



MAGNUM™ 275

Trinseo - ABS Resin

Sunday, November 3, 2019

General Information

Product Description

MAGNUM™ 275 ABS resin is a low gloss, low flow ABS resin with good impact. MAGNUM ABS resins are thermoplastic materials that provide an excellent balance of processability, impact resistance, and heat resistance as imparted by the various polymer compositions. MAGNUM ABS resins are available in a wide range of melt flow rates, impact strengths, and heat resistances for both high and low gloss applications manufactured by injection molding, sheet or profile extrusion, and thermoforming. MAGNUM ABS resins offer a wide range of processing abilities and impact resistance for low gloss injection molding applications. Combined with heat resistance, tensile and flexural strength, MAGNUM ABS resins are used in a wide variety of injection molding applications.

Applications

- Injection molding applications
- Extrusion and thermoforming applications

Complies with:

- U.S. FDA 21 CFR 181.32

Consult the regulations for complete details.

General

Material Status	• Commercial: Active
Availability	• North America
Features	• Good Impact Resistance • High Heat Resistance • Low Gloss • Good Processability • Low Flow
Agency Ratings	• FDA 21 CFR 181.32
Forms	• Pellets
Processing Method	• Extrusion • Injection Molding • Thermoforming

ASTM & ISO Properties ¹

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)	2.6	g/10 min	ASTM D1238
Melt volume-flow rate (220°C/10.0 kg)	9.00	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	265000	psi	ASTM D638
Tensile modulus	290000	psi	ISO 527-2 ²
Tensile Strength ⁴ (Yield)	5400	psi	ASTM D638
Tensile Stress (Yield)	6380	psi	ISO 527-2 ²
Tensile Strength ⁴ (Break)	5000	psi	ASTM D638
Tensile Elongation ⁴ (Yield)	3.0	%	ASTM D638
Tensile Strain (Yield)	2.6	%	ISO 527-2 ²
Tensile Elongation ⁴ (Break)	100	%	ASTM D638
Nominal strain at break	30	%	ISO 527-2 ²
Flexural Modulus ⁵	295000	psi	ASTM D790
Flexural Strength ⁵	9200	psi	ASTM D790

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Impact	Nominal Value	Unit	Test Method
Charpy notched impact strength (73°F)	10.5	ft-lb/in ²	ISO 179/1eA ²
Charpy notched impact strength (-22°F)	4.28	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 ⁶			ASTM D256
0°F, 0.126 in	2.5	ft-lb/in	
73°F, 0.126 in	5.0	ft-lb/in	
Instrumented Dart Impact			ASTM D3763
0°F, Peak Energy	290	in-lb	
0°F, 0.126 in, Total Energy ⁷	330	in-lb	
73°F, Peak Energy	290	in-lb	
73°F, 0.126 in, Total Energy ⁷	410	in-lb	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi, Unannealed, 0.126 in	200	°F	
Deflection Temperature Under Load (66 psi)	203	°F	ISO 75-2 ²
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.126 in	175	°F	
Deflection Temperature Under Load (264 psi)	185	°F	ISO 75-2 ²
Vicat Softening Temperature	225	°F	ASTM D1525
Vicat Softening Temperature (50°C/h, B (50N))	210	°F	ISO 306 ²
CLTE - Flow	4.4E-5	in/in/°F	ISO 11359-2 ²
Flammability	Nominal Value	Unit	Test Method
Flame Rating ⁸ (0.06 in)	HB		UL 94
Burning Behav. at 1.6mm nom. thickn. (0.06 in, UL)	HB		ISO 1210 ²

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 39 in/min

⁴ Type I, 2.0 in/min

⁵ Type I, 79 in/min

⁶ 10 mil Notch Depth

⁷ 11.1 ft/sec

⁸ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.