

Starex WR-9140

Acrylonitrile Styrene Acrylate
SAMSUNG SDI CO., LTD.

Message:

Material with the characteristic of high-impact resistance and high ductility that can be applied to exterior door, parabolic antenna etc.

General Information			
UL YellowCard	E115797-489092		
Features	Ductile		
	High Impact Resistance		
Uses	Automotive Exterior Parts		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.06	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	3.4	g/10 min	ASTM D1238, ISO 1133
Molding Shrinkage			ASTM D955, ISO 2577
Flow : 3.20 mm	0.44 to 0.53	%	
Across Flow : 3.20 mm	0.46 to 0.57	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	96		ASTM D785, ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	1900	MPa	ASTM D638
--	2000	MPa	ISO 527-2/50
Tensile Strength			
Yield ²	42.0	MPa	ASTM D638
Yield	45.0	MPa	ISO 527-2/50
Break ³	44.0	MPa	ASTM D638
Break	34.0	MPa	ISO 527-2/50
Tensile Elongation			
Break ⁴	110	%	ASTM D638
Break	18	%	ISO 527-2/50
Flexural Modulus			
-- ⁵	1900	MPa	ASTM D790
-- ⁶	2000	MPa	ISO 178
Flexural Strength			
-- ⁷	57.0	MPa	ASTM D790
-- ⁸	66.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method

Charpy Notched Impact Strength ⁹ (23°C)	14	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
23°C, 3.18 mm	440	J/m	ASTM D256
23°C, 6.35 mm	91	J/m	ASTM D256
23°C ¹⁰	11	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 6.40 mm	96.0	°C	ASTM D648
0.45 MPa, Unannealed, 4.00 mm	91.0	°C	ISO 75-2/B
0.45 MPa, Annealed	98.0	°C	ISO 75-2/B
1.8 MPa, Unannealed, 6.40 mm	84.0	°C	ASTM D648
1.8 MPa, Unannealed, 4.00 mm	77.0	°C	ISO 75-2/A
1.8 MPa, Annealed, 4.00 mm	94.0	°C	ISO 75-2/A
Vicat Softening Temperature	95.0	°C	ISO 306/B50
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
1.50 mm	HB		
3.00 mm	HB		
Injection	Nominal Value	Unit	
Drying Temperature			
--	80.0 to 90.0	°C	
Desiccant Dryer	80.0	°C	
Drying Time			
--	2.0 to 4.0	hr	
Desiccant Dryer	2.0 to 3.0	hr	
Suggested Max Moisture	< 0.050	%	
Rear Temperature	180 to 190	°C	
Middle Temperature	200 to 210	°C	
Front Temperature	220 to 230	°C	
Nozzle Temperature	240	°C	
Mold Temperature	40.0 to 80.0	°C	
Injection Pressure	49.0 to 245	MPa	
Back Pressure	0.490 to 1.96	MPa	
Screw Speed	50 to 150	rpm	
NOTE			
1.	5.0 mm/min		
2.	5.0 mm/min		
3.	5.0 mm/min		
4.	5.0 mm/min		
5.	2.8 mm/min		
6.	2.0 mm/min		
7.	2.8 mm/min		

8.	2.0 mm/min
9.	Thickness: 4 mm
10.	Thickness: 4 mm

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