

# CYCOLOY™ FR RESINS C2950

REGION AMERICAS

## DESCRIPTION

CYCOLOY C2950 Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) resin is a standard high heat grade that can be injection molded. This non-chlorinated, non-brominated flame retardant high heat PC/ABS has a UL V0 & 5VB flame rating. CYCOLOY C2950 resin is an excellent candidate for a wide variety of applications including appliances, lighting and electrical.

## TYPICAL PROPERTY VALUES

Revision 20191022

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D638
Tensile Strain, brk, Type I, 50 mm/min	40	%	ASTM D638
Flexural Stress, yld, 2.6 mm/min, 100 mm span	102	MPa	ASTM D790
Flexural Modulus, 2.6 mm/min, 100 mm span	2650	MPa	ASTM D790
Hardness, Rockwell R	123	-	ASTM D785
<b>IMPACT</b>			
Izod Impact, notched, 23°C	534	J/m	ASTM D256
Izod Impact, notched, -30°C	160	J/m	ASTM D256
Instrumented Dart Impact Total Energy, 23°C	61	J	ASTM D3763
Instrumented Dart Impact Total Energy, -30°C	54	J	ASTM D3763
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	112	°C	ASTM D1525
HDT, 1.82 MPa, 3.2mm, unannealed	90	°C	ASTM D648
HDT, 0.45 MPa, 6.4 mm, unannealed	104	°C	ASTM D648
HDT, 1.82 MPa, 6.4 mm, unannealed	95	°C	ASTM D648
CTE, -30°C to 30°C, flow	7.2E-05	1/°C	ASTM D696
CTE, -30°C to 30°C, xflow	7.2E-05	1/°C	ASTM D696
Thermal Conductivity	0.2	W/m-°C	ASTM C177
Relative Temp Index, Elec	85	°C	UL 746B
Relative Temp Index, Mech w/impact	85	°C	UL 746B
Relative Temp Index, Mech w/o impact	85	°C	UL 746B
<b>PHYSICAL</b>			
Specific Gravity	1.18	-	ASTM D792
Specific Gravity, color	1.22	-	ASTM D792
Water Absorption, (23°C/24hrs)	0.1	%	ASTM D570
Water Absorption, (23°C/Saturated)	0.4	%	ASTM D570
Mold Shrinkage, flow, 3.2 mm	0.4 – 0.6	%	SABIC method
Mold Shrinkage, xflow, 3.2 mm	0.4 – 0.6	%	SABIC method
Melt Flow Rate, 260°C/2.16 kgf	10	g/10 min	ASTM D1238
<b>ELECTRICAL</b>			
Volume Resistivity	1.E+17	Ω.cm	ASTM D257
Surface Resistivity	>1.E+16	Ω	ASTM D257
Dielectric Strength, in oil, 3.2 mm	19.4	kV/mm	ASTM D149

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Relative Permittivity, 50/60 Hz	3	-	ASTM D150
Relative Permittivity, 100 Hz	3	-	ASTM D150
Dissipation Factor, 50/60 Hz	0.005	-	ASTM D150
Dissipation Factor, 100 Hz	0.0049	-	ASTM D150
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D495
Hot Wire Ignition {PLC}	1	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
<b>FLAME CHARACTERISTICS</b>			
UL Yellow Card Link	<a href="#">E121562-221034</a>	-	-
UL Recognized, 94V-0 Flame Class Rating	1.49	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	2.48	mm	UL 94
Oxygen Index (LOI)	32	%	ASTM D2863
<b>INJECTION MOLDING</b>			
Drying Temperature	80 – 90	°C	
Drying Time	3 – 4	Hrs	
Drying Time (Cumulative)	8	Hrs	
Maximum Moisture Content	0.04	%	
Melt Temperature	245 – 275	°C	
Nozzle Temperature	245 – 275	°C	
Front - Zone 3 Temperature	245 – 275	°C	
Middle - Zone 2 Temperature	220 – 275	°C	
Rear - Zone 1 Temperature	220 – 255	°C	
Mold Temperature	60 – 80	°C	
Back Pressure	0.3 – 0.7	MPa	
Screw Speed	40 – 70	rpm	
Shot to Cylinder Size	30 – 80	%	
Vent Depth	0.038 – 0.076	mm	

## DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.