

## DSM Akulon® S223-HM8 (Cond.) 40% Mineral Reinforced, Heat Stabilized Nylon 66 (North America)

Categories: [Polymer](#); [Thermoplastic](#); [Nylon](#); [Nylon 66](#); [Nylon 66, 40% Mineral 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 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.

**Vendors:** [Click here to view all available suppliers for this material.](#)

Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	1.48 g/cc	0.0535 lb/in <sup>3</sup>	(DAM); ISO 1183
Water Absorption	5.3 %	5.3 %	(DAM); Sim. to ISO 62
Moisture Absorption at Equilibrium	1.4 %	1.4 %	Humidity Absorption (DAM); Sim. to ISO 62
Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	60.0 MPa	8700 psi	ISO 527-1/-2
Elongation at Break	5.5 %	5.5 %	ISO 527-1/-2
Charpy Impact Unnotched 	4.00 J/cm <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Notched 	5.00 J/cm <sup>2</sup>	23.8 ft-lb/in <sup>2</sup>	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched 	0.300 J/cm <sup>2</sup>	1.43 ft-lb/in <sup>2</sup>	ISO 179/1eA

	@ Temperature -30.0 °C	@ Temperature -22.0 °F	
	1.00 J/cm <sup>2</sup>	4.76 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Creep Modulus, 1 hour	8500 MPa	1.23e+6 psi	ISO 899-1

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 	4.0	4.0	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	10	10	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
Dissipation Factor 	0.10	0.10	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	600 V	600 V	IEC 60112

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

#### Descriptive Properties

Heat stabilized or stable to heat	Yes
Injection Molding	Yes
Release agent	Yes
With fillers	Yes

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's [terms of use](#) regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.