Stanyl® TW441

Polyamide 46

DSM Engineering Plastics

Message:

Stanyl® TW441 is a Polyamide 46 (Nylon 46) material. It is available in Asia Pacific, Europe, or North America.
Important attributes of Stanyl® TW441 are:
Heat Stabilizer
High Viscosity
Lubricated

General Information	
Additive	Heat Stabilizer Lubricant
Features	Heat Stabilized High Viscosity Lubricated
Forms	Pellets
Multi-Point Data	Isochronous Stress vs. Strain (ISO 11403-1) Isothermal Stress vs. Strain (ISO 11403-1) Secant Modulus vs. Strain (ISO 11403-1) Shear Modulus vs. Temperature (ISO 11403-1)

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 (23°C)	12	45	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	No Break		
23°C	No Break	No Break		
Notched Izod Impact Strength (23°C)	10	40	kJ/m²	ISO 180/1A
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
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

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

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