CYCOLOY™ FR RESINS C2950

REGION ASIA

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 20260305

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
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
IMPACT			
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
THERMAL			
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
PHYSICAL			
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
ELECTRICAL			
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

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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
FLAME CHARACTERISTICS			
UL Yellow Card Link	E207780-228471	-	-
UL Yellow Card Link 2	E45587-236935	-	-
UL Recognized, 94V-0 Flame Class Rating	1.5	mm	UL 94
UL Recognized, 94-5VB Flame Class Rating	2.49	mm	UL 94
Oxygen Index (LOI)	32	%	ASTM D2863
INJECTION MOLDING			
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	

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