

Cycloloy* Resin C6800

Americas: COMMERCIAL

PC+ABS, nonchlorinated, nonbrominated flame retardant.

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	62	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	50	%	ASTM D 638
Tensile Modulus, 50 mm/min	2680	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	103	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2680	MPa	ASTM D 790
Hardness, Rockwell R	120	-	ASTM D 785
IMPACT			
Izod Impact, notched, 23°C	587	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	67	J	ASTM D 3763
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	109	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	98	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.2E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.2E-05	1/°C	ASTM E 831
Thermal Conductivity	0.2	W/m·°C	ASTM C 177
Relative Temp Index, Elec	90	°C	UL 746B
Relative Temp Index, Mech w/impact	85	°C	UL 746B
Relative Temp Index, Mech w/o impact	90	°C	UL 746B
PHYSICAL			
Specific Gravity	1.19	-	ASTM D 792
Specific Gravity, color	1.18	-	ASTM D 792
Water Absorption, 24 hours	0.1	%	ASTM D 570
Water Absorption, equilibrium, 23C	0.4	%	ASTM D 570
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	11	g/10 min	ASTM D 1238
ELECTRICAL			
Volume Resistivity	1.E+17	Ohm-cm	ASTM D 257
Surface Resistivity	>1.E+14	Ohm	ASTM D 257
Dielectric Strength, in oil, 3.2 mm	17.9	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	0.0048	-	ASTM D 150
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}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94V-1 Flame Class Rating (3)	1.47	mm	UL 94

UL Recognized, 94V-0 Flame Class Rating (3)	2	mm	UL 94
UL Recognized, 94-5VB Rating (3)	2.59	mm	UL 94

Source GMD, last updated:11/14/2000

Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	75 - 80	°C
Drying Time	2 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.04	%
Melt Temperature	230 - 265	°C
Nozzle Temperature	230 - 265	°C
Front - Zone 3 Temperature	230 - 265	°C
Middle - Zone 2 Temperature	225 - 260	°C
Rear - Zone 1 Temperature	220 - 250	°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

Source GMD, last updated:11/14/2000

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. 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) Internal measurements according to UL standards.

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