

PA66 GF50 is a 50% glass fiber reinforced nylon 66 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 50133-PA66-8-A			
According or exceeded				
<b>Physical properties</b>	<b>ASTM</b>	<b>ISO</b>	<b>Unit</b>	<b>Value</b>
Description	-	1043	-	PA66GF50
Density	D1505	1183	g/cm <sup>3</sup>	1.54
Ash content	D2584	3451	%	50
Linear molds shrinkage	D955	294-4	%	0.3 ÷ 0.4
Relative Viscosity (RV) 1% [m/v] in 96% [m/m] sulfuric acid	-	307	-	2.7
Viscosity Number (VN) 0,5% [m/v] in 96% [m/m] sulfuric acid	-	307	ml/g	143
Melt Volume-Flow Rate (MVR) (275°C/5.0 kg)	-	1133	gr/10'	-
<b>Mechanical properties</b>				<b>Dry/Wet</b>
Tensile strength at yield	D638	527	MPa	-
Tensile strength at break	D638	527	MPa	200/140
Tensile elongation at break	D638	527	%	2/4
Tensile modulus	D638	527	MPa	15000/10000
Flexural stress	D790	178	MPa	280/240
Flexural modulus	D790	178	MPa	14000/9000
IZOD impact strength, notched 23°C	-	ISO 180 1eA	kJ/m <sup>2</sup>	15/20
IZOD impact strength, notched -30°C	-	ISO 180 1eA	kJ/m <sup>3</sup>	-
Charpy impact strength, unnotched 23°C	-	ISO 179 1eA	kJ/m <sup>2</sup>	-
<b>Thermal properties</b>				
Vicat Method B50 (50N/50°C)	D1525	306	°C	-
H.D.T. method B (0.45MPa)	D647	75	°C	255
H.D.T. method A (1.82 MPa)	D648	75	°C	245
Aging test (150°C)	-	-	hrs	> 200
<b>Flammability properties</b>				
Flame rating 1.6 mm	UL 94	UL 94	Class	HB
Flame rating 3.2 mm	UL 94	UL 94	Class	HB
Automotive materials (Thickess >=1 mm)	FMVSS 302	3795	mm/min	< 100
<b>Processing conditions</b>				
Rear temperature	-	-	°C	280 ÷ 290
Middle temperature	-	-	°C	280 ÷ 290
Front temperature	-	-	°C	280 ÷ 295
Nozzle temperature	-	-	°C	295 ÷ 305
Molds temperature	-	-	°C	80 ÷ 90
Injection Pressure	-	-	MPa	3.50 ÷ 12.5
Injection rate	-	-	-	Fast
Back Pressure	-	-	MPa	0.2 ÷ 3
Ejection emperature	-	-	°C	195
Drying (Optional)	-	-	hrs / °C	2 ÷ 4 h - 80°C
Suggested Max Moisture	-	-	%	0.05