

## MAGNUM™ 3904 Ultra Smooth ABS Resin

### Overview

MAGNUM™ 3904 Ultra Smooth is a high impact ABS resin for extrusion / thermoforming. This grade, is Trinseo's lowest particulate (gels) content ABS grade, and is specially recommended for the most demanding surface finish applications.

Applications:

- Automotive Interior
- Furniture

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.05 g/cm <sup>3</sup>	1.05 g/cm <sup>3</sup>	ISO 1183/B
Apparent (Bulk) Density	0.65 g/cm <sup>3</sup>	0.65 g/cm <sup>3</sup>	ISO 60
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	4.7 g/10 min	4.7 g/10 min	ISO 1133
Molding Shrinkage - Flow	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			ISO 527-2
0.157 in (4.00 mm), Injection Molded	264000 psi	1820 MPa	
Tensile Stress			ISO 527-2/50
Yield, 0.157 in (4.00 mm), Injection Molded	5370 psi	37.0 MPa	
Tensile Strain			ISO 527-2/50
Yield, 0.157 in (4.00 mm), Injection Molded	2.6 %	2.6 %	
Flexural Modulus <sup>1, 2</sup>			ISO 178
0.157 in (4.00 mm), Injection Molded	276000 psi	1900 MPa	
Flexural Stress <sup>1, 2</sup>			ISO 178
0.157 in (4.00 mm), Injection Molded	8410 psi	58.0 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C), Injection Molded	8.6 ft-lb/in <sup>2</sup>	18 kJ/m <sup>2</sup>	
73°F (23°C), Injection Molded	16 ft-lb/in <sup>2</sup>	34 kJ/m <sup>2</sup>	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			ISO 75-2/A
264 psi (1.8 MPa), Annealed	207 °F	97.0 °C	
Vicat Softening Temperature	207 °F	97.0 °C	ISO 306/B50
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Burning Rate <sup>3</sup> (0.0787 in (2.00 mm))	1.6 in/min	40 mm/min	ISO 3795
Flame Rating <sup>3</sup>			UL 94
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	