INEOS STYROLUTION

Lustran 448

Acrylonitrile Butadiene Styrene (ABS)

TECHNICAL DATASHEET

DESCRIPTION

Lustran® 448 resin is a high-gloss, high-impact injection molding grade of ABS (acrylonitrile butadiene styrene). In addition to a good balance of physical properties, it provides heat stability and very good moldability.

FEATURES

- High impact strength
- High gloss
- Good balance of physical properties
- UL 94 HB rated
- Listed under NSF 51

APPLICATIONS

- Home appliances for floor care housings
- Vacuum cleaner housings
- Kitchen electrical appliance housings
- Lawn and garden equipment
- Power tool housings

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Flow Rate, 230 °C/3.8 kg	ASTM D 1238	g/10 min	4.5
Melt Flow Rate, 220 °C/10 kg	ASTM D 1238	g/10 min	12
Mechanical Properties			
Izod Notched Impact Strength, 23 °C (73 °F)	ASTM D 256	ft-lb/in	6.2
Izod Notched Impact Strength, -40 °C (-40 °F)	ASTM D 256	ft-lb/in	1.2
Tensile Stress at Yield, 23 °C	ASTM D 638	psi	6100
Tensile Modulus	ASTM D 638	psi x 10^3	370
Flexural Modulus, 23 °C	ASTM D 790	psi x 10^3	380
Flexural Stress at 5% Deflection	ASTM D 790	psi	10500
Hardness, Rockwell	ASTM D 785	R scale	109
Thermal Properties			
DTUL @ 264 psi - Unannealed	ASTM D 648	°F	178
Coefficient of Linear Thermal Expansion	ASTM D 696	10^{-4}/°F	0.5
Other Properties			
Density	ASTM D 792	lb/in^3	1.05
Processing			

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Property, Test Condition	Standard	Unit	Values
Linear Mold Shrinkage	ASTM D 955	in/in	0 - 0.01
Drying Temperature	-	°F	175
Drying Time	-	h	2 - 4

Typical values for uncolored products

SUPPLY FORM

Lustran® ABS (Acrylonitrile Butadiene Styrene) resins are available in bulk railcar, bulk truckload and 726kg box quantities.

REGULATORY COMPLIANCE

Please refer to Styrolution web site or contact Styrolution Technical Service for further information.

PROCESSING

A reciprocating screw injection molding machine is preferred. A general-purpose screw with a 2.5:1 compression ratio is suggested. A minimum L/D ratio of 20:1 will ensure melt homogeneity. For best part quality, use the lower range of the recommended melt temperature with minimum barrel residence time. To avoid excessive residence time in the barrel, volume and weight of the shot should be balanced against barrel capacity and injection stroke. A shot weight-to-machine capacity ratio of 0.5-0.75 is recommended. A mold temperature of 110°-150°F (45°-65°C) is recommended for development of maximum gloss and strength, with the hotter end of this range preferred.

PRODUCT SAFETY

Safety Data Sheets and product labels provide information concerning the health and safety precautions that must be observed when handling the Styrolution products mentioned in this publication. No adverse effects on the health of processing personnel have been observed if the products are correctly processed and the production areas are suitably ventilated. For styrene, acrylonitrile, alpha-methyl styrene, maleic anhydride and 1, 3-butadiene, the maximum allowable workplace concentrations must be observed according to current local and federal regulations. Before working with any of these products, you must read and become familiar with the available information on their hazards, proper use, and handling. This cannot be overemphasized. This information is available in safety data sheets and on product labels. If there are questions or concerns, consult your Styrolution representative or contact the Product Safety and Regulatory Affairs Department at Styrolution.

DISCLAIMER

The aforementioned data shall constitute the agreed contractual quality of the product sold by INEOS Styrolution at the time of passing of risk. INEOS Styrolution does not make any further warranty, representation or guarantee of any kind, express or implied, regarding the suitability of the product for any particular purpose or application and INEOS Styrolution disclaims all liability in connection therewith. The customer himself is required to verify whether or not the product is suitable for the further processing or application intended and whether or not the product complies with the relevant statutory requirements. Unless explicitly and individually otherwise agreed in writing, INEOS Styrolution's sole and exclusive liability with respect to its products is set forth in INEOS Styrolution's General Terms and Conditions for Sale.

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