

CYCOLOY™ C2800 resin

Polycarbonate + ABS

SABIC Innovative Plastics

Message:

Non-chlorinated and non-brominated flame retardant PC+ABS offering balanced flow and impact properties for various applications.

General Information	
UL YellowCard	E121562-221031
Additive	Flame Retardant
Features	Bromine Free
	Chlorine Free
	Flame Retardant
	Good Flow
	Good Impact 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)
	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
--	1.17	g/cm ³	
-- ¹	1.18	g/cm ³	
Melt Mass-Flow Rate (MFR) (260°C/2.16 kg)	16	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)	120		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ²	2690	MPa	ASTM D638
Tensile Strength ³ (Yield)	58.6	MPa	ASTM D638
Tensile Elongation ⁴			ASTM D638
Yield	5.0	%	
Break	50	%	
Flexural Modulus ⁵ (100 mm Span)	2690	MPa	ASTM D790
Flexural Strength ⁶ (Yield, 100 mm Span)	96.5	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	430	J/m	ASTM D256
Instrumented Dart Impact (23°C, Total Energy)	58.3	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, 3.20 mm	73.9	°C	
1.8 MPa, Unannealed, 6.40 mm	80.0	°C	
Vicat Softening Temperature	90.6	°C	ASTM D1525 ⁷
CLTE			ASTM E831
Flow : -40 to 60°C	7.2E-5	cm/cm/°C	
Transverse : -40 to 60°C	7.2E-5	cm/cm/°C	
Thermal Conductivity	0.20	W/m/K	ASTM C177
RTI Elec	80.0	°C	UL 746
RTI Imp	70.0	°C	UL 746
RTI Str	80.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+14	ohms	ASTM D257
Volume Resistivity	1.0E+17	ohms · cm	ASTM D257
Dielectric Strength (3.20 mm, in Oil)	18	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	4.8E-3		
60 Hz	4.8E-3		
Arc Resistance ⁸	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 3		UL 746

Hot-wire Ignition (HWI)	PLC 3		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.889 mm	V-2		
1.47 mm	V-0		
2.31 mm	5VB		
Oxygen Index	35	%	ASTM D2863
Injection	Nominal Value	Unit	
Drying Temperature	77.0 to 82.0	°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	210 to 254	°C	
Middle Temperature	216 to 260	°C	
Front Temperature	227 to 274	°C	
Nozzle Temperature	232 to 274	°C	
Processing (Melt) Temp	232 to 274	°C	
Mold Temperature	49.0 to 71.0	°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.	50 mm/min		
3.	Type I, 50 mm/min		
4.	Type I, 50 mm/min		
5.	2.6 mm/min		
6.	2.6 mm/min		
7.	Rate B (120°C/h), Loading 2 (50 N)		
8.	Tungsten Electrode		

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