

Stanyl® SC50

Polyamide 46
DSM Engineering Plastics

Message:

Stanyl® SC50 is a Polyamide 46 (Nylon 46) material filled with 30% glass fiber. It is available in Asia Pacific, Europe, or North America.

Important attributes of Stanyl® SC50 are:

- Flame Rated
- Flame Retardant
- Halogen Free

General Information		
UL YellowCard	E47960-101080105	E172082-101080122
Filler / Reinforcement	Glass Fiber,30% Filler by Weight	
Additive	Flame Retardant	
Features	Flame Retardant	
	Halogen Free	
	Low (to None) Phosphorus Content	

Physical	Dry	Conditioned	Unit	Test Method
Density	1.53	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	1.0	--	%	
Flow	0.40	--	%	
Water Absorption (Equilibrium, 23°C, 50% RH)	2.1	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	12500	8000	MPa	ISO 527-2
Tensile Stress (Break)	140	100	MPa	ISO 527-2
Tensile Strain (Break)	1.7	2.5	%	ISO 527-2
Flexural Modulus	12500	8000	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	7.0	7.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	35	40	kJ/m ²	ISO 179/1eU
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	275	--	°C	ISO 75-2/A
Melting Temperature ¹	295	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	3.5E-5	--	cm/cm/°C	
Transverse	4.5E-5	--	cm/cm/°C	

Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	> 1.0E+15	1.0E+10	ohms·cm	IEC 60093
Electric Strength	30	20	kV/mm	IEC 60243-1
Comparative Tracking Index	425	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification (0.750 mm)	V-0	--		IEC 60695-11-10, -20
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0 to 8.0		hr	
Rear Temperature	285 to 295		°C	
Middle Temperature	290 to 300		°C	
Front Temperature	295 to 300		°C	
Nozzle Temperature	295 to 300		°C	
Processing (Melt) Temp	295 to 300		°C	
Mold Temperature	80.0 to 120		°C	
Injection Rate	Moderate-Fast			
Back Pressure	0.500 to 3.00		MPa	
Screw Compression Ratio	2.5:1.0			
NOTE				
1.	10°C/min			

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