

Starex VE-0860

Acrylonitrile Butadiene Styrene

SAMSUNG SDI CO., LTD.

Message:

Flame-retardant ABS material with the characteristic of high heat resistance that can be applied to battery case and adaptor

General Information	
UL YellowCard	E115797-219595
Features	Flame Retardant
	High Heat Resistance
Uses	Automotive Applications
	Automotive Under the Hood
	Battery Cases
	Electrical Housing
	Electrical/Electronic Applications

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.17	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)			
220°C/5.0 kg	1.6	g/10 min	ASTM D1238
200°C/5.0 kg	1.6	g/10 min	ISO 1133
Molding Shrinkage			ASTM D955, ISO 2577
Flow : 3.20 mm	0.40 to 0.49	%	
Across Flow : 3.20 mm	0.43 to 0.53	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	104		ASTM D785, ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	1600	MPa	ASTM D638
--	2450	MPa	ISO 527-2/5
Tensile Strength			
Yield ²	43.0	MPa	ASTM D638
Yield	45.0	MPa	ISO 527-2/5
Break ³	31.0	MPa	ASTM D638
Break	37.0	MPa	ISO 527-2/5
Tensile Elongation			
Break ⁴	8.0	%	ASTM D638
Break	5.0	%	ISO 527-2/5
Flexural Modulus			

-- ⁵	2300	MPa	ASTM D790
-- ⁶	2350	MPa	ISO 178
Flexural Strength			
-- ⁷	64.0	MPa	ASTM D790
-- ⁸	66.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹ (23°C)	16	kJ/m ²	ISO 179/1eA
Notched Izod Impact			
23°C, 3.18 mm	150	J/m	ASTM D256
23°C, 6.35 mm	140	J/m	ASTM D256
23°C ¹⁰	14	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 6.40 mm	98.0	°C	ASTM D648
0.45 MPa, Unannealed, 4.00 mm	98.0	°C	ISO 75-2/B
1.8 MPa, Unannealed, 6.40 mm	85.0	°C	ASTM D648
1.8 MPa, Unannealed, 4.00 mm	85.0	°C	ISO 75-2/A
Vicat Softening Temperature	97.0	°C	ISO 306/B50
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
1.50 mm	V-0		
	V-0		
2.50 to 2.70 mm	5VB		
Injection	Nominal Value	Unit	
Drying Temperature			
--	80.0	°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	160 to 180	°C	
Middle Temperature	190 to 200	°C	
Front Temperature	210 to 220	°C	
Nozzle Temperature	220	°C	
Mold Temperature	40.0 to 80.0	°C	
Injection Pressure	49.0 to 147	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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