

Akulon® K225-KWS

Polyamide 6
DSM Engineering Plastics

Message:

Akulon® K225-KWS is a Polyamide 6 (Nylon 6) material. It is available in Asia Pacific, Europe, or North America.
Important attributes of Akulon® K225-KWS are:
Flame Rated
Flame Retardant
Halogen Free
Heat Stabilizer

General Information				
UL YellowCard		E47960-240105		
Additive		Flame Retardant		
		Heat Stabilizer		
Features		Flame Retardant		
		Halogen Free		
		Heat Stabilized		
		Laser Markable		
Forms		Pellets		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.18	--	g/cm ³	ISO 1183
Molding Shrinkage - Across Flow	1.0	--	%	ISO 294-4
Water Absorption				ISO 62
Saturation, 23°C	9.0	--	%	
Equilibrium, 23°C, 50% RH	2.5	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	3800	1400	MPa	ISO 527-2
Tensile Stress (Yield)	80.0	40.0	MPa	ISO 527-2
Tensile Strain (Yield)	3.5	22	%	ISO 527-2
Nominal Tensile Strain at Break	8.0	> 50	%	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	6.0	10	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU

-30°C	55	--	kJ/m ²	
23°C	60	--	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	200	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	80.0	--	°C	ISO 75-2/A
Melting Temperature ¹	220	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	9.0E-5	--	cm/cm/°C	
Transverse	9.0E-5	--	cm/cm/°C	
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	3.30	8.00		
1 MHz	3.20	3.60		
Dissipation Factor				IEC 60250
100 Hz	9.0E-3	0.13		
1 MHz	0.020	0.080		
Comparative Tracking Index	--	600	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification				IEC 60695-11-10, -20
0.380 mm	V-0	--		
1.50 mm	V-0	--		
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0 to 8.0		hr	
Rear Temperature	225 to 230		°C	
Middle Temperature	230 to 235		°C	
Front Temperature	230 to 240		°C	
Nozzle Temperature	230 to 250		°C	
Processing (Melt) Temp	245 to 255		°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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