

Zytel® 70G50HSLR BK509

NYLON RESIN

DuPont Transportation & Industrial

PROSPECTOR®

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Technical Data

Product Description

50% Glass Reinforced, Heat Stabilized, Hydrolysis Resistant, Polyamide 66

General

Material Status	• Commercial: Active
Literature ¹	• Processing - Injection Molding (English) • Processing - Injection Molding of Glass-reinforced Zytel (English) • Typical Processing for DuPont Engineering Polymers (English)
Search for UL Yellow Card	• DuPont Transportation & Industrial • Zytel®
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight
Additive	• Heat Stabilizer
Features	• Heat Stabilized • Hydrolysis Resistant
RoHS Compliance	• Contact Manufacturer
Multi-Point Data	• Isothermal Stress vs. Strain (ISO 11403-1) • Secant Modulus vs. Strain (ISO 11403-1) • Shear Modulus vs. Temperature, Dynamic (ISO 11403-1) • Shear Stress vs. Shear Rate (ISO 11403-1) • Tensile Modulus vs. Temperature (ISO 11403-1) • Viscosity vs. Shear Rate (ISO 11403-2)
Part Marking Code (ISO 11469)	• >PA66-GF50<
Resin ID (ISO 1043)	• PA66-GF50
ISO Designation	• ISO 16396-PA66,GF50,M1CGHW,S14-160

Physical	Dry	Conditioned	Unit	Test Method
Density	1.57	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.80	--	%	
Flow	0.20	--	%	
Water Absorption				ISO 62
Equilibrium, 23°C, 2.00 mm, 50% RH	1.3	--	%	
Viscosity Number	150	--	cm ³ /g	ISO 307
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	17000	13000	MPa	ISO 527-2
Tensile Stress (Break)	240	170	MPa	ISO 527-2
Tensile Strain (Break)	2.8	4.0	%	ISO 527-2
Poisson's Ratio	0.33	0.33		
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	16	18	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C ³	95	90	kJ/m ²	
23°C	95	100	kJ/m ²	



Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature 1.8 MPa, Unannealed	255	--	°C	ISO 75-2/A
Glass Transition Temperature ⁴	70.0	20.0	°C	ISO 11357-2
Melting Temperature ⁴	261	--	°C	ISO 11357-3
CLTE				
Flow : 23 to 55°C	1.7E-5	--	cm/cm/°C	ASTM E831
Flow : -40 to 23°C	1.3E-5	--	cm/cm/°C	ISO 11359-2
Flow : 55 to 160°C	2.0E-5	--	cm/cm/°C	ISO 11359-2
Transverse : -40 to 23°C	4.4E-5	--	cm/cm/°C	ISO 11359-2
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate ⁵ (1.00 mm)	< 80	--	mm/min	ISO 3795
FMVSS Flammability	B	--		FMVSS 302
Fill Analysis	Dry	Conditioned	Unit	
Ejection Temperature	210	--	°C	
Injection	Dry Unit			
Drying Temperature	80 °C			
Drying Time - Desiccant Dryer	2.0 to 4.0 hr			
Suggested Max Moisture	0.20 %			
Processing (Melt) Temp	285 to 305 °C			
Melt Temperature, Optimum	295 °C			
Mold Temperature	70 to 120 °C			
Mold Temperature, Optimum	100 °C			
Holding Pressure	50.0 to 100 MPa			
Drying Recommended	yes			
Hold Pressure Time	3.00 s/mm			
Maximum Screw Tangential Speed	12 m/min			

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 Typical properties: these are not to be construed as specifications.
- ³ Derived from Similar Grade
- ⁴ 10°C/min
- ⁵ FMVSS 302



Where to Buy

Supplier

DuPont Transportation & Industrial
Wilmington, DE USA
Telephone: 302-999-4592
Web: <http://plastics.dupont.com/>

Distributor

Avient Distribution (formerly PolyOne Distribution)

Avient Distribution is a global distribution company. Contact Avient Distribution for availability of individual products by country.

Telephone: +1-888-502-0951 (USA); +86-21-6028-4805 (China)

Web: <https://www.avientdistribution.com/>

Availability: Global

CCC Plastics

Telephone: 800-465-6917

Web: <https://www.ccc-group.com/>

Availability: Canada

Distrupol Ltd

Distrupol Ltd is a Pan European distribution company. Contact Distrupol Ltd for availability of individual products by country.

Telephone: 08452003040

Web: <http://www.distrupol.com/>

Availability: Denmark, Finland, Ireland, Norway, Sweden, United Kingdom

