

# Starex VE-1801

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)	1.15		ASTM D792
Density (Natural)	1.15	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	15	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	15	g/10 min	ISO 1133
Molding Shrinkage - Flow (0.126 in)	2.9E-3 to 3.5E-3	in/in	ASTM D955
Molding Shrinkage - Across Flow (0.126 in)	3.1E-3 to 3.8E-3	in/in	ASTM D955
Molding Shrinkage			ISO 294-4
Across Flow : 0.0787 in	0.31 to 0.38	%	
Flow : 0.0787 in	0.29 to 0.35	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus <sup>2</sup>	260000	psi	ASTM D638
Tensile Modulus	290000	psi	ISO 527-1/50
Tensile Strength <sup>2</sup> (Yield)	3270	psi	ASTM D638
Tensile Stress (Yield)	3190	psi	ISO 527-2/50
Tensile Strength <sup>2</sup> (Break)	3700	psi	ASTM D638
Tensile Stress (Break)	3340	psi	ISO 527-2/50
Tensile Elongation <sup>2</sup> (Break)	33	%	ASTM D638
Tensile Strain (Break)	37	%	ISO 527-2/50
Flexural Modulus <sup>3</sup>	256000	psi	ASTM D790
Flexural Modulus <sup>4</sup>	261000	psi	ISO 178
Flexural Strength <sup>3</sup>	4270	psi	ASTM D790
Flexural Stress <sup>4</sup>	4640	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength <sup>5</sup> (73°F)	4.8	ft-lb/in <sup>2</sup>	ISO 179/1eA
Notched Izod Impact			ASTM D256
73°F, 0.125 in	1.8	ft-lb/in	
73°F, 0.250 in	1.6	ft-lb/in	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	93		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	185	°F	
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.252 in	160	°F	
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Unannealed, 0.157 in	160	°F	

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 264 psi, Annealed, 0.157 in	176	°F	ISO 75-2/A
Vicat Softening Temperature	189	°F	ISO 306/B120
--	183	°F	ISO 306/B50
<b>Flammability</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Flame Rating (0.08 in)	V-0		UL 94

### Processing Information

Injection	Nominal Value	Unit
Drying Temperature		
Desiccant Dryer	176	°F
Hot Air Dryer	176	°F
Drying Time		
Desiccant Dryer	2.0 to 3.0	hr
Hot Air Dryer	2.0 to 4.0	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

<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