

Polifil® ABS GFABS-30

Acrylonitrile Butadiene Styrene

The Plastics Group

Message:

Polifil® GFABS series compounds combine the most desirable properties of both components allowing for enhanced processability and toughness together with the stiffness of glass. These compounds are used in firearms, automotive applications, and household appliances. Standard processing techniques are applicable. Use this information as a guide to aid you in selecting the proper resin for your application. TPG will custom compound and fine-tune our formulations for your application.

General Information			
Filler / Reinforcement	Glass Fiber,30% Filler by Weight		
Features	Good Processability		
	Good Stiffness		
	Good Toughness		
Uses	Automotive Applications		
	Household Goods		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.28	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	3.0 to 10	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.18 mm)	0.20	%	ASTM D955
Water Absorption (24 hr)	0.15	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	118		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	6270	MPa	ASTM D638
Tensile Strength (23°C)	89.6	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield, 23°C	2.0	%	
Break, 23°C	2.0	%	
Flexural Modulus - Tangent (23°C)	6410	MPa	ASTM D790
Flexural Strength (23°C)	116	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	53	J/m	ASTM D256
Gardner Impact (23°C, 12.7 mm)	0.452	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648

0.45 MPa, Unannealed	107	°C
1.8 MPa, Unannealed	100	°C
Injection	Nominal Value	Unit
Drying Temperature	82.2	°C
Drying Time	2.0	hr
Rear Temperature	204 to 216	°C
Middle Temperature	210 to 221	°C
Front Temperature	221 to 232	°C
Nozzle Temperature	227 to 232	°C
Processing (Melt) Temp	218 to 271	°C
Mold Temperature	37.8 to 65.6	°C
Injection Rate	Moderate	
Back Pressure	0.172 to 0.517	MPa
Screw Speed	30 to 60	rpm

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