

Cycoloy* Resin IP1000
Americas: COMMERCIAL

Automotive applications: High impact and ductility to -22F for interior trim and instrument panel applications.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	530	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	550	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	120	%	ASTM D 638
Tensile Modulus, 50 mm/min	22400	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	860	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	22700	kgf/cm ²	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	68	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	50	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	509	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -30°C	571	cm-kgf	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	126	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	129	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	108	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ASTM E 831
PHYSICAL			
Specific Gravity	1.13	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 260°C/5.0 kgf	13.5	g/10 min	ASTM D 1238



Cycloloy* Resin IP1000
Americas: COMMERCIAL

PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	105 - 110	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.04	%
Melt Temperature	275 - 300	°C
Nozzle Temperature	275 - 300	°C
Front - Zone 3 Temperature	260 - 300	°C
Middle - Zone 2 Temperature	255 - 295	°C
Rear - Zone 1 Temperature	250 - 290	°C
Mold Temperature	60 - 90	°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

