

# Luran SAN 51

Styrene Acrylonitrile (SAN)

## TECHNICAL DATASHEET

### DESCRIPTION

Luran SAN 51 is an injection molding grade of SAN with excellent chemical resistance and toughness.

### FEATURES

- Good transparency
- Very good chemical resistance
- Toughness

### APPLICATIONS

- Battery housings
- Lighters
- Fan blade
- Tooth brush handles

Property, Test Condition	Standard	Unit	Values
<b>Rheological Properties</b>			
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm <sup>3</sup> /10 min	15
<b>Mechanical Properties</b>			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m <sup>2</sup>	2
Tensile Strain at Break, 23 °C	ISO 527	%	3.8
Tensile Modulus	ISO 527	MPa	3800
Flexural Strength, 23 °C	ISO 178	MPa	125
Hardness, Rockwell	ISO 2039-2	R scale	126
<b>Thermal Properties</b>			
Vicat Softening Temperature, B/2 (120 °C/h, 50N)	ASTM D 1525	°C	106
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	103
<b>Optical Properties</b>			
Light Transmission at 550 nm	ASTM D 1003	%	87 - 88
<b>Other Properties</b>			
<b>Processing</b>			
Linear Mold Shrinkage	ISO 294-4	%	0.3 - 0.4

Typical values for uncolored products

## SUPPLY FORM

Luran is delivered in the form of cylindrical and lenticular pellets. The bulk density of the pellets is from 0.55 to 0.65 g/cm<sup>3</sup>. Values may differ for special grades. Standard Packaging unit: 25 kg paper bag. 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 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 absorbs moisture, but this can be removed by drying.

## PRODUCT SAFETY

Given appropriate processing of the products and suitable ventilation measures in production areas, no adverse effects on the health of process operators have been found. Workplace limits for styrene and acrylonitrile, as given in the national listings applicable, must be adhered to. The values currently applicable in Germany under TRGS 900 (issue of October, 2002) for maximum workplace concentrations are as follows. Styrene: 20 ml/m<sup>3</sup> = 86 mg/m<sup>3</sup>; acrylonitrile: 3 ml/m<sup>3</sup> = 7 mg/m<sup>3</sup>. Appendix I of Directive 67/548/EWG and TRGS 905 (issue of October, 2002) classify acrylonitrile in carcinogenic category II (substances which should be regarded as carcinogenic in humans).

Experience has shown that during appropriate processing of Luran with suitable ventilation the values obtained are well below the limits mentioned above. TRGS 402 (Germany) can be used for determining and assessing the concentrations of hazardous substances in the air within working areas. Inhalation of gaseous degradation products, such as those which may arise on severe overheating of the material or during pumped evacuation, must be avoided. Further information can be found in our Luran safety data sheets.

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