

Starex GR-4020L

Lotte Chemical Corporation - Acrylonitrile Butadiene Styrene

General Information

General

Filler / Reinforcement • Glass Fiber

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity (Natural)	1.18		ASTM D792
Density (Natural)	1.19	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	7.0	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	9.0	g/10 min	ISO 1133
Molding Shrinkage - Flow (0.126 in)	1.0E-3 to 3.0E-3	in/in	ASTM D955
Ash Content	20	%	ISO 3451
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ²	768000	psi	ASTM D638
Tensile Modulus	812000	psi	ISO 527-1/50
Tensile Strength ² (Yield)	12800	psi	ASTM D638
Tensile Stress (Yield)	12800	psi	ISO 527-2/50
Tensile Strength ² (Break)	12500	psi	ASTM D638
Tensile Stress (Break)	12800	psi	ISO 527-2/50
Tensile Elongation ² (Break)	2.5	%	ASTM D638
Tensile Strain (Break)	2.5	%	ISO 527-2/50
Flexural Modulus ³	768000	psi	ASTM D790
Flexural Modulus	928000	psi	ISO 178
Flexural Strength ³	15600	psi	ASTM D790
Flexural Stress	18100	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁴ (73°F)	4.3	ft-lb/in ²	ISO 179/1eA
Notched Izod Impact			ASTM D256
73°F, 0.125 in	1.2	ft-lb/in	
73°F, 0.250 in	1.3	ft-lb/in	
Notched Izod Impact Strength ⁴ (73°F)	3.8	ft-lb/in ²	ISO 180/1A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	112		ASTM D785
Rockwell Hardness (R-Scale)	112		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi, Unannealed, 0.252 in	219	°F	
Deflection Temperature Under Load			ISO 75-2/B
66 psi, Unannealed, 0.157 in	217	°F	
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.252 in	212	°F	
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Unannealed, 0.157 in	207	°F	

Starex GR-4020L

Lotte Chemical Corporation - Acrylonitrile Butadiene Styrene

Thermal		Nominal Value	Unit	Test Method
Vicat Softening Temperature				
--	•	225	°F	ISO 306/B120
	•	223		
--	•	221	°F	ISO 306/B50
	•	217		

Flammability		Nominal Value	Unit	Test Method
Flame Rating				UL 94
0.06 in			HB	
0.12 in			HB	
0.24 in			HB	

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		356 to 374	°F
Middle Temperature		392 to 410	°F
Front Temperature		428 to 446	°F
Nozzle Temperature		464	°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: 235°C