



MAGNUM 559 UM

ABS Resin

Overview

MAGNUM™ 559 UM ABS Resin is optimally designed for ultra-low gloss or matte surface extruded sheet applications. It is designed to maintain excellent, low gloss aesthetics after thermoforming.

Applications

Sheet extrusion in applications requiring very low surface gloss. This product can be injection molded as well.

Physical Properties ⁽¹⁾	Test Method	English Units	SI Units
Specific Gravity	ASTM D 792	1.05	1.05
Melt Flow Rate , 230°C/3.8kg	ASTM D 1238	2.5 g/10 min	2.5 g/10 min
Mechanical Properties ⁽²⁾			
Tensile Strength at Yield	ASTM D 638	3100 psi	21.5 MPa
Ultimate Elongation	ASTM D 638	45 %	45 %
Flexural Strength, 3-points, 2 mm/min	ASTM D 790	5900 psi	41 MPa
Flexural Modulus, 3-points, 2 mm/min	ASTM D 790	250,000 psi	1725 MPa
Notched Izod Impact	ASTM D 256		
73°F (23°C)		1.9 ft-lb/in	101 J/m
0°F (-18°C)		1.7 ft-lb/in	91 J/m
-20°F		1.7 ft-lb/in	91 J/m
-40°F		1.5 ft-lb/in	80 J/m
Instrumented Dart Impact	ASTM D 5628		
73°F (23°C)		115 in-lbs.	13 J
0°F		65 in-lbs.	7 J
-20°F		60 in-lbs.	6.6 J
-40°F		50 in-lbs.	5.5 J
Instrumented Impact Strength	ASTM D3763		
Yield Energy			
73°F		105 in-lbs.	11.5 J
-40°F		85 in-lbs.	9.3 J
Total Energy			
73°F		130 in-lbs.	14.3 J
-40°F		120 in-lbs.	13.2 J
Rockwell Hardness, R-scale	ASTM D 785	89	89
Tensile Modulus, 1 mm/min	ASTM D 638	215,000 psi	1480 MPa
Tensile Strength at Break	ASTM D 638	3700 psi	25.5 MPa
Tensile Elongation at Yield	ASTM D 638	2.0 %	2.0 %
Thermal Properties			
Deflection Temperature Under Load	ASTM D 648		
66 psi (0.45 MPa), annealed		223°F	106 °C
66 psi (0.45 MPa), unannealed		207°F	97 °C
264 psi (1.8 MPa), annealed		218°F	103 °C
264 psi (1.8 MPa), unannealed		189°F	87 °C
Vicat Softening Point	ASTM D 1525	227°F	108 °C
Optical Properties			
Gardner Gloss, 60°	ASTM D 523	<= 10 %	<= 10 %
Yellowness Index	ASTM D1925	2.3	2.3

