

Stanyl® TW300

Polyamide 46
DSM Engineering Plastics

Message:

Stanyl® TW300 is a Polyamide 46 (Nylon 46) material. It is available in Asia Pacific, Europe, or North America.
Important attributes of Stanyl® TW300 are:
Flame Rated
Heat Stabilizer
Typical application of Stanyl® TW300: Automotive

General Information				
UL YellowCard		E47960-240079	E172082-225893	
Additive		Heat Stabilizer		
Features		Heat Stabilized		
Forms		Pellets		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.18	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	2.0	--	%	
Flow	2.0	--	%	
Water Absorption (Equilibrium, 23°C, 50% RH)	3.7	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				ISO 527-2
--	3300	1000	MPa	
120°C	800	--	MPa	
160°C	650	--	MPa	
180°C	600	--	MPa	
200°C	500	--	MPa	
Tensile Stress				ISO 527-2
Yield	100	55.0	MPa	
Yield, 120°C	50.0	--	MPa	
Yield, 160°C	40.0	--	MPa	
Yield, 180°C	35.0	--	MPa	
Yield, 200°C	30.0	--	MPa	
Nominal Tensile Strain at Break				ISO 527-2
--	40	> 50	%	
120°C	> 50	--	%	
160°C	> 50	--	%	
180°C	> 50	--	%	
200°C	> 50	--	%	

Flexural Modulus				ISO 178
--	3000	900	MPa	
120°C	800	--	MPa	
160°C	600	--	MPa	
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	4.0	4.0	kJ/m ²	
23°C	10	35	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	No Break		
23°C	No Break	No Break		
Notched Izod Impact Strength				ISO 180/1A
-40°C	4.0	4.0	kJ/m ²	
23°C	10	35	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)				
	190	--	°C	ISO 75-2/A
Melting Temperature ¹	295	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	8.5E-5	--	cm/cm/°C	
Transverse	1.1E-4	--	cm/cm/°C	
Thermal Index - 5000 hr	152	--	°C	IEC 60216
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+15	1.0E+9	ohms·cm	IEC 60093
Electric Strength	25	15	kV/mm	IEC 60243-1
Comparative Tracking Index	400	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification				IEC 60695-11-10, -20
0.750 mm	V-2	--		
1.50 mm	V-2	--		
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0 to 8.0		hr	
Rear Temperature	280 to 320		°C	
Middle Temperature	300 to 320		°C	
Front Temperature	300 to 320		°C	
Nozzle Temperature	300 to 320		°C	
Processing (Melt) Temp	310 to 320		°C	
Mold Temperature	80.0 to 120		°C	

Injection Rate	Moderate-Fast	
Back Pressure	2.00 to 10.0	MPa
Screw Compression Ratio	2.5:1.0	

NOTE

1. 10°C/min

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