

Product description

Speciality grade with highest mechanical strength and chemical resistance.

Physical form and storage

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.

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.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed. In order to check the availability of products please contact us or our sales agency.

Product Information

Typical values for uncoloured product at 23 °C ¹⁾	Test method ²⁾	Unit	Values ³⁾
Properties			
Polymer abbreviation	-	-	SAN
Density	ISO 1183	kg/m ³	1080
Moisture absorption, equilibrium 23°C/50% r.h.	similar to ISO 62	%	0.3
Processing			
Method: Injection moulding (M), Extrusion (E)	-	-	M.E
Melt volume-flow rate MVR 220 °C/10 kg	ISO 1133	cm ³ /10min	7
Melt volume-flow rate MVR 200 °C/21.6 kg	ISO 1133	cm ³ /10min	9
Pre-drying: Temperature	-	°C	80
Pre-drying: Time	-	h	2 - 4
Melt temperature, injection moulding	-	°C	220 - 260
Mould temperature, injection moulding	-	°C	40 - 80
Moulding shrinkage, free, longitudinal	-	%	0.3 - 0.7
Flammability			
UL94 rating at 1.6 mm thickness	IEC 60695-11-10	class	HB
UL94 rating at 0.8 mm thickness	IEC 60695-11-10	class	HB
Mechanical properties			
Tensile modulus	ISO 527-1/-2	MPa	3800
Stress at break	ISO 527-1/-2	MPa	79
Strain at break	ISO 527-1/-2	%	4
Flexural strength	ISO 178	MPa	140
Tensile creep modulus, 1000 h, strain ≤ 0.5%, 23°C	ISO 899-1	MPa	2800
Charpy unnotched impact strength (23°C)	ISO 179/1eU	kJ/m ²	21
Izod notched impact strength, 1A (23°C)	ISO 180/A	kJ/m ²	2.5
Charpy notched impact strength (23°C)	ISO 179/1eA	kJ/m ²	2.5
Ball indentation hardness at 358 N/30 s	ISO 2039-1	MPa	175
Rockwell hardness	ISO 2039-2	class	M86
Thermal properties			
HDT A (1.80 MPa)	ISO 75-1/-2	°C	90
HDT B (0.45 MPa)	ISO 75-1/-2	°C	102
Vicat softening temperature VST B50	ISO 306	°C	107
Max. service temperature (short cycle operation)	-	°C	85
Coefficient of linear thermal expansion, longitudinal (23-80)°C	ISO 11359-1/-2	E-6/K	70
Thermal conductivity	DIN 52612-1	W/(m K)	0.17
Electrical properties			
Relative permittivity (100Hz)	IEC 60250	-	3
Relative permittivity (1 MHz)	IEC 60250	-	2.8
Dissipation factor (100 Hz)	IEC 60250	E-4	50
Dissipation factor (1 MHz)	IEC 60250	E-4	80
Volume resistivity	IEC 60093	Ohm*m	1E14
Surface resistivity	IEC 60093	Ohm	>1E15
Electric strength K20/P50, d = 1 mm	IEC 60243-1	kV/mm	34

Footnotes

1) If product name or properties don't state otherwise.

2) Specimens according to CAMPUS.

3) The asterisk symbol "*" signifies inapplicable properties.

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