

CYCOLOY™ C2950HF resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

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

General Information			
UL YellowCard	E121562-221035		
Additive	Flame retardancy		
Features	Chlorine Free		
	Impact resistance, good		
	Good liquidity		
	Heat resistance, medium		
	Bromine-free		
	Flame retardancy		
Processing Method	Injection molding		
Multi-Point Data	Elastic Modulus vs Temperature (ASTM D4065)		
	Tensile Creep (ASTM D2990)		
	Tensile Fatigue		
	Tensile Stress vs. Strain (ASTM D638)		
	Viscosity vs. Shear Rate (ASTM D3835)		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.18	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	22	g/10 min	ASTM D1238
Molding Shrinkage			Internal method
Flow: 3.20mm	0.40 - 0.60	%	Internal method
Transverse flow: 3.20mm	0.40 - 0.60	%	Internal method
Water Absorption			ASTM D570
24 hr	0.10	%	ASTM D570
Equilibrium, 23°C	0.40	%	ASTM D570

Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	121		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ¹ (Yield)	64.1	MPa	ASTM D638
Tensile Elongation ²			ASTM D638
Yield	5.0	%	ASTM D638
Fracture	40	%	ASTM D638

Flexural Modulus ³ (100 mm Span)	2590	MPa	ASTM D790
Flexural Strength ⁴ (Yield, 100 mm Span)	96.5	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	450	J/m	ASTM D256
Instrumented Dart Impact (23°C, Energy at Peak Load)	54.2	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 6.40mm	102	°C	ASTM D648
1.8 MPa, unannealed, 3.20mm	87.8	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	93.3	°C	ASTM D648
Vicat Softening Temperature	113	°C	ASTM D1525 ⁵
Linear thermal expansion coefficient			ASTM D696
Flow: -30 to 30°C	7.2E-5	cm/cm/°C	ASTM D696
Lateral: -30 to 30°C	7.2E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.20	W/m/K	ASTM C177
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+16	ohms	ASTM D257
Volume Resistivity	1.6E+17	ohms · cm	ASTM D257
Dielectric Strength (3.20 mm, in Oil)	24	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
50 Hz	2.80		ASTM D150
60 Hz	2.80		ASTM D150
1 MHz	2.70		ASTM D150
Dissipation Factor			ASTM D150
50 Hz	5.2E-3		ASTM D150
60 Hz	5.2E-3		ASTM D150
1 MHz	7.1E-3		ASTM D150
Arc Resistance ⁶	PLC 6		ASTM D495
Comparative Tracking Index (CTI)	PLC 2		UL 746
High Amp Arc Ignition (HAI)	PLC 0		UL 746
High Voltage Arc Tracking Rate (HVTR)	PLC 3		UL 746
Hot-wire Ignition (HWI)	PLC 2		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.762 mm	V-2		UL 94
1.50 mm	V-0		UL 94
2.49 mm	5VB		UL 94
3.40 mm	5VA		UL 94

Oxygen Index	30	%	ASTM D2863
Injection	Nominal Value	Unit	
Drying Temperature	82.2 - 87.8	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	8.0	hr	
Suggested Max Moisture	0.040	%	
Suggested Shot Size	30 - 80	%	
Rear Temperature	221 - 254	°C	
Middle Temperature	221 - 266	°C	
Front Temperature	243 - 277	°C	
Nozzle Temperature	243 - 277	°C	
Processing (Melt) Temp	243 - 277	°C	
Mold Temperature	60.0 - 82.2	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	40 - 70	rpm	
Vent Depth	0.038 - 0.076	mm	

NOTE

1. Type 1, 50mm/min
2. Type 1, 50mm/min
3. 2.6 mm/min
4. 2.6 mm/min
5. 标准 B (120°C/h), 载荷2 (50N)
6. Tungsten electrode

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