

LUSTRAN ELITE 1891

Acrylonitrile Butadiene Styrene (ABS)

TECHNICAL
DATASHEET

DESCRIPTION

Lustran® Elite 1891 resin is an injection molding grade of ABS (acrylonitrile butadiene styrene) for high-heat applications in the automotive market. It provides high heat resistance, low gloss, toughness, and easy flow for processing molded-in color parts.

FEATURES

- SAE J1685: ABS0111
- High heat resistance
- Low gloss
- Easy flow
- UL 94 HB rated

APPLICATIONS

- AB pillars
- Door panels
- Console and console trim
- Lamp housings

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Flow Rate, 220 °C/10 kg	ISO 1133	g/10 min	8
Melt Flow Rate, 230 °C/3.8 kg	ISO 1133	g/10 min	2
Mechanical Properties			
Tensile Modulus (MD)	ISO 527	MPa	2300
Tensile Stress at Yield, 23 °C	ISO 527	MPa	45
Tensile Strain at Yield, 23 °C	ISO 527	%	2.5
Nominal Strain at Break, 23 °C	ISO 527	%	25
Flexural Strength, 23 °C	ISO 178	MPa	70
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	17
Charpy Notched Impact Strength, -30 °C	ISO 179/1eA	kJ/m²	9
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	105
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	102
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	106
Coefficient of Linear Thermal Expansion	ISO 11359	10 ⁻⁶ /°C	80 - 110
Thermal Conductivity	DIN 52612-1	W/(m K)	0.17

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Property, Test Condition	Standard	Unit	Values
Other Properties			
Water Absorption, Saturated at 23 °C	ISO 62	%	1
Moisture Absorption	ASTM D570	%	0.22
Density (ASTM)	ASTM D 792	g/cm ³	1.05
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.4 - 0.7
Melt Temperature Range	ISO 294	°C	250 - 270
Mold Temperature Range	ISO 294	°C	50 - 70
Rear Temperature Range	-	°C	240 - 255
Middle Temperature Range	-	°C	245 - 260
Front Temperature Range	-	°C	250 - 265
Drying Temperature	-	°C	80
Drying Time	-	h	4

Typical values for uncolored products

Please note that all processing data stated are only indicative and may vary depending on the individual processing complexities.

Please consult our local sales or technical representatives for details.

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.

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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 above mentioned data are accurate to the best of our knowledge. They are based upon reputable labs and industry standard testing methods. These are only typical values and actual product specification may deviate at industrial range. Therefore, no data in this technical data sheet shall constitute a warranty or representation regarding product features, fitness of the product for a specific purpose or application or its processability. 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.