

Akulon® K223-P2

Polyamide 6
DSM Engineering Plastics

Message:

Akulon® K223-P2 is a Polyamide 6 (Nylon 6) material. It is available in Europe for injection molding.
Important attributes of Akulon® K223-P2 are:
Flame Rated
Impact Modified
Mold Release Agent

General Information				
Additive		Impact Modifier		
		Mold Release		
Features		Impact Modified		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.11	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	1.5	--	%	
Flow	1.4	--	%	
Water Absorption				ISO 62
Saturation, 23°C	9.0	--	%	
Equilibrium, 23°C, 50% RH	2.5	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	2500	750	MPa	ISO 527-2
Tensile Stress (Yield)	70.0	38.0	MPa	ISO 527-2
Tensile Strain (Yield)	4.0	25	%	ISO 527-2
Nominal Tensile Strain at Break	> 50	> 50	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	8.0	8.0	kJ/m ²	
23°C	16	--	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	No Break		
23°C	No Break	No Break		
Thermal	Dry	Conditioned	Unit	Test Method

Heat Deflection Temperature				
0.45 MPa, Unannealed	130	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	55.0	--	°C	ISO 75-2/A
CLTE				ISO 11359-2
Flow	1.0E-4	--	cm/cm/°C	
Transverse	1.4E-4	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+14	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+12	ohms·cm	IEC 60093
Electric Strength	28	20	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	3.40	14.0		
1 MHz	3.10	4.50		
Dissipation Factor				IEC 60250
100 Hz	8.0E-3	0.30		
1 MHz	0.020	0.12		
Comparative Tracking Index	--	600	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification (1.60 mm)	HB	--		IEC 60695-11-10, -20
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0 to 8.0		hr	
Rear Temperature	230 to 235		°C	
Middle Temperature	235 to 250		°C	
Front Temperature	240 to 260		°C	
Nozzle Temperature	240 to 270		°C	
Processing (Melt) Temp	240 to 275		°C	
Mold Temperature	50.0 to 80.0		°C	
Injection Rate	Moderate-Fast			
Back Pressure	3.00 to 10.0		MPa	
Screw Compression Ratio	2.5:1.0			

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