Starex SR-0300

Lotte Chemical Corporation - Acrylonitrile Butadiene Styrene

Wednesday, March 9, 2022

General Information

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Automotive Specifications	• CHERRY Q/SQR.04.132 • GM GMP.ABS.003	• GM GMW15572P-ABS-T2 • HYUNDAI MS225-18 T1	• IMDS ID 59862039

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity (Natural)	1.05		ASTM D792
Density (Natural)	1.05	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	13	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	13	g/10 min	ISO 1133
Molding Shrinkage - Flow (0.126 in)	4.0E-3 to 7.0E-3	in/in	ASTM D955
Molding Shrinkage - Across Flow (0.126 in)	4.0E-3 to 7.0E-3	in/in	ASTM D955
Molding Shrinkage			ISO 294-4
Across Flow : 0.0787 in	0.40 to 0.70	%	
Flow : 0.0787 in	0.40 to 0.70	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [2]	319000	psi	ASTM D638
Tensile Modulus	348000	psi	ISO 527-1/50
Tensile Strength [2] (Yield)	6380	psi	ASTM D638
Tensile Stress (Yield)	6960	psi	ISO 527-2/50
Tensile Strength [2] (Break)	4790	psi	ASTM D638
Tensile Stress (Break)	5080	psi	ISO 527-2/50
Tensile Elongation [2] (Break)	50	%	ASTM D638
Tensile Strain (Break)	22	%	ISO 527-2/50
Flexural Modulus [3]	334000	psi	ASTM D790
Flexural Modulus [4]	363000	psi	ISO 178
Flexural Strength [3]	8850	psi	ASTM D790
Flexural Stress [4]	11000	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength [5] (73°F)	12	ft·lb/in²	ISO 179/1eA
Notched Izod Impact			ASTM D256
73°F, 0.125 in	5.4	ft·lb/in	
73°F, 0.250 in	4.3	ft·lb/in	
Notched Izod Impact Strength [5] (73°F)	10	ft·lb/in²	ISO 180/1A

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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			ISO 75-2/B
66 psi, Unannealed, 0.157 in	203	°F	
Deflection Temperature Under Load			ISO 75-2/B
66 psi, Annealed, 0.157 in	216	°F	
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed, 0.252 in	190	°F	
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Unannealed, 0.157 in	174	°F	
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Annealed, 0.157 in	207	°F	
Vicat Softening Temperature			
--	221	°F	ISO 306/B120
--	216	°F	ISO 306/B50

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	3.0 to 4.0	hr
Suggested Max Moisture	< 0.10	%
Rear Temperature	356 to 392	°F
Middle Temperature	392 to 428	°F
Front Temperature	410 to 446	°F
Nozzle Temperature	428 to 482	°F
Mold Temperature	104 to 176	°F
Injection Pressure	7110 to 21300	psi
Back Pressure	71.1 to 284	psi
Screw Speed	50 to 150	rpm

Injection Notes

Hot Runner Temperature: 220 to 230°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