

ASTALAC™ ABS GSM

Acrylonitrile Butadiene Styrene

Marplex Australia Pty. Ltd.

Message:

ASTALAC™ ABS GSM is a high impact strength grade of ABS and is designed for injection moulding applications requiring superior toughness and abuse resistance whilst maintaining a balance of product rigidity, heat resistance and mouldability. Typical automotive applications include painted front grilles and decor panels, other areas of use include vacuum cleaner nozzles and pool filtration equipment.

Note: The letters "UV" or "W" indicate UV stabilisation has been added [ie: ASTALAC™ GSM-UV]. Underwriters Laboratory Reference E183535-B.

General Information			
Features	Good Moldability		
	High Impact Resistance		
	Medium Heat Resistance		
	Medium Rigidity		
	Paintable		
	Ultra High Toughness		
Uses	Automotive Applications		
UL File Number	E183535-B		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 kg	14	g/10 min	
230°C/3.8 kg	3.0	g/10 min	
Molding Shrinkage - Flow (3.00 mm)	0.60	%	ASTM D955
Water Absorption (24 hr)	0.25	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	100		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (3.20 mm)	40.0	MPa	ASTM D638
Tensile Elongation ² (Break, 3.20 mm)	50	%	ASTM D638
Flexural Modulus ³ (3.20 mm)	2250	MPa	ASTM D790
Flexural Strength ⁴ (3.20 mm)	68.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.20 mm)	330	J/m	ASTM D256
Gardner Impact (3.20 mm)	25.0	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, 3.20 mm	77.0	°C	
1.8 MPa, Unannealed, 6.40 mm	83.0	°C	

1.8 MPa, Unannealed, 12.7 mm	88.0	°C	
Vicat Softening Temperature	101	°C	ASTM D1525 ⁵
CLTE - Flow	9.0E-5	cm/cm/°C	ASTM D696
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.60 mm)	HB		UL 94
Glow Wire Ignition Temperature (1.60 mm)	550	°C	AS/NZS 60695
Injection	Nominal Value	Unit	
Drying Temperature	85.0 to 90.0	°C	
Drying Time	3.0 to 6.0	hr	
Rear Temperature	205 to 225	°C	
Middle Temperature	215 to 235	°C	
Front Temperature	225 to 245	°C	
Processing (Melt) Temp	220 to 250	°C	
Mold Temperature	40.0 to 70.0	°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	3.0 to 6.0	kN/cm ²	
NOTE			
1.	5.0 mm/min		
2.	5.0 mm/min		
3.	1.3 mm/min		
4.	1.3 mm/min		
5.	Loading 1 (10 N)		

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