

## DSM Akulon® K222-KGV4 /A PA6-GF20 FR(30)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 20% Glass Fiber Filled

### Material Notes:

20% Glass Reinforced, Heat Stabilized, Flame Retardant (Halogen-phosphorous-free)

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DSM-Akulon-K222-KGV4-A-PA6-GF20-FR30.php](http://www.lookpolymers.com/polymer_DSM-Akulon-K222-KGV4-A-PA6-GF20-FR30.php)

Physical Properties	Metric	English	Comments
Density	1.34 g/cc	0.0484 lb/in <sup>3</sup>	dry; ISO 1183
Water Absorption	6.5 %	6.5 %	Sim. To ISO 62
Moisture Absorption	2.00 %	2.00 %	Sim. To ISO 62
Linear Mold Shrinkage, Flow	0.0060 cm/cm	0.0060 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	45.0 MPa	6530 psi	cond; ISO 527-1/-2
	80.0 MPa	11600 psi	dry; ISO 527-1/-2
Elongation at Break	3.0 %	3.0 %	dry; ISO 527-1/-2
	15 %	15 %	cond; ISO 527-1/-2
Tensile Modulus	2.50 GPa	363 ksi	cond; ISO 527-1/-2
	5.70 GPa	827 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	4.00 J/cm <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	cond; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	4.00 J/cm <sup>2</sup>	19.0 ft-lb/in <sup>2</sup>	dry; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	4.60 J/cm <sup>2</sup>	21.9 ft-lb/in <sup>2</sup>	dry; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	9.30 J/cm <sup>2</sup>	44.3 ft-lb/in <sup>2</sup>	cond; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.400 J/cm <sup>2</sup>	1.90 ft-lb/in <sup>2</sup>	dry; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	0.400 J/cm <sup>2</sup> Metric	1.90 ft-lb/in <sup>2</sup> English	Comments
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.400 J/cm <sup>2</sup>	1.90 ft-lb/in <sup>2</sup>	cond; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.900 J/cm <sup>2</sup>	4.28 ft-lb/in <sup>2</sup>	cond; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
Melting Point	220 °C	428 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	210 °C	410 °F	dry; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	170 °C	338 °F	dry; ISO 75-1/-2
Flammability, UL94	V-2	V-2	dry; IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-2	V-2	dry; IEC 60695-11-10
	@Thickness 0.800 mm	@Thickness 0.0315 in	
Glow Wire Test	960 °C	1760 °F	Glow Wire Flammability Index, dry; IEC 60695-2-12
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	960 °C	1760 °F	Glow Wire Flammability Index, dry; IEC 60695-2-12
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	cond; IEC 60093
	1.00e+15 ohm-cm	1.00e+15 ohm-cm	dry; IEC 60093
Surface Resistance	1.00e+14 ohm	1.00e+14 ohm	cond; IEC 60093
Dielectric Constant	3.8	3.8	dry; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.9	3.9	cond; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	4.3	4.3	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	

Electrical Properties	Metric	English	Comments
	@Frequency 100 Hz	@Frequency 100 Hz	cond; IEC 60250
Dielectric Strength	25.0 kV/mm	635 kV/in	cond; IEC 60243-1
	30.0 kV/mm	762 kV/in	dry; IEC 60243-1
Dissipation Factor	0.013	0.013	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.021	0.021	dry; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.10	0.10	cond; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.30	0.30	cond; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	600 V	600 V	cond; IEC 60112
	600 V	600 V	dry; IEC 60112

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