

MAGNUM™ 342 EZ

ABS Resin

Trinseo

Message:

MAGNUM™ 342 EZ ABS resin is a medium impact, high flow, low gloss resin often used in automotive applications. Automotive MAGNUM ABS resins offer a wide range of gloss, viscosity, impact strength and heat properties for use in numerous automotive applications. Melt flow rates from 1 to 12 g/10 min, impact strengths from 2.5 to 12 ft-lb/in and heat distortion temperatures from 165°F to 190°F are available. Available primarily as natural plus concentrates, MAGNUM ABS resins are used in a wide variety of automotive applications including structural instrument panels, consoles, pillars, and exterior trim parts requiring painting and plating.

Applications:

Automotive door panels

Consoles

Interior trim

General Information			
Features	High Flow		
	High Impact Resistance		
	Low Gloss		
	Medium Impact Resistance		
Uses	Automotive Applications		
	Automotive Exterior Trim		
	Automotive Interior Trim		
	Structural Parts		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.04	g/cm ³	ASTM D792
--	1050	kg/m ³	ISO 1183 ¹
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	6.0	g/10 min	ASTM D1238
Melt volume-flow rate (220°C/10.0 kg)	22.0	cm ³ /10min	ISO 1133 ²
Molding Shrinkage - Flow	0.40 to 0.70	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
3.20 mm, Injection Molded ³	1790	MPa	ASTM D638
--	1800	MPa	ISO 527-2 ⁴
Tensile Strength			
Yield, 3.20 mm, Injection Molded	41.4	MPa	ASTM D638
Yield	37.0	MPa	ISO 527-2 ⁵
Tensile Elongation			
Yield, 3.20 mm, Injection Molded	3.0	%	ASTM D638

Yield	2.3	%	ISO 527-2 ⁶
Nominal strain at break	> 50	%	ISO 527-2 ⁷
Flexural Modulus ⁸ (3.20 mm, Injection Molded)	2000	MPa	ASTM D790
Flexural Strength ⁹ (3.20 mm, Injection Molded)	58.6	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy notched impact strength			ISO 179/1eA ¹⁰
-30°C	8.00	kJ/m ²	
23°C	16.0	kJ/m ²	
Charpy impact strength			ISO 179/1eU ¹¹
-30°C	No Break		
23°C	No Break		
Notched Izod Impact			ASTM D256
-18°C, 3.20 mm, Injection Molded	80	J/m	
23°C, 3.20 mm, Injection Molded	160	J/m	
Instrumented Dart Impact			ASTM D3763
23°C, 3.20 mm, Injection Molded, Peak Energy	32.8	J	
23°C, 3.20 mm, Injection Molded, Total Energy	42.9	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed	90.6	°C	ASTM D648
0.45 MPa	89.0	°C	ISO 75-2 ¹²
1.8 MPa, Unannealed	76.7	°C	ASTM D648
1.8 MPa	80.0	°C	ISO 75-2 ¹³
Vicat Softening Temperature			
--	104	°C	ASTM D1525 ¹⁴
50°C/h, B (50N)	94.0	°C	ISO 306 ¹⁵
CLTE - Flow	7.8E-5	cm/cm/°C	ISO 11359-2 ¹⁶
Injection	Nominal Value	Unit	
Drying Temperature	82.2 to 85.0	°C	
Drying Time	2.0 to 4.0	hr	
Suggested Max Moisture	0.10	%	
Processing (Melt) Temp	232 to 246	°C	
Mold Temperature	26.7 to 48.9	°C	
Back Pressure	0.345 to 0.689	MPa	
Clamp Tonnage	2.8 to 4.1	kN/cm ²	
Screw L/D Ratio	20.0:1.0		
Screw Compression Ratio	1.5:1.0 to 3.5:1.0		
NOTE			

1.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
2.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
3.	1.0 mm/min
4.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
5.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
6.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
7.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
8.	Method I (3 point load), 2.0 mm/min
9.	Method I (3 point load), 2.0 mm/min
10.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
11.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
12.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
13.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
14.	Rate B (120°C/h), Loading 1 (10 N)
15.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
16.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

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