



MAGNUM™ 342 EZ

Trinseo - ABS Resin

Sunday, November 3, 2019

General Information

Product Description

Overview:

MAGNUM™ 342EZ is a standard heat ABS. It is a reliable and cost effective solution for general covered interior automotive applications. MAGNUM™ 342EZ has high flow characteristics supporting part design freedom.

Benefits:

- Lot to lot consistency allowing for optimal machine parameters settings from the start
- Low VOC allowing a better interior air quality facing increasing regulatory and OEMs constraints.
- Heat stability during wide range of processing temperatures: enhanced part design freedom

Applications:

- General purpose covered interior automotive applications
- Mid-consoles
- Door liners
- Seat trims

General

Material Status	• Commercial: Active
Availability	• Latin America • North America
Features	• High Flow • Low Gloss • High Impact Resistance • Medium Impact Resistance
Uses	• Automotive Applications • Automotive Interior Trim • Automotive Exterior Trim • Structural Parts
Automotive Specifications	• CHRYSLER MS-DB-200 Type A CPN3457 Color: 90% Color Match • CHRYSLER MS-DB-200 Type A CPN508 Color: 90% Color Match • FORD WSS-M4D483-C1 • FORD WSS-M4D827-A3 • GM GMW15572P-ABS-T1 • TOYOTA TSM 5512G-2A
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.04		ASTM D792
Density	0.0379	lb/in ³	ISO 1183 ²
Melt Mass-Flow Rate (230°C/3.8 kg)	6.0	g/10 min	ASTM D1238
Melt volume-flow rate (220°C/10.0 kg)	22	cm ³ /10min	ISO 1133 ²
Molding Shrinkage - Flow	4.0E-3 to 7.0E-3	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ³ (0.126 in, Injection Molded)	260000	psi	ASTM D638
Tensile modulus	261000	psi	ISO 527-2 ²
Tensile Strength (Yield, 0.126 in, Injection Molded)	6000	psi	ASTM D638
Tensile Stress (Yield)	5370	psi	ISO 527-2 ²
Tensile Elongation (Yield, 0.126 in, Injection Molded)	3.0	%	ASTM D638

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Mechanical	Nominal Value	Unit	Test Method
Tensile Strain (Yield)	2.3	%	ISO 527-2 ²
Nominal strain at break	> 50	%	ISO 527-2 ²
Flexural Modulus ⁴ (0.126 in, Injection Molded)	290000	psi	ASTM D790
Flexural Strength ⁴ (0.126 in, Injection Molded)	8500	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy notched impact strength (73°F)	7.61	ft·lb/in ²	ISO 179/1eA ²
Charpy notched impact strength (-22°F)	3.81	ft·lb/in ²	ISO 179/1eA ²
Charpy impact strength (73°F)	No Break		ISO 179/1eU ²
Charpy impact strength (-22°F)	No Break		ISO 179/1eU ²
Notched Izod Impact			ASTM D256
0°F, 0.126 in, Injection Molded	1.5	ft·lb/in	
73°F, 0.126 in, Injection Molded	3.0	ft·lb/in	
Instrumented Dart Impact			ASTM D3763
73°F, 0.126 in, Injection Molded, Peak Energy	290	in·lb	
73°F, 0.126 in, Injection Molded, Total Energy	380	in·lb	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	195	°F	ASTM D648
Deflection Temperature Under Load (66 psi)	192	°F	ISO 75-2 ²
Deflection Temperature Under Load 264 psi, Unannealed	170	°F	ASTM D648
Deflection Temperature Under Load (264 psi)	176	°F	ISO 75-2 ²
Vicat Softening Temperature	220	°F	ASTM D1525 ⁵
Vicat Softening Temperature (50°C/h, B (50N))	201	°F	ISO 306 ²
CLTE - Flow	4.3E-5	in/in/°F	ISO 11359-2 ²

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180 to 185	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.10	%
Processing (Melt) Temp	450 to 475	°F
Mold Temperature	80 to 120	°F
Back Pressure	50.0 to 100	psi
Clamp Tonnage	2.0 to 3.0	tons/in ²
Screw L/D Ratio	20.0:1.0	
Screw Compression Ratio	1.5:1.0 to 3.5:1.0	

Notes

¹ Typical properties: these are not to be construed as specifications.

² Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

³ 0.039 in/min

⁴ Method I (3 point load), 0.079 in/min

⁵ Rate B (120°C/h), Loading 1 (10 N)