

PA6 GF50 is a 50% glass fiber reinforced nylon 6 compound known for its exceptional stiffness, mechanical strength, and dimensional stability, heat stabilized. It is commonly used as a metal replacement material in demanding industries such as automotive, electrical, industrial machinery, and power tools.

Form	Granules			
Color available	All color			
Processing method	Injecton			
Features	Lubricated	Heat stabilized		
Additive				
Available	Resistant to hydrolysis	Resistant to metals	Colored	
According or exceeded	VW TL 50134-PA6-10-A			
According or exceeded				
Physical properties	ASTM	ISO	Unit	Value
Description	-	1043	-	PA6GF50
Density	D1505	1183	g/cm ³	1.56
Ash content	D2584	3451	%	50
Linear molds shrinkage	D955	294-4	%	0.1 ÷ 0.3
Relative Viscosity (RV) 1% [m/v] in 96% [m/m] sulfuric acid	-	307	-	2.8
Viscosity Number (VN) 0,5% [m/v] in 96% [m/m] sulfuric acid	-	307	ml/g	151
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	-	1133	gr/10'	-
Mechanical properties				Dry/Wet
Tensile strength at yield	D638	527	MPa	190/130
Tensile strength at break	D638	527	MPa	-
Tensile elongation at break	D638	527	%	2
Tensile modulus	D638	527	MPa	16000/10500
Flexural stress	D790	178	MPa	360/250
Flexural modulus	D790	178	MPa	15000/9500
IZOD impact strength, notched 23°C	-	ISO 180 1eA	kJ/m ²	20/32
IZOD impact strength, notched -30°C	-	ISO 180 1eA	kJ/m ³	-
Charpy impact strength, unnotched 23°C	-	ISO 179 1eA	kJ/m ²	-
Thermal properties				
Vicat Method B50 (50N/50°C)	D1525	306	°C	-
H.D.T. method B (0.45MPa)	D647	75	°C	221
H.D.T. method A (1.82 MPa)	D648	75	°C	214
Aging test (150°C)	-	-	hrs	> 200
Flammability properties				
Flame rating 1.6 mm	UL 94	UL 94	Class	HB
Flame rating 3.2 mm	UL 94	UL 94	Class	HB
Automotive materials (Thickness >=1 mm)	FMVSS 302	3795	mm/min	< 100
Processing conditions				
Rear temperature	-	-	°C	260 ÷ 265
Middle temperature	-	-	°C	260 ÷ 265
Front temperature	-	-	°C	265 ÷ 275
Nozzle temperature	-	-	°C	265 ÷ 275
Molds temperature	-	-	°C	80 ÷ 90
Injection Pressure	-	-	MPa	3.50 ÷ 12.5
Injection rate	-	-	-	Fast
Back Pressure	-	-	MPa	0.2 ÷ 3
Ejection emperature	-	-	°C	155
Drying (Optional)	-	-	hrs / °C	2 ÷ 4 h - 80°C
Suggested Max Moisture	-	-	%	0.05