

MAJORIS GFR400

Polypropylene

AD majoris

Message:

MAJORIS GFR400 is a special long glass fibre reinforced polypropylene compound halogen free flame retardant UL 94 VO classification, for injection moulding and extrusion. The long glass fibres, chemically coupled to the polypropylene matrix, are providing with outstanding mechanical properties. MAJORIS GFR400 is available both in natural (MAJORIS GFR400) and black (MAJORIS GFR400-8229). Other colours can be provided on request.

APPLICATIONS

MAJORIS GFR400 is intended for injection moulding of highly demanding technical applications.

The excellent properties of MAJORIS GFR400 make it suitable for:

Electrical components, structural furniture parts, load bearing, demanding components for various engineering sectors.

MAJORIS GFR400 can, in many of these applications, substitute other engineering plastics or metal alloys.

General Information			
Filler / Reinforcement	Long glass fiber		
Additive	heat stabilizer		
	Flame retardancy		
Features	Chemical coupling		
	Recyclable materials		
	Heat resistance, high		
	Thermal Stability		
	Halogen-free		
	Flame retardancy		
Uses	Electrical components		
	Furniture		
	Metal substitution		
Appearance	Black		
	Available colors		
	Natural color		
Forms	Particle		
Processing Method	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.26	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction: 2.00mm	0.76	%	ISO 294-4
Flow direction: 2.00mm	0.33	%	ISO 294-4

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	7450	MPa	ISO 527-2/1
Tensile Stress (Break)	100	MPa	ISO 527-2/50
Tensile Strain (Break)	3.0	%	ISO 527-2/50
Flexural Modulus ¹	7000	MPa	ISO 178
Flexural Stress	175	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	20	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	46	kJ/m ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	160	°C	ISO 75-2/B
1.8 MPa, not annealed	148	°C	ISO 75-2/A
Ball Pressure Test (150°C)	Pass		IEC 60335-1
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.800 mm	V-2		UL 94
1.60 mm	V-0		UL 94
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (1.00 mm)	825	°C	IEC 60695-2-13
Oxygen Index ²	35	%	ISO 4589-2
Injection	Nominal Value	Unit	
Rear Temperature	180 - 220	°C	
Processing (Melt) Temp	180 - 220	°C	
Mold Temperature	60.0 - 100	°C	
Injection Pressure	30.0 - 60.0	MPa	
Injection Rate	Slow		
Screw Speed	30 - 150	rpm	
Injection instructions			
Holding pressure: 50 to 70% of the injection pressureBack pressure: as low as possible, 0 to 10%Holding time: as long as practical			
NOTE			
1.	2.0 mm/min		
2.	4 mm		

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