

# Luran HD 20

Styrene Acrylonitrile (SAN)

## TECHNICAL DATASHEET

### DESCRIPTION

Luran® HD 20 is an easy-flow grade of SAN especially designed for the medical market. It is suitable for moldings with very thin walls and / or adverse flow length to wall ratio. It features very good transparency and a light intrinsic color.

### FEATURES

- Full HD Service Package
- Easy flow
- Excellent transparency
- Good chemical resistance
- Resistant to beta and gamma sterilization
- Very good dimensional stability

### APPLICATIONS

- Sample holders
- Inhalator housings
- Vakuum vials

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	22
<b>Mechanical Properties</b>			
Izod Notched Impact Strength, 23 °C	ISO 180/A	kJ/m <sup>2</sup>	2
Izod Notched Impact Strength, -30 °C	ISO 180/A	kJ/m <sup>2</sup>	2
Charpy Notched Impact Strength, 23° C	ISO 179/1eA	kJ/m <sup>2</sup>	2
Charpy Unnotched, 23 °C	ISO 179/1eU	kJ/m <sup>2</sup>	16
Charpy Unnotched, -30 °C	ISO 179/1eU	kJ/m <sup>2</sup>	16
Tensile Stress at Yield, 23 °C	ISO 527	MPa	72
Tensile Strain at Break, 23 °C	ISO 527	%	3
Tensile Modulus	ISO 527	MPa	3700
Tensile Creep Modulus (1000h)	ISO 899	MPa	2800
Tensile Creep Modulus (1h)	ISO 899	MPa	3500
Flexural Strength, 23 °C	ISO 178	MPa	120
Hardness, Ball Indentation	ISO 2039-1	MPa	165
<b>Thermal Properties</b>			

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Vicat Softening Temperature VST/B/50 (50N, 50 °C/h)	ISO 306	°C	106
Heat Deflection Temperature A; (annealed 4 h/80 °C; 1.8 MPa)	ISO 75	°C	86
Heat Deflection Temperature B; (annealed 4 h/80 °C; 0.45 MPa)	ISO 75	°C	99
Coefficient of Linear Thermal Expansion	ISO 11359	10 <sup>-6</sup> /°C	70
Thermal Conductivity	DIN 52612-1	W/(m K)	0.17
<b>Electrical Properties</b>			
Dielectric Constant (100 Hz)	IEC 62631-2-1	-	3
Dissipation Factor (100 Hz)	IEC 62631-2-1	10 <sup>-4</sup>	40
Dissipation Factor (1 MHz)	IEC 62631-2-1	10 <sup>-4</sup>	70
Volume Resistivity	IEC 62631-3-1	Ohm*m	10 <sup>14</sup>
<b>Optical Properties</b>			
Refractive Index, Sodium D Line	ISO 489	-	1.569
<b>Other Properties</b>			
Density	ISO 1183	kg/m <sup>3</sup>	1080
Bulk Density (with external lubricant)	-	kg/m <sup>3</sup>	650
Moisture Absorption, Equilibrium 23 °C/50% RH	ISO 62	%	0.2
<b>Processing</b>			
Linear Mold Shrinkage	ISO 294-4	%	0.3 - 0.7
Melt Temperature Range	ISO 294	°C	220 - 260
Mold Temperature Range	ISO 294	°C	40 - 80
Injection Velocity	ISO 294	mm/s	200
Drying Temperature	-	°C	80
Drying Time	-	h	2 - 4