

Stanyl® 46HF5050

Polyamide 46
DSM Engineering Plastics

Message:

Stanyl® 46HF5050 is a Polyamide 46 (Nylon 46) material filled with 50% glass fiber. It is available in Asia Pacific, Europe, or North America. Important attributes of Stanyl® 46HF5050 are:

- Flame Rated
- Flame Retardant
- Heat Stabilizer
- High Flow

General Information				
UL YellowCard		E47960-240061	E172082-225819	
Filler / Reinforcement		Glass Fiber,50% Filler by Weight		
Additive		Flame Retardant		
		Heat Stabilizer		
Features		Flame Retardant		
		Heat Stabilized		
		High Flow		
Forms		Pellets		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.87	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.30	--	%	
Flow	0.70	--	%	
Water Absorption (Equilibrium, 23°C, 50% RH)	1.2	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	18000	15000	MPa	ISO 527-2
Tensile Stress (Break)	200	135	MPa	ISO 527-2
Tensile Strain (Break)	1.5	2.3	%	ISO 527-2
Flexural Modulus	16000	14000	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	15	15	kJ/m ²	
23°C	15	15	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	40	40	kJ/m ²	
23°C	40	45	kJ/m ²	

Notched Izod Impact Strength				ISO 180/1A
-40°C	18	18	kJ/m ²	
23°C	18	18	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	290	--	°C	ISO 75-2/A
Melting Temperature ¹	295	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	2.0E-5	--	cm/cm/°C	
Transverse	3.0E-5	--	cm/cm/°C	
Thermal Index - 5000 hrs	163	--	°C	IEC 60216
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	350	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification				IEC 60695-11-10, -20
0.400 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	280 to 310		°C	
Middle Temperature	300 to 315		°C	
Front Temperature	300 to 315		°C	
Nozzle Temperature	300 to 310		°C	
Processing (Melt) Temp	310 to 320		°C	
Mold Temperature	60.0 to 120		°C	
Injection Rate	Moderate-Fast			
Back Pressure	1.00		MPa	
Screw Compression Ratio	2.5:1.0			
NOTE				
1.	10°C/min			

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