MAGNUM™ 8391 MED
ABS Resin

Overview

MAGNUM™ 8391 MED ABS combines an excellent glossy appearance with high flow and medium impact performance. The mass (continuous process) ABS technology ensures an ABS resin that combines excellent processability with a stable light base color that is ideal for self-coloring. MAGNUM 8391 MED natural resin has undergone biocompatibility testing based on ISO 10993 (Biological Evaluation of Medical Devices) and is suitable for use in approved medical applications.

Applications:
- Medical Applications

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.05	g/cm³	1.05	g/cm³	ASTM D792 ISO 1183/B
Apparent (Bulk) Density	0.65	g/cm³	0.65	g/cm³	ISO 60
Melt Mass-Flow Rate (MFR)					
220°C/10.0 kg	28	g/10 min	28	g/10 min	ASTM D1238 ISO 1133
230°C/3.8 kg	8.0	g/10 min	8.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	4.0E-3 to 7.0E-3	in/in	0.40 to 0.70	%	ASTM D955 ISO 294-4
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus					ISO 527-2
0.126 in (3.20 mm), Injection Molded	339000	psi	2340	MPa	
Tensile Strength					
Yield [1]	6960	psi	48.0	MPa	ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	6530	psi	45.0	MPa	ISO 527-2/50
Yield, 0.126 in (3.20 mm), Injection Molded	6820	psi	47.0	MPa	ISO 527-2/100
Break [1]	5080	psi	35.0	MPa	ASTM D638
Tensile Elongation					
Yield [1]	2.7	%	2.7	%	ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	2.5	%	2.5	%	ISO 527-2/50
Yield, 0.126 in (3.20 mm), Injection Molded	2.6	%	2.6	%	ISO 527-2/100
Break [1]	8.7	%	8.7	%	ASTM D638
Flexural Modulus					
-- [2]	360000	psi	2480	MPa	ASTM D790
0.126 in (3.20 mm), Injection Molded [3, 4]	348000	psi	2400	MPa	ISO 178
Flexural Strength					
-- [2]	10900	psi	75.0	MPa	ASTM D790
0.126 in (3.20 mm), Injection Molded [3, 4]	10200	psi	70.0	MPa	ISO 178
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Charpy Notched Impact Strength					ISO 179/1eA
-22°F (-30°C), Injection Molded	4.3	ft·lb/in²	9.0	kJ/m²	
73°F (23°C), Injection Molded	9.0	ft·lb/in²	19	kJ/m²	
Notched Izod Impact					
73°F (23°C)	4.4	ft·lb/in	230	J/m	ASTM D256
-22°F (-30°C), Injection Molded	4.3	ft·lb/in²	9.0	kJ/m²	ISO 180/A
73°F (23°C), Injection Molded	9.0	ft·lb/in²	19	kJ/m²	ISO 180/A

Hardness	Nominal Value (English)		Nominal Value (SI)		Test Method
Rockwell Hardness (R-Scale)	108		108		ASTM D785
Thermal	**Nominal Value (English)**		**Nominal Value (SI)**		**Test Method**
Deflection Temperature Under Load					
66 psi (0.45 MPa), Unannealed	189	°F	87.0	°C	ASTM D648
264 psi (1.8 MPa), Unannealed	165	°F	74.0	°C	ASTM D648
264 psi (1.8 MPa), Annealed	203	°F	95.0	°C	ISO 75-2/A
Vicat Softening Temperature					
--	210	°F	99.0	°C	ASTM D1525 [5]
--	203	°F	95.0	°C	ISO 306/B50
Flammability	**Nominal Value (English)**		**Nominal Value (SI)**		**Test Method**
Burning Rate [6] (0.0787 in (2.00 mm))	2.4	in/min	60	mm/min	ISO 3795
Flame Rating [6]					UL 94
0.06 in (1.5 mm)	HB		HB		
0.12 in (3.0 mm)	HB		HB		

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

[1] 2.0 in/min (50 mm/min)

[2] 0.051 in/min (1.3 mm/min)

[3] 0.079 in/min (2.0 mm/min)

[4] 3-points

[5] Rate B (120°C/h), Loading 1 (10 N)

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

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