

Akulon® K222-KGV4

Polyamide 6
DSM Engineering Plastics

Message:

Akulon® K222-KGV4 is a Polyamide 6 (Nylon 6) material filled with 20% glass fiber. It is available in Asia Pacific, Europe, or North America for injection molding.

Important attributes of Akulon® K222-KGV4 are:

Flame Rated
Flame Retardant
Halogen Free
Heat Stabilizer

General Information				
UL YellowCard		E43392-235087	E47960-240089	
Filler / Reinforcement		Glass Fiber,20% Filler by Weight		
Additive		Flame Retardant		
		Heat Stabilizer		
Features		Flame Retardant		
		Halogen Free		
		Heat Stabilized		
		Low (to None) Phosphorus Content		
Forms		Pellets		
Processing Method		Injection Molding		
Multi-Point Data		Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.34	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	1.0	--	%	
Flow	0.60	--	%	
Water Absorption				ISO 62
Saturation, 23°C	6.5	--	%	
Equilibrium, 23°C, 50% RH	2.0	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	5700	2500	MPa	ISO 527-2
Tensile Stress (Break)	80.0	45.0	MPa	ISO 527-2
Tensile Strain (Break)	3.0	15	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	4.0	4.0	kJ/m²	

23°C	4.0	9.0	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	40	40	kJ/m ²	
23°C	46	93	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	210	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	170	--	°C	ISO 75-2/A
Melting Temperature ¹	220	--	°C	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+14	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+13	ohms·cm	IEC 60093
Electric Strength	30	25	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	4.30	10.0		
1 MHz	3.80	3.90		
Dissipation Factor				IEC 60250
100 Hz	0.013	0.30		
1 MHz	0.021	0.10		
Comparative Tracking Index	600	600	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification				IEC 60695-11-10, -20
0.800 mm	V-2	--		
1.50 mm	V-2	--		
Glow Wire Flammability Index				IEC 60695-2-12
1.00 mm	960	--	°C	
1.60 mm	960	--	°C	
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0 to 8.0		hr	
Rear Temperature	225 to 235		°C	
Middle Temperature	230 to 240		°C	
Front Temperature	235 to 250		°C	
Nozzle Temperature	235 to 255		°C	
Processing (Melt) Temp	245 to 265		°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			

NOTE

1. 10°C/min

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