

Stanyl® TE250F6

Polyamide 46

DSM Engineering Plastics

PROSPECTOR®

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Technical Data

Product Description

Stanyl® TE250F6 is a Polyamide 46 (Nylon 46) material filled with 30% glass fiber. It is available in Asia Pacific, Europe, or North America.

Important attributes of Stanyl® TE250F6 are:

- Flame Rated
- Flame Retardant
- Heat Stabilizer

Typical application of Stanyl® TE250F6: Automotive

General

Material Status	• Commercial: Active		
Literature ¹	• Processing (English) • Technical Datasheet (English)		
UL Yellow Card ²	• E43392-235032 • E47960-240064 • E172082-225869		
Search for UL Yellow Card	• DSM Engineering Plastics • Stanyl®		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
Additive	• Flame Retardant	• Heat Stabilizer	
Features	• Flame Retardant	• Heat Stabilized	
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)	• Viscosity vs. Shear Rate (ISO 11403-2)

Physical	Dry	Conditioned	Unit	Test Method
Density	1.68	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	1.1	--	%	
Flow	0.40	--	%	
Water Absorption				ISO 62
Equilibrium, 73°F (23°C), 50% RH	1.6	--	%	

Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				ISO 527-2
--	1.74E+6 (12000)	1.16E+6 (8000)	psi (MPa)	
248°F (120°C)	1.09E+6 (7500)	--	psi (MPa)	
320°F (160°C)	899000 (6200)	--	psi (MPa)	
Tensile Stress				ISO 527-2
Break	26100 (180)	18100 (125)	psi (MPa)	
Break, 248°F (120°C)	15200 (105)	--	psi (MPa)	
Break, 320°F (160°C)	13800 (95.0)	--	psi (MPa)	



Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Strain				ISO 527-2
Break	2.5	3.5	%	
Break, 248°F (120°C)	4.0	--	%	
Break, 320°F (160°C)	4.0	--	%	
Flexural Modulus				ISO 178
--	1.60E+6 (11000)	1.06E+6 (7300)	psi (MPa)	
248°F (120°C)	943000 (6500)	--	psi (MPa)	
320°F (160°C)	725000 (5000)	--	psi (MPa)	
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-22°F (-30°C)	4.8 (10)	4.8 (10)	ft·lb/in ² (kJ/m ²)	
73°F (23°C)	5.2 (11)	5.2 (11)	ft·lb/in ² (kJ/m ²)	
Charpy Unnotched Impact Strength				ISO 179/1eU
-22°F (-30°C)	24 (50)	24 (50)	ft·lb/in ² (kJ/m ²)	
73°F (23°C)	29 (60)	29 (60)	ft·lb/in ² (kJ/m ²)	
Notched Izod Impact Strength				ISO 180/1A
-40°F (-40°C)	5.2 (11)	5.2 (11)	ft·lb/in ² (kJ/m ²)	
73°F (23°C)	5.2 (11)	5.2 (11)	ft·lb/in ² (kJ/m ²)	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				ISO 75-2/A
264 psi (1.8 MPa), Unannealed	554 (290)	--	°F (°C)	
Melting Temperature ⁴	563 (295)	--	°F (°C)	ISO 11357-3
CLTE				ISO 11359-2
Flow	1.4E-5 (2.5E-5)	--	in/in/°F (cm/cm/°C)	
Transverse	3.1E-5 (5.5E-5)	--	in/in/°F (cm/cm/°C)	
Thermal Index - 5000 hrs	325 (163)	--	°F (°C)	IEC 60216
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+15	1.0E+10	ohms·cm	IEC 60093
Electric Strength	760 (30)	510 (20)	V/mil (kV/mm)	IEC 60243-1
Comparative Tracking Index	225	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification				IEC 60695-11-10, -20
0.0138 in (0.350 mm)	V-0	--		
0.0591 in (1.50 mm)	V-0	--		
Injection	Dry (English)	Dry (SI)		
Drying Temperature	176 °F	80.0 °C		



Injection	Dry (English)	Dry (SI)
Drying Time	4.0 to 8.0 hr	4.0 to 8.0 hr
Rear Temperature	536 to 608 °F	280 to 320 °C
Middle Temperature	572 to 608 °F	300 to 320 °C
Front Temperature	572 to 608 °F	300 to 320 °C
Nozzle Temperature	572 to 608 °F	300 to 320 °C
Processing (Melt) Temp	581 to 608 °F	305 to 320 °C
Mold Temperature	176 to 248 °F	80.0 to 120 °C
Injection Rate	Moderate-Fast	Moderate-Fast
Back Pressure	290 to 1450 psi	2.00 to 10.0 MPa
Screw Compression Ratio	2.5:1.0	2.5:1.0

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ 10°C/min



Where to Buy

Supplier

DSM Engineering Plastics
Evansville, IN USA
Telephone: 800-333-4237
Web: <http://www.dsm.com/>

Distributor

Channel Prime Alliance
Telephone: 800-247-8038
Web: <http://www.channelpa.com/>
Availability: North America

Chase Plastic Services, Inc.
Chase Plastics Services is a North American distributor with representatives throughout the region. Please find your rep here:
<http://www.chaseplastics.com/contact/locations>
Telephone: 800-232-4273
Web: <http://www.chaseplastics.com/>
Availability: North America

Nexeo Solutions - Europe
Nexeo Solutions is a Pan European distribution company. Contact Nexeo for availability of individual products by country.
Telephone: +34-93-480-9125
Web: <http://www.nexeosolutions.com/>
Availability: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Russian Federation, Spain, Sweden, Switzerland, United Kingdom

RESINEX Group
RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.
Telephone: +32-14-672511
Web: <http://www.resinex.com/>
Availability: Europe

TER HELL PLASTIC GMBH
TER HELL PLASTIC is a Pan European distribution company. Contact TER HELL PLASTIC for availability of individual products by country.
Telephone: +49-232-3941-0
Web: <http://www.terhell.de/>
Availability: Europe