

Starex GR-4005

Lotte Chemical Corporation - Acrylonitrile Butadiene Styrene

General Information

General

Filler / Reinforcement • Glass Fiber

Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity (Natural)	1.08		ASTM D792
Density (Natural)	1.09	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	15	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	18	g/10 min	ISO 1133
Molding Shrinkage - Flow (0.126 in)	2.0E-3 to 4.0E-3	in/in	ASTM D955
Ash Content	5.2	%	ISO 3451
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ²	427000	psi	ASTM D638
Tensile Modulus	450000	psi	ISO 527-1/50
Tensile Strength ² (Yield)	8530	psi	ASTM D638
Tensile Stress (Yield)	8410	psi	ISO 527-2/50
Tensile Strength ² (Break)	6830	psi	ASTM D638
Tensile Stress (Break)	7830	psi	ISO 527-2/50
Tensile Elongation ² (Break)	3.6	%	ASTM D638
Tensile Strain (Break)	3.3	%	ISO 527-2/50
Flexural Modulus ³	441000	psi	ASTM D790
Flexural Modulus	479000	psi	ISO 178
Flexural Strength ³	12700	psi	ASTM D790
Flexural Stress	13100	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	1.3	ft·lb/in	
73°F, 0.250 in	1.7	ft·lb/in	
Notched Izod Impact Strength ⁴ (73°F)	3.6	ft·lb/in ²	ISO 180/1A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	110		ASTM D785
Rockwell Hardness (R-Scale)	110		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 66 psi, Unannealed, 0.252 in	217	°F	ASTM D648
Deflection Temperature Under Load 66 psi, Unannealed, 0.157 in	212	°F	ISO 75-2/B
Deflection Temperature Under Load 264 psi, Unannealed, 0.252 in	205	°F	ASTM D648
Deflection Temperature Under Load 264 psi, Unannealed, 0.157 in	192	°F	ISO 75-2/A

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

Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.06 in	HB		
0.07 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