4.3 | IEC 60250 |
| | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz | |
| | 15 | 15 | 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 | |
| | 0.24 | 0.24 | IEC 60250 |
| | @Frequency 100 Hz | @Frequency 100 Hz | |
| Comparative Tracking Index | 600 V | 600 V | IEC 60112 |

| Descriptive Properties | Value | Comments |
|------------------------|-------|----------|
| Injection molding | Yes | |
| Release Agent | Yes | |
| Without Fillers | Yes | |

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