

CYCOLOY™ C2950 resin

Polycarbonate + ABS
SABIC Innovative Plastics

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Technical Data

Product Description

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

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet
UL Yellow Card ²	• E121562-221034
Search for UL Yellow Card	• SABIC Innovative Plastics • CYCOLOY™
Availability	• North America
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
Density / Specific Gravity		ASTM D792
--	1.18 g/cm ³	
-- ⁴	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 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Strength ⁵ (Yield)	62.7 MPa	ASTM D638
Tensile Elongation ⁵ (Break)	40 %	ASTM D638
Flexural Modulus ⁶ (100 mm Span)	2650 MPa	ASTM D790
Flexural Strength ⁶ (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	



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Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (R-Scale)	123	ASTM D785
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 ⁷
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 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 2	UL 746
Hot-wire Ignition (HWI)	PLC 1	UL 746
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
1.5 mm	V-0	
2.5 mm	5VB	
Oxygen Index	32 %	ASTM D2863
Injection	Nominal Value Unit	
Drying Temperature	82 to 88 °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 to 82 °C	
Back Pressure	0.345 to 0.689 MPa	
Screw Speed	40 to 70 rpm	
Vent Depth	0.038 to 0.076 mm	



Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ Color

⁵ Type I, 50 mm/min

⁶ 2.6 mm/min

⁷ Rate B (120°C/h), Loading 2 (50 N)

⁸ Tungsten Electrode



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Where to Buy

Supplier

SABIC Innovative Plastics

Pittsfield, MA USA

Telephone: 800-845-0600

Web: <http://www.sabic-ip.com/>

Distributor

Nexeo Solutions

Telephone: 800-531-7106

Web: <http://www.nexeosolutions.com/>

Availability: North America

Reseller

A Reseller is not a distributor authorized by the Supplier.

Guangzhou Huaxiu Plastics Co., Ltd.

Telephone: +86-20-82582555

Web: <http://www.va-so.com>

Availability: China

