

# Starex VE-1870 U

## Lotte Chemical Corporation - High Impact Polystyrene

### General Information

#### General

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

### Properties<sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity (Natural)	1.17		ASTM D792
Density (Natural)	1.17	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	9.5	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	9.0	g/10 min	ISO 1133
Molding Shrinkage - Flow (0.126 in)	4.0E-3 to 7.0E-3	in/in	ASTM D955
Molding Shrinkage - Across Flow (0.126 in)	4.0E-3 to 7.0E-3	in/in	ASTM D955
Molding Shrinkage			ISO 294-4
Across Flow : 0.0787 in	0.40 to 0.70	%	
Flow : 0.0787 in	0.40 to 0.70	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength <sup>2</sup> (Yield)	3270	psi	ASTM D638
Tensile Stress (Yield)	2900	psi	ISO 527-2/50
Flexural Modulus <sup>3</sup>	270000	psi	ASTM D790
Flexural Modulus <sup>4</sup>	232000	psi	ISO 178
Flexural Strength <sup>3</sup>	4550	psi	ASTM D790
Flexural Stress <sup>4</sup>	4350	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength <sup>5</sup> (73°F)	4.8	ft-lb/in <sup>2</sup>	ISO 179/1eU
Notched Izod Impact (73°F, 0.125 in)	1.8	ft-lb/in	ASTM D256
Notched Izod Impact Strength <sup>5</sup> (73°F)	4.0	ft-lb/in <sup>2</sup>	ISO 180/1A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	90		ASTM D785
Rockwell Hardness (R-Scale)	92		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi, Unannealed, 0.252 in	190	°F	
Deflection Temperature Under Load			ISO 75-2/B
66 psi, Unannealed, 0.157 in	185	°F	
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.252 in	162	°F	
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Unannealed, 0.157 in	165	°F	
Vicat Softening Temperature	183 189	°F	ISO 306/B50
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.07 in	V-0		
0.13 in	V-0		

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#### Processing Information

Injection	Nominal Value	Unit
Drying Temperature		
Desiccant Dryer	140	°F
Hot Air Dryer	140	°F
Drying Time		
Desiccant Dryer	2.0 to 4.0	hr
Hot Air Dryer	4.0 to 6.0	hr
Suggested Max Moisture	< 0.10	%
Rear Temperature	356 to 410	°F
Middle Temperature	410	°F
Front Temperature	410	°F
Nozzle Temperature	428	°F
Mold Temperature	140 to 176	°F
Injection Pressure	9960 to 29900	psi
Back Pressure	142 to 427	psi
Screw Speed	40 to 80	rpm

#### Injection Notes

Hot Runner Temperature: 210°C

#### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 0.79 in/min

<sup>3</sup> 0.11 in/min

<sup>4</sup> 0.079 in/min

<sup>5</sup> 4mm