



Cycloloy* Resin CH6410

Europe-Africa-Middle East: COMMERCIAL

CH6410 is a high heat, impact modified PC resin, with nonbrominated, nonchlorinated flame retardant system. Limited colors only.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	55	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	95	%	ISO 527
Tensile Modulus, 1 mm/min	2300	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	2400	MPa	ISO 178
Hardness, H358/30	100	MPa	ISO 2039-1
IMPACT			
Izod Impact, notched 80*10*4 +23°C	50	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 0°C	19	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	15	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	55	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	15	kJ/m ²	ISO 179/1eA
THERMAL			
Thermal Conductivity	0.2	W/m-°C	ISO 8302
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.5E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	134	°C	ISO 306
Vicat Softening Temp, Rate B/120	135	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	126	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	113	°C	ISO 75/Ae

1) Typical values only. Variations within normal tolerances are possible for variose colours. All values are measured at least after 48 hours storage at 230C/50% relative humidity.
All properties, expect the melt volume rate are measured on injection moulded samples.
All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.
3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.
4) Own measurement according to UL.





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THERMAL			
Relative Temp Index, Elec	100	°C	UL 746B
Relative Temp Index, Mech w/impact	100	°C	UL 746B
Relative Temp Index, Mech w/o impact	100	°C	UL 746B
PHYSICAL			
Mold Shrinkage on Tensile Bar, flow (2)	0.5 - 0.7	%	GE Method
Density	1.2	g/cm ³	ISO 1183
Melt Volume Rate, MVR at 260°C/5.0 kg	16	cm ³ /10 min	ISO 1133
ELECTRICAL			
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	3	PLC Code	UL 746A
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 0.8 mm	35	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	25	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	17	kV/mm	IEC 60243-1
Relative Permittivity, 50/60 Hz	2.7	-	IEC 60250
Relative Permittivity, 1 MHz	2.7	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.001	-	IEC 60250
Dissipation Factor, 1 MHz	0.01	-	IEC 60250
Comparative Tracking Index	225	V	IEC 60112
FLAME CHARACTERISTICS			
UL Recognized, 94V-1 Flame Class Rating (3)	1	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	1.5	mm	UL 94
Glow Wire Flammability Index 960°C, passes at	1.5	mm	IEC 60695-2-12
Glow Wire Ignitability Temperature, 1.0 mm	825	°C	IEC 60695-2-13

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
FLAME CHARACTERISTICS			
Glow Wire Ignitability Temperature, 2.0 mm	825	°C	IEC 60695-2-13
Oxygen Index (LOI)	38	%	ISO 4589

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Source, GMD, Last Update: 06/11/2007





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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	90 - 100	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	270 - 300	°C
Nozzle Temperature	250 - 290	°C
Front - Zone 3 Temperature	260 - 300	°C
Middle - Zone 2 Temperature	250 - 290	°C
Rear - Zone 1 Temperature	230 - 260	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	60 - 90	°C

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