

Starex GR-5035U

Lotte Chemical Corporation - Styrene Acrylonitrile

General Information

General	
Filler / Reinforcement	• Glass Fiber
Uses	• Construction Applications

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity (Natural)	1.34		ASTM D792
Density (Natural)	1.34	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	6.0	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	6.0	g/10 min	ISO 1133
Molding Shrinkage - Flow (0.126 in)	5.0E-3 to 6.0E-3	in/in	ASTM D955
Molding Shrinkage - Across Flow (0.126 in)	5.0E-3 to 6.0E-3	in/in	ASTM D955
Molding Shrinkage			ISO 294-4
Across Flow : 0.0787 in	0.50 to 0.60	%	
Flow : 0.0787 in	0.50 to 0.60	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ²	1.35E+6	psi	ASTM D638
Tensile Modulus	1.31E+6	psi	ISO 527-1/50
Tensile Strength ² (Yield)	18500	psi	ASTM D638
Tensile Stress (Yield)	17400	psi	ISO 527-2/50
Tensile Strength ² (Break)	17100	psi	ASTM D638
Tensile Stress (Break)	17100	psi	ISO 527-2/50
Tensile Elongation ² (Break)	2.0	%	ASTM D638
Tensile Strain (Break)	2.0	%	ISO 527-2/50
Flexural Modulus ³	1.35E+6	psi	ASTM D790
Flexural Modulus ⁴	1.67E+6	psi	ISO 178
Flexural Strength ³	19200	psi	ASTM D790
Flexural Stress ⁴	26100	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁵ (73°F)	2.9	ft·lb/in ²	ISO 179/1eA
Notched Izod Impact			ASTM D256
73°F, 0.125 in	1.1	ft·lb/in	
73°F, 0.250 in	0.92	ft·lb/in	
Notched Izod Impact Strength ⁵ (73°F)	2.6	ft·lb/in ²	ISO 180/1A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	120		ASTM D785
Rockwell Hardness (R-Scale)	123		ISO 2039-2

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 66 psi, Unannealed, 0.252 in	228	°F	ASTM D648
Deflection Temperature Under Load 66 psi, Unannealed, 0.157 in	230	°F	ISO 75-2/B
Deflection Temperature Under Load 264 psi, Unannealed, 0.252 in	221	°F	ASTM D648
Deflection Temperature Under Load 264 psi, Unannealed, 0.157 in	223	°F	ISO 75-2/A
Vicat Softening Temperature	235	°F	ISO 306/B50
Optical	Nominal Value	Unit	Test Method
Yellowness Index (2.50 in)	30	YI	ASTM D1925

Processing Information

Injection	Nominal Value	Unit
Drying Temperature		
Desiccant Dryer	176	°F
Hot Air Dryer	176	°F
Drying Time		
Desiccant Dryer	2.0 to 4.0	hr
Hot Air Dryer	4.0 to 6.0	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	446	°F
Mold Temperature	104 to 176	°F
Injection Pressure	7110	psi
Back Pressure	71.1 to 284	psi
Screw Speed	50 to 150	rpm

Injection Notes

Hot Runner Temperature: 220°C

Notes

¹ Typical properties: these are not to be construed as specifications.

² 0.20 in/min

³ 0.11 in/min

⁴ 0.079 in/min

⁵ 4mm