

Starex VE-1897

Lotte Chemical Corporation - High Impact Polystyrene

General Information

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America

Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity (Natural)	1.15		ASTM D792
Density (Natural)	1.15	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	16	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	16	g/10 min	ISO 1133
Molding Shrinkage - Flow (0.126 in)	3.0E-3 to 4.0E-3	in/in	ASTM D955
Molding Shrinkage - Across Flow (0.126 in)	4.0E-3 to 5.0E-3	in/in	ASTM D955
Molding Shrinkage - Flow (0.0787 in)	0.30 to 0.40	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ²	299000	psi	ASTM D638
Tensile Modulus	303000	psi	ISO 527-1/50
Tensile Strength ² (Yield)	3270	psi	ASTM D638
Tensile Stress (Yield)	3340	psi	ISO 527-2/50
Tensile Strength ² (Break)	3700	psi	ASTM D638
Tensile Stress (Break)	3190	psi	ISO 527-2/50
Tensile Elongation ² (Break)	35	%	ASTM D638
Tensile Strain (Break)	35	%	ISO 527-2/50
Flexural Modulus ³	277000	psi	ASTM D790
Flexural Modulus ⁴	232000	psi	ISO 178
Flexural Strength ³	4550	psi	ASTM D790
Flexural Stress ⁴	5370	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁵ (73°F)	5.5	ft·lb/in ²	ISO 179/1eA
Notched Izod Impact			ASTM D256
73°F, 0.125 in	1.7	ft·lb/in	
73°F, 0.250 in	1.2	ft·lb/in	
Notched Izod Impact Strength ⁵ (73°F)	5.2	ft·lb/in ²	ISO 180/1A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	100		ASTM D785
Rockwell Hardness (R-Scale)	98		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2/B
66 psi, Unannealed, 0.157 in	178	°F	
Deflection Temperature Under Load			ISO 75-2/B
66 psi, Annealed, 0.157 in	183	°F	
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.252 in	167	°F	

Starex VE-1897

Lotte Chemical Corporation - High Impact Polystyrene

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 264 psi, Unannealed, 0.157 in	158	°F	ISO 75-2/A
Deflection Temperature Under Load 264 psi, Annealed, 0.157 in	174	°F	ISO 75-2/A
Vicat Softening Temperature --	185	°F	ISO 306/B120
--	178	°F	ISO 306/B50

Flammability	Nominal Value	Unit	Test Method
Flame Rating 0.06 in 0.12 in	V-0 V-0		UL 94

Processing Information

Injection	Nominal Value	Unit
Drying Temperature Desiccant Dryer Hot Air Dryer	176 176	°F °F
Drying Time Desiccant Dryer Hot Air Dryer	2.0 to 3.0 2.0 to 4.0	hr hr
Suggested Max Moisture	< 0.050	%
Rear Temperature	374 to 392	°F
Middle Temperature	392 to 410	°F
Front Temperature	410 to 428	°F
Nozzle Temperature	428	°F
Mold Temperature	104 to 176	°F
Injection Pressure	7110 to 35600	psi
Back Pressure	71.1 to 284	psi
Screw Speed	50 to 150	rpm

Injection Notes

Hot Runner Temperature: 220°C

Notes

¹ Typical properties: these are not to be construed as specifications.

² 0.79 in/min

³ 0.11 in/min

⁴ 0.079 in/min

⁵ 4mm