

ASTALENE™ PBT MDA271

Polybutylene Terephthalate

Marplex Australia Pty. Ltd.

Message:

ASTALENE MDA271 is a 35% mineral filled polybutylene terephthalate polymer. It has excellent processability, high rigidity and a high specific gravity. It has been specifically designed for plumbing applications. ASTALENE MDA271 is a development grade. The typical properties are based on limited experimental data, and are subject to change as more data becomes available.

General Information			
Filler / Reinforcement	Mineral filler, 35% filler by weight		
Features	Rigidity, high		
	High density		
	Workability, good		
Uses	Pipe components		
Appearance	Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.76	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (250°C/2.16 kg)	22	g/10 min	ASTM D1238
Molding Shrinkage - Flow ¹ (3.00 mm)	1.4	%	ASTM D955
Water Absorption (24 hr)	0.080	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	112		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (3.20 mm)	54.0	MPa	ASTM D638
Tensile Elongation ³ (Break, 3.20 mm)	2.0	%	ASTM D638
Flexural Modulus ⁴ (3.20 mm)	3500	MPa	ASTM D790
Flexural Strength ⁵ (3.20 mm)	83.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.20 mm)	35	J/m	ASTM D256
Dart Drop Impact (3.20 mm)	4.00	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 3.20mm	170	°C	ASTM D648
0.45 MPa, unannealed, 12.7mm	185	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	78.0	°C	ASTM D648
1.8 MPa, unannealed, 12.7mm	80.0	°C	ASTM D648
Vicat Softening Temperature	200	°C	ASTM D1525 ⁶

CLTE - Flow	7.0E-5	cm/cm/°C	ASTM D696
Flammability	Nominal Value		Test Method
Flame Rating (1.60 mm)	HB		UL 94
Additional Information			
Glow Wire Temperature, AS 2420, 1.6 mm: 550°CVicat Softening Temperature, ASTM D1525, 1 kg: >200°C			
Injection	Nominal Value	Unit	
Drying Temperature	120 - 130	°C	
Drying Time	4.0 - 6.0	hr	
Rear Temperature	230 - 240	°C	
Middle Temperature	240 - 250	°C	
Front Temperature	250 - 260	°C	
Processing (Melt) Temp	250 - 270	°C	
Mold Temperature	60.0	°C	
Injection Pressure	60.0 - 140	MPa	
Injection Rate	Fast		
Back Pressure	0.300 - 1.00	MPa	
Clamp Tonnage	3.0 - 6.0	kN/cm²	
Injection instructions			
Nozzle Temperature: Do not exceed stock temperatureScrew Speed: Minimum			
NOTE			
1.	D2 type		
2.	5.0 mm/min		
3.	5.0 mm/min		
4.	1.3 mm/min		
5.	1.3 mm/min		
6.	压力1 (10N)		

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