

CYCOLOY™ C2950 resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

Non-chlorinated and non-brominated flame retardant PC/ABS offering balanced flow and impact plus improved heat resistance intended for various applications.

General Information	
UL YellowCard	E121562-221034
Additive	Flame Retardant
Features	Bromine Free
	Chlorine Free
	Flame Retardant
	Good Flow
	Good Impact Resistance
	Medium Heat Resistance

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)
	Instrumented Impact (Energy) (ASTM D3763)
	Instrumented Impact (Load) (ASTM D3763)
	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			ASTM D792
--	1.18	g/cm ³	
-- ¹	1.22	g/cm ³	
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.40 to 0.60	%	
Across Flow : 3.20 mm	0.40 to 0.60	%	

Water Absorption			ASTM D570
24 hr	0.10	%	
Equilibrium, 23°C	0.40	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	123		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield)	62.7	MPa	ASTM D638
Tensile Elongation ³ (Break)	40	%	ASTM D638
Flexural Modulus ⁴ (100 mm Span)	2650	MPa	ASTM D790
Flexural Strength ⁵ (Yield, 100 mm Span)	102	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C	160	J/m	
23°C	530	J/m	
Instrumented Dart Impact			ASTM D3763
-30°C, Total Energy	54.2	J	
23°C, Total Energy	61.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	104	°C	
1.8 MPa, Unannealed, 3.20 mm	90.6	°C	
1.8 MPa, Unannealed, 6.40 mm	95.0	°C	
Vicat Softening Temperature	113	°C	ASTM D1525 ⁶
CLTE			ASTM D696
Flow : -30 to 30°C	7.2E-5	cm/cm/°C	
Transverse : -30 to 30°C	7.2E-5	cm/cm/°C	
Thermal Conductivity	0.20	W/m/K	ASTM C177
RTI Elec	85.0	°C	UL 746
RTI Imp	85.0	°C	UL 746
RTI Str	85.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+16	ohms	ASTM D257
Volume Resistivity	1.0E+17	ohms · cm	ASTM D257
Dielectric Strength (3.20 mm, in Oil)	19	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	3.00		
60 Hz	3.00		
100 Hz	3.00		
Dissipation Factor			ASTM D150
50 Hz	5.0E-3		
60 Hz	5.0E-3		
100 Hz	4.9E-3		

Arc Resistance ⁷	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 1		UL 746
High Amp Arc Ignition (HAI)	PLC 0		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 2		UL 746
Hot-wire Ignition (HWI)	PLC 1		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	V-0		
2.49 mm	5VB		
Oxygen Index	32	%	ASTM D2863
Injection	Nominal Value	Unit	
Drying Temperature	82.0 to 88.0	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.040	%	
Suggested Shot Size	30 to 80	%	
Rear Temperature	221 to 254	°C	
Middle Temperature	221 to 277	°C	
Front Temperature	243 to 277	°C	
Nozzle Temperature	243 to 277	°C	
Processing (Melt) Temp	243 to 277	°C	
Mold Temperature	60.0 to 82.0	°C	
Back Pressure	0.345 to 0.689	MPa	
Screw Speed	40 to 70	rpm	
Vent Depth	0.038 to 0.076	mm	
NOTE			
1.	Color		
2.	Type I, 50 mm/min		
3.	Type I, 50 mm/min		
4.	2.6 mm/min		
5.	2.6 mm/min		
6.	Rate B (120°C/h), Loading 2 (50 N)		
7.	Tungsten Electrode		

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