

Akulon® S223-D

Polyamide 66
DSM Engineering Plastics

Message:

Akulon® S223-D is a Polyamide 66 (Nylon 66) material. It is available in Europe or North America.
Important attributes of Akulon® S223-D are:
Medium Viscosity
Nucleated

General Information				
Additive	Nucleating Agent			
Features	Medium-low Viscosity			
	Nucleated			
Forms	Pellets			
Multi-Point Data	Specific Heat vs. Temperature (ISO 11403-2)			
	Specific Volume vs Temperature (ISO 11403-2)			
Physical	Dry	Conditioned	Unit	Test Method
Density	1.14	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.95	--	%	
Flow	0.95	--	%	
Water Absorption				ISO 62
Saturation, 23°C	8.5	--	%	
Equilibrium, 23°C, 50% RH	2.3	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	3600	1600	MPa	ISO 527-2
Tensile Stress (Yield)	95.0	60.0	MPa	ISO 527-2
Tensile Strain (Yield)	4.0	20	%	ISO 527-2
Nominal Tensile Strain at Break	10	> 50	%	ISO 527-2
Flexural Modulus	2800	--	MPa	ISO 178
Flexural Stress	125	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	6.0	6.0	kJ/m ²	
23°C	6.0	12	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	215	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	85.0	--	°C	ISO 75-2/A
Melting Temperature ¹	260	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	1.0E-4	--	cm/cm/°C	
Transverse	1.0E-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	30	25	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	3.20	15.0		
1 MHz	3.00	4.30		
Dissipation Factor				IEC 60250
100 Hz	6.0E-3	0.24		
1 MHz	0.017	0.12		
Comparative Tracking Index	--	600	V	IEC 60112
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0 to 8.0		hr	
Rear Temperature	265 to 285		°C	
Middle Temperature	275 to 290		°C	
Front Temperature	280 to 295		°C	
Nozzle Temperature	280 to 290		°C	
Processing (Melt) Temp	270 to 295		°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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