INEOS STYROLUTION

Luran S 778T

Acrylonitrile Styrene Acrylate (ASA)

TECHNICAL DATASHEET

DESCRIPTION

Luran® S 778T is an injection molding grade with enhanced heat resistance and best chemical resistance among the ASA grades.

FEATURES

- High softening temperature
- High chemical resistance
- Enhanced stiffness
- New SPF 30 UV stabilization available

APPLICATIONS

- Radiator grills
- Mirror housings
- Household devices

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm³/10 min	5
Mechanical Properties			
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
Tensile Creep Modulus (1000h)	ISO 899	MPa	1250
Flexural Strength, 23 °C	ISO 178	MPa	80
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m²	15
Charpy Notched Impact Strength, -30 °C	ISO 179/1eA	kJ/m²	4
Hardness, Ball Indentation	ISO 2039-1	MPa	85
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	104
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

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Revision Date: 12/12/2018

Property, Test Condition	Standard	Unit	Values
Thermal Conductivity	DIN 52612-1	W/(m K)	0.17
Electrical Properties			
Relative Permittivity (100 Hz)	IEC 62631-2-1	-	3.9
Relative Permittivity (1 MHz)	IEC 62631-2-1	-	3.5
Dissipation Factor (100 Hz)	IEC 62631-2-1	10^{-4}	90
Dissipation Factor (1 MHz)	IEC 62631-2-1	10^{-4}	330
Volume Resistivity	IEC 62631-3-1	Ohm*m	10^{12}
Surface Resistivity	IEC 62631-3-1	Ohm	10^{13}
Other Properties			
Density	ISO 1183	kg/m³	1070
Water Absorption, Saturated at 23 °C	ISO 62	%	1.65
Moisture Absorption, Equilibrium 23 °C/50% RH	ISO 62	%	0.35
UL94 rating at 1.5 mm thickness	IEC 60695-11-10	-	HB
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

Typical values for uncolored products

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 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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