

CYCOLAC™ BDT5510 resin

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

Message:

Automotive. High heat resistance, low gloss, color concentratable for interior applications. Natural only.

General Information	
UL YellowCard	E121562-101094442
Features	High Heat Resistance
	Low Gloss
Uses	Automotive Interior Parts
Appearance	Natural Color
Processing Method	Injection Molding
Multi-Point Data	Coefficient of Thermal Expansion vs. Temperature (ASTM E831)
	Elastic Modulus vs Temperature (ASTM D4065)
	Flexural DMA (ASTM D4065)
	Pressure-Volume-Temperature (PVT - Zoller Method)
	Shear DMA (ASTM D4065)
	Specific Heat vs. Temperature (ASTM D3417)
	Tensile Creep (ASTM D2990)
	Tensile Fatigue
	Tensile Stress vs. Strain (ASTM D638)
	Thermal Conductivity vs. Temperature (ASTM E1530)
	Viscosity vs. Shear Rate (ASTM D3835)

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.05	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR)			
230°C/3.8 kg	6.0	g/10 min	ASTM D1238
220°C/10.0 kg	14	g/10 min	ISO 1133
Spiral Flow	73.7	cm	Internal Method
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.80	%	Internal Method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2280	MPa	ASTM D638
--	2930	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	53.0	MPa	ASTM D638
Yield	43.0	MPa	ISO 527-2/50

Flexural Modulus			
50.0 mm Span ³	2460	MPa	ASTM D790
-- ⁴	2030	MPa	ISO 178
Flexural Stress			
--	67.0	MPa	ISO 178
Yield, 50.0 mm Span ⁵	81.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁶			ISO 179/1eA
-30°C	7.2	kJ/m ²	
23°C	13	kJ/m ²	
Notched Izod Impact			
23°C	290	J/m	ASTM D256
-30°C ⁷	7.0	kJ/m ²	ISO 180/1A
23°C ⁸	13	kJ/m ²	ISO 180/1A
Gardner Impact (23°C)	35.0	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	92.0	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ⁹	95.0	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	81.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁰	83.0	°C	ISO 75-2/Af
Vicat Softening Temperature	98.0	°C	ISO 306/B50
CLTE - Flow (-40 to 60°C)	1.4E-4	cm/cm/°C	ASTM E831
Flammability	Nominal Value		Test Method
Flame Rating (1.52 mm)	HB		UL 94
Optical	Nominal Value		Test Method
Gardner Gloss (60°, Untextured)	25		ASTM D523
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (260°C, 1000 sec ⁻¹)	163	Pa · s	ASTM D3835
Injection	Nominal Value	Unit	
Drying Temperature	87.8 to 93.3	°C	
Drying Time	2.0 to 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.010	%	
Suggested Shot Size	50 to 70	%	
Rear Temperature	193 to 238	°C	
Middle Temperature	210 to 249	°C	
Front Temperature	221 to 254	°C	
Nozzle Temperature	232 to 274	°C	
Processing (Melt) Temp	232 to 274	°C	
Mold Temperature	48.9 to 82.2	°C	
Back Pressure	0.345 to 0.689	MPa	

Screw Speed	30 to 60	rpm
Vent Depth	0.038 to 0.051	mm
NOTE		
1.	5.0 mm/min	
2.	Type I, 5.0 mm/min	
3.	1.3 mm/min	
4.	2.0 mm/min	
5.	1.3 mm/min	
6.	80*10*4 sp=62mm	
7.	80*10*4	
8.	80*10*4	
9.	80*10*4 mm	
10.	80*10*4 mm	

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