

Starex GR-4010

Lotte Chemical Corporation - Acrylonitrile Butadiene Styrene

General Information

General

Filler / Reinforcement	• Glass Fiber
Uses	• Appliances

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) (220°C/10.0 kg)	7.8	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	7.8	g/10 min	ISO 1133
Molding Shrinkage - Flow (0.126 in)	1.0E-3 to 3.0E-3	in/in	ASTM D955
Ash Content			
--	9.7	%	ASTM D5630
--	9.7	%	ISO 3451
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ²	512000	psi	ASTM D638
Tensile Modulus	551000	psi	ISO 527-1/50
Tensile Strength ² (Yield)	10500	psi	ASTM D638
Tensile Stress (Yield)	11300	psi	ISO 527-2/50
Tensile Strength ² (Break)	9960	psi	ASTM D638
Tensile Stress (Break)	11300	psi	ISO 527-2/50
Tensile Elongation ² (Break)	3.4	%	ASTM D638
Tensile Strain (Break)	3.3	%	ISO 527-2/50
Flexural Modulus ³	583000	psi	ASTM D790
Flexural Modulus ⁴	595000	psi	ISO 178
Flexural Strength ³	14200	psi	ASTM D790
Flexural Stress ⁴	16000	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁵ (73°F)	5.2	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	1.6	ft·lb/in	
Notched Izod Impact Strength ⁵ (73°F)	4.8	ft·lb/in ²	ISO 180/1A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	114		ASTM D785
Rockwell Hardness (R-Scale)	114		ISO 2039-2

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 66 psi, Unannealed, 0.252 in	223	°F	ASTM D648
Deflection Temperature Under Load 66 psi, Unannealed, 0.157 in	223	°F	ISO 75-2/B
Deflection Temperature Under Load 264 psi, Unannealed, 0.252 in	212	°F	ASTM D648
Deflection Temperature Under Load 264 psi, Unannealed, 0.157 in	210	°F	ISO 75-2/A
Vicat Softening Temperature			
--	226	°F	ISO 306/B120
--	223	°F	ISO 306/B50

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