

Ineos ABS Lustran® 433 ABS, General-Purpose Injection Molding Grade

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Molded

Material Notes:

Lustran® ABS 433 is a general-purpose injection molding grade of ABS (Acrylonitrile Butadiene Styrene). It is a high-impact, high-gloss ABS, available only in natural (000000) and black (904000). In its natural color (000000), Lustran® ABS 433 meets FDA requirements for food contact. Typical applications include housings, toys, small appliances, and consumer goods.

Order this product through the following link:

http://www.lookpolymers.com/polymer_ineos-ABS-Lustran-433-ABS-General-Purpose-Injection-Molding-Grade.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.05 g/cc	1.05 g/cc	ASTM-D792
Linear Mold Shrinkage	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	ASTM-D955
Melt Flow	5.0 g/10 min	5.0 g/10 min	Rate; ASTM-D1238
	@Load 3.80 kg, Temperature 230 Å°C	@Load 8.38 lb, Temperature 446 Å°F	
	12 g/10 min	12 g/10 min	Index; ASTM-D1238
	@Load 10.0 kg, Temperature 220 Å°C	@Load 22.0 lb, Temperature 428 Å°F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	109	109	ASTM-D785
Tensile Strength, Yield	42.0 MPa	6090 psi	ASTM-D638
Elongation at Break	>= 30 %	>= 30 %	ASTM-D638
Tensile Modulus	2.55 GPa	370 ksi	ASTM-D638
Flexural Yield Strength	72.0 MPa	10400 psi	ASTM-D790
Flexural Modulus	2.60 GPa	377 ksi	ASTM-D790
Izod Impact, Notched	0.640 J/cm	1.20 ft-lb/in	ASTM-D256
	@Thickness 3.20 mm, Temperature -40.0 Å°C	@Thickness 0.126 in, Temperature -40.0 Å°F	
	2.08 J/cm	3.90 ft-lb/in	ASTM-D256
	@Thickness 12.7 mm, Temperature 23.0 Å°C	@Thickness 0.500 in, Temperature 73.4 Å°F	
	3.75 J/cm	7.03 ft-lb/in	ASTM-D256
	@Thickness 3.20 mm, Temperature 23.0 Å°C	@Thickness 0.126 in, Temperature 73.4 Å°F	

Thermal Properties	Metric	English	Comments
CTE, linear	90.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	50.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM-D696
Deflection Temperature at 0.46 MPa (66 psi)	92.0 $\text{Å}^\circ\text{C}$	198 $\text{Å}^\circ\text{F}$	Unannealed; ASTM-D648
	@Thickness 12.7 mm	@Thickness 0.500 in	
	99.0 $\text{Å}^\circ\text{C}$	210 $\text{Å}^\circ\text{F}$	Annealed; ASTM-D648
	@Thickness 12.7 mm	@Thickness 0.500 in	
Deflection Temperature at 1.8 MPa (264 psi)	85.0 $\text{Å}^\circ\text{C}$	185 $\text{Å}^\circ\text{F}$	Unannealed; ASTM-D648
	@Thickness 12.7 mm	@Thickness 0.500 in	
	94.0 $\text{Å}^\circ\text{C}$	201 $\text{Å}^\circ\text{F}$	Annealed; ASTM-D648
	@Thickness 12.7 mm	@Thickness 0.500 in	
	102 $\text{Å}^\circ\text{C}$	216 $\text{Å}^\circ\text{F}$	Annealed, Compression Molded; ASTM-D648
	@Thickness 12.7 mm	@Thickness 0.500 in	
Vicat Softening Point	106 $\text{Å}^\circ\text{C}$	223 $\text{Å}^\circ\text{F}$	Rate B; ASTM-D1525
Flammability, UL94	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	235 - 249 $\text{Å}^\circ\text{C}$	455 - 480 $\text{Å}^\circ\text{F}$	Injection Molding
Middle Barrel Temperature	241 - 254 $\text{Å}^\circ\text{C}$	466 - 489 $\text{Å}^\circ\text{F}$	Injection Molding
Front Barrel Temperature	246 - 260 $\text{Å}^\circ\text{C}$	475 - 500 $\text{Å}^\circ\text{F}$	Injection Molding
Nozzle Temperature	246 - 260 $\text{Å}^\circ\text{C}$	475 - 500 $\text{Å}^\circ\text{F}$	Injection Molding
Melt Temperature	246 - 274 $\text{Å}^\circ\text{C}$	475 - 525 $\text{Å}^\circ\text{F}$	Injection Molding
Mold Temperature	43.0 - 66.0 $\text{Å}^\circ\text{C}$	109 - 151 $\text{Å}^\circ\text{F}$	Injection Molding
Drying Temperature	71.0 - 77.0 $\text{Å}^\circ\text{C}$	160 - 171 $\text{Å}^\circ\text{F}$	
	@Time 14400 sec	@Time 4.00 hour	
	82.0 - 88.0 $\text{Å}^\circ\text{C}$	180 - 190 $\text{Å}^\circ\text{F}$	
	@Time 7200 sec	@Time 2.00 hour	
Moisture Content	$\leq 0.10\%$	$\leq 0.10\%$	

Dew Point Processing Properties	$\leq -29.0 \text{ }^\circ\text{C}$ Metric	$\leq -20.2 \text{ }^\circ\text{F}$ English	Inlet air Comments
Injection Pressure	68.9 - 110 MPa	10000 - 16000 psi	Injection Molding
Back Pressure	0.000 - 0.172 MPa	0.000 - 25.0 psi	Injection Molding
Clamp Pressure	30.8 - 61.6 MPa	4470 - 8930 psi	Injection Molding
Cushion	$\leq 0.635 \text{ cm}$	$\leq 0.250 \text{ in}$	Injection Molding

Descriptive Properties	Value	Comments
Hold Pressure	50-75% of Injection Pressure, Injection Molding	
Injection Speed	High	Injection Molding
Screw Compression Ratio	2.5:1	Injection Molding
Screw Length-to-Diameter Ratio	$\geq 20:1$	Injection Molding
Screw Speed	Moderate, Injection Molding	
Shot Weight-to-Machine Capacity Ratio	0.5-0.75	Injection Molding

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