TRINSEO™

MAGNUM™ 555
ABS Resin

Overview

MAGNUM™ 555 ABS resin is low gloss, low flow ABS resin that has a sheet Izod impact strength of 8.0 ft-lb/in. 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. The sheet and thermoforming grades of MAGNUM ABS resins provide excellent high and low gloss aesthetics, good thermal color stability, heat and impact resistance, and stiffness. MAGNUM ABS resins can fill a variety of needs by offering ranges in melt flow rates from 1.0 to 4.0, sheet Izod impacts from 2.5 to 10.5 ft-lb/in and sheet flexural modulus from 285,000 to 300,000 psi.

Applications

- Burial vault liners
- Tool cases
- Recreational vehicles
- Luggage
- Signs

Complies with:

- U.S. FDA 21 CFR 181.32

Consult the regulations for complete details.

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.04	g/cm³	1.04	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	2.4	g/10 min	2.4	g/10 min	ASTM D1238
Molding Shrinkage - Flow	4.0E-3 to 7.0E-3	in/in	0.40 to 0.70	%	ASTM D955
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus [1]	340000	psi	2340	MPa	ASTM D638
Tensile Strength [1]					ASTM D638
Yield	6300	psi	43.4	MPa	
Break	5100	psi	35.2	MPa	
Flexural Modulus [2]	370000	psi	2550	MPa	ASTM D790
Flexural Strength [2]	11300	psi	77.9	MPa	ASTM D790
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Notched Izod Impact [3]					ASTM D256
0°F (-18°C), 0.126 in (3.20 mm)	2.7	ft·lb/in	140	J/m	
73°F (23°C), 0.126 in (3.20 mm)	8.0	ft·lb/in	430	J/m	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Vicat Softening Temperature	227	°F	108	°C	ASTM D1525
Electrical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Dielectric Constant (100 Hz)	2.79		2.79		ASTM D150
Dissipation Factor (100 Hz)	4.0E-3		4.0E-3		ASTM D150
Flammability	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Flame Rating [4] (0.06 in (1.5 mm))	HB		HB		UL 94
Optical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Gardner Gloss (60°)	85		85		ASTM D523

Injection	Nominal Value	(English)	Nominal Value	(SI)
Drying Temperature	180 to 190	°F	82 to 88	°C

Injection	Nominal Value	(English)	Nominal Value	(SI)
Drying Time	2.0 to 4.0	hr	2.0 to 4.0	hr
Suggested Max Moisture	0.10	%	0.10	%
Processing (Melt) Temp	425 to 525	°F	218 to 274	°C
Mold Temperature	80 to 140	°F	27 to 60	°C
Back Pressure	50.0 to 500	psi	0.345 to 3.45	MPa
Clamp Tonnage	2.0 to 5.0	tons/in²	2.8 to 6.9	kN/cm²
Screw L/D Ratio	20.0:1.0		20.0:1.0	
Screw Compression Ratio	1.5:1.0 to 3.5:1.0		1.5:1.0 to 3.5:1.0	

Injection Notes

Some applications such as plating may require moisture levels as low as 0.05%.

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