Luran 378P

Styrene Acrylonitrile (SAN)

STYROLUTION
Driving Success. Together.

Technical Datasheet

DESCRIPTION

Luran® 378P is an easy flow grade of SAN with enhanced chemical resistance and mechanical strength.

FEATURES

- Very good chemical resistance
- Good heat resistance
- Good surface appearance
- Excellent transparency
- Excellent dimensional stability

APPLICATIONS

- Battery housings
- Storage boxes
- Toilet seats
- Sanitary equipment

Property, Test Condition	Standard	Unit	Values
Rheological Properties			
Melt Volume Rate 220 °C/10 kg	ISO 1133	cm³/10 min	20
Mechanical Properties			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m²	2
Izod Notched Impact Strength, -30 °C	ISO 180/A	kJ/m²	2
Charpy Notched Impact Strength, 23° C	ISO 179	kJ/m²	2
Charpy Unnotched, 23° C	ISO 179	kJ/m²	19
Charpy Unnotched, -30° C	ISO 179	kJ/m²	19
Tensile Stress at Yield, 23° C	ISO 527	MPa	75
Tensile Strain at Break, 23° C	ISO 527	%	3.5
Tensile Modulus	ISO 527	MPa	3800
Tensile Creep Modulus (1000h)	ISO 899	MPa	2800
Tensile Creep Modulus (1h)	ISO 899	MPa	3500
Flexural Strength	ISO 178	MPa	135
Hardness, Rockwell		M scale	M85
Hardness, Ball Indentation	ISO 2039-1	MPa	175
Thermal Properties			
Vicat Softening Temperature VST/B/50 (50°C/h, 50N)	ISO 306	°C	107

Contact us:
Phone +49 2133 51 4007
infopoint.emea@styrolution.com
www.styrolution.com

Property, Test Condition	Standard	Unit	Values
Heat Deflection Temperature A; (annealed, 1.8 MPa)	ISO 75	°C	89
Heat Deflection Temperature B; (annealed, 0.45 MPa)	ISO 75	°C	101
Coefficient of Linear Thermal Expansion	ISO 11359	10^(-6)/°C	70
Thermal Conductivity	DIN 52612-1	W/(m K)	0.17
Electrical Properties			
Dielectric Constant (100 Hz)	IEC 60250	-	3
Dissipation Factor (100 Hz)	IEC 60250	10^(-4)	50
Dissipation Factor (1 MHz)	IEC 60250	10^(-4)	80
Volume Resistivity	IEC 60093	Ohm*m	1E14
Surface Resistivity	IEC 60093	Ohm	>1E15
Optical Properties			
Refractive Index, Sodium D Line	ISO 489	-	1.56
Light Transmission at 550 nm	ASTM D 1003	%	>89
Haze	ASTM D 1003	%	<1
Other Properties			
Density	ISO 1183	kg/m³	1080
Bulk Density (with external lubricant)		kg/m³	650
Moisture Absorption, Equilibrium 23°C/50% RH	ISO 62	%	0.30
Processing			
Linear Mold Shrinkage	ISO 294-4	%	0.3 - 0.7
Melt Temperature Range	ISO 294	°C	220 - 260
Mold Temperature Range	ISO 294	°C	50
Injection Velocity	ISO 294	mm/s	200
Drying Temperature		°C	80
Drying Time		h	2 - 4

Typical values for uncolored products

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SUPPLY FORM

Luran® is supplied as cylindrical or lenticular pellets. The bulk density is approx. 0.55-0.65 g/cm³. Standard pack: 25 kg PE sack, palletized and film-secured. PE bags should not be stored outside. Subject to agreement, other means of packing are possible, e.g. 1000 kg bulk containers (flexible IBCs or intermediate bulk big bag containers); shipping by road tanker can be arranged. Luran® pellets can be stored for prolonged periods in dry areas subject to normal temperature control without any changes in mechanical properties. However, for sensitive colors storage over some years can cause some color change. Under poor storage conditions, Luran absorbs moisture, which can be removed again by drying. Packs stored in cold areas should be brought to ambient temperature before opening, to prevent condensation on the pellets.

PROCESSING

Luran 378P is primarily processed through injection molding but any process suitble for thermoplastic molding compositions may also be used.

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/m³ = 86 mg/m³; acrylonitrile: 3 ml/m³ = 7 mg/m³. 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.

DISCLAIMER

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