

# MAJORIS GFR450

Polypropylene

AD majoris

Message:

MAJORIS GFR450 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 GFR450 is available both in natural (MAJORIS GFR450) and black (MAJORIS GFR450-8229). Other colours can be provided on request.

APPLICATIONS

MAJORIS GFR450 is intended for injection moulding of highly demanding technical applications.  
The excellent properties of MAJORIS GFR450 make it suitable for:  
Electrical components, structural furniture parts, load bearing, demanding components for various engineering sectors.  
MAJORIS GFR450 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	1.30	g/cm <sup>3</sup>	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction: 2.00mm	0.74	%	ISO 294-4
Flow direction: 2.00mm	0.32	%	ISO 294-4

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9500	MPa	ISO 527-2/1
Tensile Stress (Break)	80.0	MPa	ISO 527-2/50
Tensile Strain (Break)	2.5	%	ISO 527-2/50
Flexural Modulus <sup>1</sup>	9000	MPa	ISO 178
Flexural Stress	130	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	17	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	20	kJ/m <sup>2</sup>	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	162	°C	ISO 75-2/B
1.8 MPa, not annealed	150	°C	ISO 75-2/A
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.60 mm)	V-0		UL 94
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (2.00 mm)	825	°C	IEC 60695-2-13
Oxygen Index <sup>2</sup>	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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#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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