Stanyl® WTP81

Polyamide 46

DSM Engineering Plastics

Message:

Stanyl®WTP81 is a polyamide 46 (nylon 46) material. This product is available in North America, Europe or Asia Pacific.
Stanyl®The main features of WTP81 are:
flame retardant/rated flame
heat stabilizer
Lubrication

General Information	
UL YellowCard	E172082-102826378
Additive	heat stabilizer Lubricant
Features	Thermal Stability Lubrication

Physical	Dry	Conditioned	Unit	Test Method
Density	1.18	--	g/cm³	ISO 1183
Molding Shrinkage				ISO 294-4
Transverse flow	2.0	--	%	ISO 294-4
Flow	2.0	--	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	3.7	--	%	ISO 62
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus				ISO 527-2
--	3200	1000	MPa	ISO 527-2
120°C	800	--	MPa	ISO 527-2
160°C	650	--	MPa	ISO 527-2
180°C	600	--	MPa	ISO 527-2
200°C	500	--	MPa	ISO 527-2
Tensile Stress				ISO 527-2
Yield	100	55.0	MPa	ISO 527-2
Yield, 120°C	50.0	--	MPa	ISO 527-2
Yield, 160°C	40.0	--	MPa	ISO 527-2
Yield, 180°C	35.0	--	MPa	ISO 527-2
Yield, 200°C	30.0	--	MPa	ISO 527-2
Nominal Tensile Strain at Break				ISO 527-2
--	40	> 50	%	ISO 527-2
120°C	> 50	--	%	ISO 527-2

160°C	> 50	--	%	ISO 527-2
180°C	> 50	--	%	ISO 527-2
200°C	> 50	--	%	ISO 527-2
Flexural Modulus				ISO 178
--	3000	900	MPa	ISO 178
120°C	800	--	MPa	ISO 178
160°C	600	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	4.0	4.0	kJ/m²	ISO 179/1eA
23°C	10	35	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	No Break		ISO 179/1eU
23°C	No Break	No Break		ISO 179/1eU
Notched Izod Impact				ISO 180/1A
-30°C	4.0	4.0	kJ/m²	ISO 180/1A
23°C	10	35	kJ/m²	ISO 180/1A
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	280	--	°C	ISO 75-2/B
1.8 MPa, not annealed	190	--	°C	ISO 75-2/A
Melting Temperature [1]	295	--	°C	ISO 11357-3
Linear thermal expansion coefficient				ISO 11359-2
Flow	8.5E-5	--	cm/cm/°C	ISO 11359-2
Lateral	1.1E-4	--	cm/cm/°C	ISO 11359-2
RTI Elec (0.75 mm)	150	--	°C	UL 746
Thermal Index - 5000 hrs	152	--	°C	IEC 60216
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+15	1.0E+9	ohms·cm	IEC 60093
Dielectric Strength	25	15	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	3.90	22.0		IEC 60250
1 MHz	3.60	1.50		IEC 60250
Comparative Tracking Index	400	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification				IEC 60695-11-10, -20
0.75 mm	V-2	--		IEC 60695-11-10, -20
1.5 mm	V-2	--		IEC 60695-11-10, -20
Injection	Dry	Unit		

Drying Temperature	80	°C
Drying Time	4.0 - 8.0	hr
Rear Temperature	280 - 320	°C
Middle Temperature	300 - 320	°C
Front Temperature	300 - 320	°C
Nozzle Temperature	300 - 320	°C
Processing (Melt) Temp	310 - 320	°C
Mold Temperature	80 - 120	°C
Injection Rate	Moderate-Fast	
Back Pressure	2.00 - 10.0	MPa
Screw Compression Ratio	2.5:1.0	

NOTE	
1.	10°C/min

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China