Lustran® SAN 31

Styrene Acrylonitrile

Styrolution

Message:

Lustran SAN 31 resin is an injection molding grade of transparent SAN (styrene acrylonitrile) thermoplastic. The base resin used in the Lustran SAN 31 product is in chemical compliance with 21 CFR 181.32 (acrylonitrile copolymers and resins) for use in the manufacture of repeated-use houseware articles as well as FDA modified ISO 10993-1**. It also meets U.S. Pharmacopeia 23 Class 6 test requirements. Lustran SAN 31 has a large molding window and is easy to process. The resin is available in natural (000000) color, crystal (552160) tint, and transparent and opaque custom colors.
Lustran SAN 31 resin is a general-purpose grade with a unique balance of cost/performance properties among thermoplastic resins. It is used in a wide variety of applications requiring clarity, heat and chemical resistance, strength and rigidity. Typical applications include beverage tumblers and mugs, blender jars, tableware, dinnerware, cosmetic packaging, instrument lenses, and medical devices.
Lustran SAN 31 performs exceptionally well in applications that are subject to demanding environments. Finished products are resistant to heat deformation, scratching, and chemicals, such as foodstuffs, oils, greases, acids, alkalies, and petroleum products. Common solvents, such as MEK and THF, can be used for bonding Lustran SAN 31. Parts molded out of Lustran 31 resin also accept various methods of printing. As with any product, use of Lustran 31 resin in a given application must be tested (including field testing, etc.) in advance by the user to determine suitability.

General Information	
UL YellowCard	E44741-235669
Features	Good dimensional stability
	Rigidity, high
	Excellent printability
	Workability, good
	Good strength
	Scratch resistance
	Good chemical resistance
	alkali resistance
	Heat resistance, high
	acid resistance
	Oil resistance
	Grease resistance
	Definition, high
	Compliance of Food Exposure
	General
Uses	Cosmetic Packaging
	Lens
	Food service sector
	Medical/nursing supplies
	Table products
Agency Ratings	EC 1907/2006 (REACH)
	FDA 21 CFR 181.32
	ISO 10993-Part I

	USP 23 Class 6
Appearance	Opacity
	Available colors
	Clear/transparent
	Transparent-Light Blue
	Natural color
Forms	Particle
Processing Method	Injection molding
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)
	Secant Modulus vs. Strain (ISO 11403-1)
	Specific Volume vs Temperature (ISO 11403-2)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.07	g/cm³	ASTM D792
Specific Volume	0.930	cm³/g	ASTM D792
Radiant Panel Flame Spread Index [1] (2.03 to 2.41mm)			ASTM E162
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	7.5	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.30 - 0.40	%	ASTM D955
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	83		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	3300	MPa	ASTM D638
Tensile Strength (Break)	72.0	MPa	ASTM D638
Flexural Modulus	3400	MPa	ASTM D790
Flexural Strength (Yield)	115	MPa	ASTM D790
Deformation Under Load [2] (50°C, 28 MPa)	1.50	%	ASTM D621
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (3.20 mm)	21	J/m	ASTM D256
Unnotched Izod Impact (3.20 mm)	240	J/m	ASTM D4812
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
1.8 MPa, unannealed, 12.7mm	96.0	°C	ASTM D648
1.8 MPa, annealed, 12.7mm	103	°C	ASTM D648
Vicat Softening Temperature	110	°C	ASTM D1525 [3]
CLTE - Flow	6.8E-5	cm/cm/°C	ASTM D696
RTI Elec (1.57 mm)	50.0	°C	UL 746
RTI Imp (1.57 mm)	50.0	°C	UL 746
RTI (1.57 mm)	50.0	°C	UL 746
Flammability	**Nominal Value**		**Test Method**

Flame Rating			UL 94
1.57 mm	HB		UL 94
3.05 mm	HB		UL 94
6.10 mm	HB		UL 94
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.570		ASTM D542
Transmittance (3200 µm)	87.0 - 88.0	%	ASTM D1003
Haze (3200 µm)	0.70	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature			
A	82.0 - 88.0	°C	
B	71.0 - 77.0	°C	
Drying Time			
A	2.0	hr	
B	4.0	hr	
Suggested Max Moisture	0.20	%	
Suggested Shot Size	50 - 70	%	
Suggested Max Regrind	20	%	
Rear Temperature	170 - 185	°C	
Middle Temperature	185 - 200	°C	
Front Temperature	200 - 215	°C	
Nozzle Temperature	200 - 215	°C	
Processing (Melt) Temp	220 - 260	°C	
Mold Temperature	40.0 - 80.0	°C	
Injection Pressure	68.9 - 138	MPa	
Injection Rate	Moderate-Fast		
Back Pressure	0.00 - 0.172	MPa	
Clamp Tonnage	2.8 - 5.5	kN/cm^2	
Cushion	< 3.18	mm	
Screw L/D Ratio	20.0:1.0		
Screw Compression Ratio	2.5:1.0		
Injection instructions			
Screw Speed: ModerateHold Pressure: 40 to 80% of Injection Pressure			
NOTE			
1.	Natural color, sustained flaming, 15in (380mm), dripping: yes (flaming)		
2.	24 hrs		
3.	标准 B (120°C/h)		

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China