TRINSEO™

MAGNUM™ A440
ABS Resin

Overview

MAGNUM™ A440 is a general purpose ABS resins with outstanding processability. It has medium impact and heat performance, and is designed for extrusion thermoforming applications. Its stable light base color makes it an ideal candidate for self-coloring process.

- Applications:
  - Medium impact mono-layer sheets
  - Co-extruded sheets

- Complies with:
  - U.S. FDA 21 CFR 181.32(a)(3)(i)
  - Consult the regulation for complete details

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.05	g/cm³	1.05	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	6.5	g/10 min	6.5	g/10 min	ISO 1133
Molding Shrinkage	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 Strength					
Yield [1]	5950	psi	41.0	MPa	ASTM D638
Yield	5950	psi	41.0	MPa	ISO 527-2/50
Break [1]	4640	psi	32.0	MPa	ASTM D638
Break	4500	psi	31.0	MPa	ISO 527-2/50
Tensile Elongation					
Break [1]	30	%	30	%	ASTM D638
Break	30	%	30	%	ISO 527-2/50
Flexural Modulus [2]	305000	psi	2100	MPa	ASTM D790
Flexural Strength [2]	10200	psi	70.0	MPa	ASTM D790
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Charpy Notched Impact Strength (73°F (23°C))	8.0	ft·lb/in²	17	kJ/m²	ISO 179/1eA
Notched Izod Impact (73°F (23°C))	4.3	ft·lb/in	230	J/m	ASTM D256
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					ASTM D648
264 psi (1.8 MPa), Annealed	205	°F	96.0	°C	
Vicat Softening Temperature	216	°F	102	°C	ISO 306/B50
Flammability	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Flame Rating [3]					UL 94
0.06 in (1.5 mm)	HB		HB		
0.12 in (3.0 mm)	HB		HB		

Additional Information

Mass balance versions (bio-based (BIO) or chemically recycled (CR)) of this product are chemically and physically indistinguishable to the standard fossil grade. This technical data sheet applies to all versions. Letters of sameness are available upon request.

Injection	Nominal Value	(English)	Nominal Value	(SI)
Drying Temperature	176 to 194	°F	80 to 90	°C
Drying Time	2.0 to 4.0	hr	2.0 to 4.0	hr