

Akulon® K223-HGM24

DSM Engineering Plastics - Polyamide 6

Monday, January 20, 2020

General Information

Product Description

10% Glass Reinforced, 20% Mineral Reinforced, Heat Stabilized

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass\Mineral, 30% Filler by Weight		
Additive	• Heat Stabilizer		
Features	• Heat Stabilized		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PA6-(GF+MD)30		

ASTM & ISO Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.37	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.90	--	%	
Flow	0.30	--	%	
Water Absorption				ISO 62
Saturation, 23°C	6.5	--	%	
Water Absorption				ISO 62
Equilibrium, 23°C, 50% RH	1.9	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	7500	3200	MPa	ISO 527-2
Tensile Stress (Break)	110	50.0	MPa	ISO 527-2
Tensile Strain (Break)	2.5	12	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	5.0	5.0	kJ/m ²	
23°C	3.0	8.0	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	35	35	kJ/m ²	
23°C	40	45	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/B
0.45 MPa, Unannealed	210	--	°C	
Heat Deflection Temperature				ISO 75-2/A
1.8 MPa, Unannealed	180	--	°C	
Melting Temperature ²	220	--	°C	ISO 11357-3
CLTE - Flow	3.5E-5	--	cm/cm/°C	ISO 11359-2
CLTE - Transverse	6.0E-5	--	cm/cm/°C	ISO 11359-2

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Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+14	1.0E+12	ohms-cm	IEC 60093
Electric Strength	35	30	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	3.50	14.0		
1 MHz	3.30	4.50		
Dissipation Factor				IEC 60250
100 Hz	5.0E-3	0.32		
1 MHz	0.014	0.12		
Comparative Tracking Index	--	500	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification				IEC 60695-11-10,
1.6 mm	HB	--		-20

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min