



### Cycloloy® Resin C2950

## Americas: COMMERCIAL

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

You may also be interested in:		
Enhanced Property	Data Sheet	
Improved HVAC Impact Resistance	<a href="#">DX211</a>	Additional Information
Improved HVAC Impact Resistance	<a href="#">DX110</a>	Additional Information
Improved UL Performance	<a href="#">DX240</a>	Additional Information

TYPICAL PROPERTIES *	TYPICAL VALUE	UNIT	STANDARD
<b>MECHANICAL</b>			
Tensile Stress,yield, Type I, 50 mm/min	62	MPa	ASTM D 638
Tensile Stress,break,Type I, 50 mm/min	40	%	ASTM D 638
Flexural Stress,yield, 2.5 mm/min, 100mm span	102	MPa	ASTM D 790
Flexural Modulus, 2.5 mm/min, 100mm span	2650	MPa	ASTM D 790
Hardness, Rockwell R	123	-	ASTM D 785
<b>IMPACT</b>			
Izod Impact, notched, 23°C	534	J/m	ASTM D 256
Izod Impact, notched, -30°C	160	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	61	J	ASTM D 3763
Instrumented Impact Total Energy, -30°C	54	J	ASTM D 3763
<b>THERMAL</b>			
Vicat Softening Temp, Rate 8.60	112	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, thin sealed	90	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, thin sealed	104	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, thin sealed	95	°C	ASTM D 648
CTE, -30°C to 30°C, flow	7.2E-05	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	7.2E-05	1/°C	ASTM D 696
Thermal Conductivity	0.2	W/m·°C	ASTM C 177
Relative Temp Index, Elec	85	°C	UL 746B
Relative Temp Index, Mech w/Impact	85	°C	UL 746B

- Typical values only. Variations in sample selection are possible. For various colourabil values are measured, at least one of the four storage at 210°C after addition of 100% H<sub>2</sub>O.
- All properties, except the total chlorine content, are measured on injection nuclear samples.
- All properties are measured according to ISO 209.

This application is for editorial selection purposes only to be used for publication only.  
 This article is not intended for journal presentation. It is only a preprint and it is subject to the conditions.  
 One manuscript according to IJL

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>THERMAL</b>			
Relative Temp Index, Icleg w/o Impact	85	°C	UL 746B
<b>PHYSICAL</b>			
Specific Gravity	1.18	-	ASTM D 792
Specific Gravity, cobr	1.22	-	ASTM D 792
Water Absorption, 24 hrs @ 50°C	0.1	%	ASTM D 570
Water Absorption, eqv. equilibrium, 23°C	0.4	%	ASTM D 570
Mold Shrinkage, flow, 32 mm	0.4-0.6	%	SABIC Method
Mold Shrinkage, xflow, 32 mm	0.4-0.6	%	SABIC Method
Melt Flow Rate, 260°C/2.16 kgf	10	g/10 min	ASTM D 1238
<b>ELECTRICAL</b>			
Volume Resistivity	1.E+17	Ωcm-cm	ASTM D 257
Surface Resistivity	>1.E+16	Ωcm	ASTM D 257
Dielectric Strength, Icleg, 32 mm	19.4	kV/mm	ASTM D 149
Relative Permittivity, 50/60 Hz	3	-	ASTM D 150
Relative Permittivity, 100 Hz	3	-	ASTM D 150
Dissipation Factor, 50/60 Hz	0.005	-	ASTM D 150
Dissipation Factor, 100 Hz	0.0049	-	ASTM D 150
Arc Resistance, Tc gatebar (PLC)	6	PLC Code	ASTM D 495
Hot Wire Ignitability (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)	1	PLC Code	UL 746A
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94V-0 Flame Class Rating (2)	1.49	mm	UL 94
UL Recognized, 94-SV-B Rating (2)	2.48	mm	UL 94
CSA (See File for complete listing)	LS88480	File No.	CSA LISTED

<sup>1</sup> Typical values only. Variations within normal tolerance are possible. On various colored filaments, the color may affect the value after a few hours of heat storage at 260°C due to melt shrinkage. All properties, except thermal, were determined on injection molded samples.

<sup>2</sup> Only applicable for materials selected for preparation to be used for promotional design. This rating is not transferable to other material prepared under other conditions. One flame spread according to UL.

Source: SABIC Innovative Plastics IP Div.

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
FLAME CHARACTERISTICS Oxygen Index (OI)	32	%	ASTM D 2853

<sup>1</sup> Typical values only. Variations within normal tolerance are possible. On various colored filaments, the filament may have a slight color change after 240°C heat treatment.

All properties, except thermal stability, determined at Injecon test machine samples.

All samples are prepared according to ISO 2853.

<sup>2</sup> Cyclooy resin for general industrial purposes or for a particular design.

<sup>3</sup> This data is not intended to reflect material presented under any other name or in any other form than that the conditions.

<sup>4</sup> One measurement according to UL.

Source: OI-O, Lab Update:

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
<b>Injection Molding</b>		
Drying Temperature	80-90	°C
Drying Time	3-4	hrs
Drying Time (Cm thickness)	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	220-265	°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

\* NOTE: Back Pressure, Screw Speed, Shot to Cylinder Size and Vent Depth are only mentioned as general guidelines. These may not apply or need adjustments specific situations such as two slot sizes, thin wall molding and gas-assist molding.

1) Typical values only. Variations within normal tolerance are possible. On various colors of filaments, some variations in heat resistance and/or color stability may occur.

2) Cyclooy resin is for mold additive purposes only and for promotional design.

3) This data is not intended to reflect material properties. It is only offered as a general guide.

4) One filament was according to UL.

Source: GMG, Last Update:

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