

# ASTALON™ GS2020M

Polycarbonate

Marplex Australia Pty. Ltd.

## Message:

ASTALON™ GS2020M is a 20% glass fibre filled version of ASTALON™ S2000R and offers an exceptional combination of product rigidity and strength, heat resistance, dimensional stability, flame retardancy, creep resistance and processability. Typical applications of ASTALON™ GS2020M include metal substitution such as automotive interior structural brackets, camera frames, industrial electrical switch housings, electrical power tool casings and mounting chassis for electronics devices such as computer printers, laptop computers and VTR units.

General Information			
Filler / Reinforcement	Glass Fiber,20% Filler by Weight		
Features	Flame Retardant Good Creep Resistance Good Dimensional Stability Good Processability Good Stiffness Good Strength Medium Heat Resistance		
Uses	Automotive Applications Camera Applications Electrical/Electronic Applications Housings Industrial Applications Metal Replacement Power/Other Tools Printer Parts		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.33	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	11	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.00 mm)	0.30	%	ASTM D955
Water Absorption (24 hr)	0.11	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	124		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>1</sup> (3.20 mm)	106	MPa	ASTM D638
Tensile Elongation <sup>2</sup> (Break, 3.20 mm)	4.0	%	ASTM D638
Flexural Modulus <sup>3</sup> (6.40 mm)	6350	MPa	ASTM D790
Flexural Strength <sup>4</sup> (6.40 mm)	185	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.20 mm)	140	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed, 6.40 mm)	145	°C	ASTM D648
CLTE - Flow	2.4E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	23	kV/mm	ASTM D149
Dielectric Constant	3.05		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.60 mm)	V-2		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	120 to 125	°C	
Drying Time	4.0 to 6.0	hr	
Rear Temperature	245 to 265	°C	
Middle Temperature	260 to 280	°C	
Front Temperature	275 to 295	°C	
Processing (Melt) Temp	270 to 300	°C	
Mold Temperature	60.0 to 110	°C	
Injection Pressure	60.0 to 140	MPa	
Injection Rate	Moderate		
Back Pressure	0.100 to 0.500	MPa	
Screw Speed	40 to 60	rpm	
Clamp Tonnage	4.0 to 8.0	kN/cm <sup>2</sup>	
NOTE			
1.	5.0 mm/min		
2.	5.0 mm/min		
3.	2.8 mm/min		
4.	2.8 mm/min		

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