

Luran S 778T

Acrylonitrile Styrene Acrylate (ASA)

TECHNICAL DATASHEET

DESCRIPTION

Luran® S acrylonitrile styrene acrylate (ASA) polymers feature high surface quality and good impact strength including enhanced colour fastness. The products deliver superior long-term performance when exposed to UV irradiation and additionally provide excellent chemical resistance. Luran® S 778T is an injection molding grade with enhanced heat resistance and best chemical resistance among the Luran S grades.

FEATURES

- Chemical resistance
- Heat resistance
- Long-term property retention
- UV resistance

APPLICATIONS

- Unpainted automotive exterior: radiator grills
- Truck: exterior body panels
- Bicycle/ E-bicycle parts
- Toys, sports & leisure

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm ³ /10 min	5
Mechanical Properties			
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m ²	15
Charpy Notched Impact Strength, -30 °C	ISO 179/1eA	kJ/m ²	4
Tensile Modulus	ISO 527	MPa	2500
Tensile Stress at Yield, 23 °C	ISO 527	MPa	54
Tensile Strain at Yield, 23 °C	ISO 527	%	3.4
Nominal Strain at Break, 23 °C	ISO 527	%	8
Flexural Modulus	-	-	2450
Tensile Creep Modulus (1000h)	ISO 899	MPa	1250
Flexural Strength, 23 °C	ISO 178	MPa	80
Hardness, Ball Indentation	ISO 2039-1	MPa	85
Izod Notched Impact Strength, -40 °C (-40 °F)	ASTM D 256	kJ/m ²	0.7
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	104

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Property, Test Condition	Standard	Unit	Values
Vicat Softening Temperature, VST/A/50 (10N, 50 °C/h)	ISO 306	°C	113
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	103
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	ISO 22007-4	W/(m K)	0.17
Other Properties			
Density	ISO 1183	kg/m ³	1070
UL94 rating at 1.5 mm thickness	IEC 60695-11-10	-	HB
Burning rate (US-FMVSS), 2.0 mm	ISO 3795	mm/min	30
Water Absorption, Saturated at 23 °C	ISO 62	%	1.65
Moisture Absorption, Equilibrium 23 °C/50% RH	ISO 62	%	0.35
Processing			
Melt Temperature Range	ISO 294	°C	240 - 280
Mold Temperature Range	ISO 294	°C	40 - 80
Drying Temperature	-	°C	80
Drying Time	-	h	2 - 4
Molding shrinkage, free, longitudinal	-	%	0.4 - 0.7
Linear Mold Shrinkage	ISO 294-4	%	0.4 - 0.7

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

Luran® S is delivered in the form of cylindrical or spherical pellets. The bulk density of the pellets is from 0.55 to 0.65 g/cm³. Values may differ for special grades. Standard Packaging unit: 25 kg PE-bag on palette, shrunk or wrapped with PE film. In addition, delivery in larger units of up to 1000 kg (IBC = Intermediate Bulk Container) or silo trucks can be arranged. In dry areas with normal temperature control, Luran S pellets can be stored for relatively long periods of time without any change in mechanical properties. With unstable colors, however, storage over a number of years can give rise to some change in color. Under poor storage conditions, Luran S absorbs moisture, but this can be removed by drying.

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PRODUCT SAFETY

No adverse effects on the health of processing personnel have been observed where the products are correctly processed and the production areas are suitably ventilated. For styrene, alpha-methylstyrene, acrylonitrile, and butyl acrylate the maximum allowable workplace concentrations must be observed according to the pertaining national regulations. In Germany, the following limit values are valid TRGS 900 (Aug. 2004): styrene, MAK-value: 20 ml/m³; alpha-methylstyrene, MAK-value: 100 ml/m³; acrylonitrile, TRK-value: 3 ml/m³, and butyl acrylate, MAK-value: 2 ml/m³ (1.7.2004). According to EU directive 67/548/EEC, Annex I (2001), acrylonitrile is classified as carcinogenic, category 2 ('substances which should be regarded as if they are carcinogenic to man'). Experience has shown that when Luran® S is processed correctly with appropriate ventilation, the levels are far below the limits mentioned above. Inhalation of the vapors of degradation products which can arise on severe overheating of the materials or during purging out should be avoided. Further information can be found in the Luran S safety data sheets.

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.