

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	E45329-236717		
Additive	Flame retardancy		
Features	Chlorine Free		
	Impact resistance, good		
	Good liquidity		
	Heat resistance, medium		
	Bromine-free		
	Flame retardancy		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.17	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	12.0	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow ¹	0.40 - 0.60	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.60	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	123		ISO 2039-2
Ball Indentation Hardness (H 358/30)	116	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2800	MPa	ISO 527-2/1
Tensile Stress			
Yield	55.0	MPa	ISO 527-2/5
Yield	60.0	MPa	ISO 527-2/50
Fracture	45.0	MPa	ISO 527-2/5
Fracture	50.0	MPa	ISO 527-2/50
Tensile Strain			
Yield	4.0	%	ISO 527-2/5, ISO 527-2/50
Fracture	65	%	ISO 527-2/5
Fracture	> 50	%	ISO 527-2/50

Flexural Modulus ²	2700	MPa	ISO 178
Flexural Stress	90.0	MPa	ISO 178
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	54.0	mg	Internal method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ³			ISO 179/1eA
-30°C	15	kJ/m ²	ISO 179/1eA
23°C	45	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ⁴			ISO 179/1eU
	No Break		
-30°C	No Break		ISO 179/1eU
	No Break		
23°C	No Break		ISO 179/1eU
Notched Izod Impact ⁵			ISO 180/1A
-30°C	14	kJ/m ²	ISO 180/1A
23°C	44	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength ⁶			ISO 180/1U
-30°C	No Break		ISO 180/1U
23°C	No Break		ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁷			
0.45 MPa, unannealed, 100 mm span	103	°C	ISO 75-2/Be
1.8 MPa, unannealed, 100 mm span	90.0	°C	ISO 75-2/Ae
Vicat Softening Temperature			
--	118	°C	ISO 306/A50
--	110	°C	ISO 306/B50
--	112	°C	ISO 306/B120
Ball Pressure Test (100°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			ISO 11359-2
Flow: -40 to 40°C	7.5E-5	cm/cm/°C	ISO 11359-2
Flow: 23 to 60°C	8.0E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	7.5E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 60°C	8.0E-5	cm/cm/°C	ISO 11359-2
Thermal Conductivity	0.20	W/m/K	ISO 8302
RTI Elec	85.0	°C	UL 746
RTI Imp	85.0	°C	UL 746
RTI	85.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method

Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength			IEC 60243-1
0.800mm, in oil	35	kV/mm	IEC 60243-1
1.60mm, in oil	25	kV/mm	IEC 60243-1
3.20mm, in oil	17	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
50 Hz	2.80		IEC 60250
60 Hz	2.80		IEC 60250
1 MHz	2.70		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	4.0E-3		IEC 60250
60 Hz	4.0E-3		IEC 60250
1 MHz	6.0E-3		IEC 60250
Comparative Tracking Index (CTI)	PLC 0		UL 746
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	V-0		UL 94
2.50 mm	5VB		UL 94
Glow Wire Flammability Index (1.00 mm)	960	°C	IEC 60695-2-12
Oxygen Index	32	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	90.0 - 100	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	
Hopper Temperature	60.0 - 80.0	°C	
Rear Temperature	210 - 240	°C	
Middle Temperature	230 - 270	°C	
Front Temperature	240 - 280	°C	
Nozzle Temperature	230 - 270	°C	
Processing (Melt) Temp	250 - 280	°C	
Mold Temperature	60.0 - 90.0	°C	
NOTE			
1.	Tensile Bar		
2.	2.0 mm/min		
3.	80*10*4 sp=62mm		
4.	80*10*4 sp=62mm		
5.	80*10*4		
6.	80*10*4		
7.	120*10*4 mm		

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