

Stanyl® 46HF4550

Polyamide 46
DSM Engineering Plastics

Message:

Stanyl® 46HF4550 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® 46HF4550 are:
Flame Rated
Heat Stabilizer
High Flow
Typical application of Stanyl® 46HF4550: Electrical/Electronic Applications

General Information				
UL YellowCard		E43392-100074826	E47960-100074825	E172082-100074827
Filler / Reinforcement		Glass Fiber,50% Filler by Weight		
Additive		Heat Stabilizer		
Features		Heat Stabilized		
		High Flow		
Uses		Electrical/Electronic Applications		
Forms		Pellets		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.62	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.90	--	%	
Flow	0.40	--	%	
Water Absorption (Equilibrium, 23°C, 50% RH)	1.9	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				ISO 527-2
--	16000	11000	MPa	
120°C	11000	--	MPa	
160°C	10000	--	MPa	
Tensile Stress				ISO 527-2
Break	250	170	MPa	
Break, 120°C	150	--	MPa	
Break, 160°C	135	--	MPa	
Tensile Strain				ISO 527-2
Break	2.2	3.5	%	
Break, 120°C	3.5	--	%	
Break, 160°C	3.5	--	%	
Flexural Modulus	15000	11000	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	18	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	70	70	kJ/m ²	
23°C	80	100	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				
Flow	3.5E-5	--	cm/cm/°C	ASTM D696
Flow	1.0E-5	--	cm/cm/°C	ISO 11359-2
Transverse	4.0E-5	--	cm/cm/°C	ASTM D696
Transverse	1.1E-4	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+15	1.0E+11	ohms·cm	IEC 60093
Electric Strength	30	25	kV/mm	IEC 60243-1
Comparative Tracking Index	450	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification				IEC 60695-11-10, -20
0.750 mm	HB	--		
1.50 mm	HB	--		
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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