

Akulon® K222-KWGV4

Polyamide 6
DSM Engineering Plastics

Message:

Akulon® K222-KWGV4 is a Polyamide 6 (Nylon 6) material filled with 20% glass fiber. It is available in Asia Pacific for injection molding. Important attributes of Akulon® K222-KWGV4 are:

- Flame Rated
- Flame Retardant
- Halogen Free
- Heat Stabilizer
- Mold Release Agent

General Information				
UL YellowCard		E47960-240090		
Filler / Reinforcement		Glass Fiber,20% Filler by Weight		
Additive		Flame Retardant		
		Heat Stabilizer		
		Mold Release		
Features		Flame Retardant		
		Halogen Free		
		Heat Stabilized		
		Laser Markable		
		Low (to None) Phosphorus Content		
Forms		Pellets		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.36	--	g/cm ³	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	6200	2500	MPa	ISO 527-2
Tensile Stress (Break)	80.0	45.0	MPa	ISO 527-2
Tensile Strain (Break)	2.5	15	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA

-30°C	4.0	4.0	kJ/m ²	
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	45	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	185	--	°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	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification				IEC 60695-11-10, -20
0.750 mm	V-2	--		
1.50 mm	V-2	--		
Glow Wire Flammability Index				IEC 60695-2-12
0.750 mm	960	--	°C	
3.00 mm	960	--	°C	
Glow Wire Ignition Temperature				IEC 60695-2-13
0.750 mm	775	--	°C	
3.00 mm	775	--	°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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