



CYCOLOY™ Resin C1000HF

Europe-Africa-Middle East: LIMITED USE

CYCOLOY C1000HF is a general purpose PC+ABS blend specially developed for thin wall applications requiring a high flow with a good balance of properties. It is suitable for applications in the automotive and appliance industry.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	71	mg/1000cy	SABIC Method
Tensile Stress, yield, 5 mm/min	50	MPa	ISO 527
Tensile Stress, break, 5 mm/min	40	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	55	MPa	ISO 527
Tensile Stress, break, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	4	%	ISO 527
Tensile Strain, break, 5 mm/min	45	%	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	25	%	ISO 527
Tensile Modulus, 1 mm/min	2400	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	86	MPa	ISO 178
Flexural Modulus, 2 mm/min	2300	MPa	ISO 178
Hardness, H358/30	98	MPa	ISO 2039-1
Hardness, Rockwell R	117	-	ISO 2039-2
IMPACT			
Izod Impact, notched 80*10*3 +23°C	40	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	15	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	40	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 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	8.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ISO 11359-2





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THERMAL			
Ball Pressure Test, 75°C +/- 2°C	PASSES	-	IEC 60695-10-2
Ball Pressure Test, approximate maximum	100	°C	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	114	°C	ISO 306
Vicat Softening Temp, Rate B/120	116	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	117	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	95	°C	ISO 75/Ae
Relative Temp Index, Elec	60	°C	UL 746B
Relative Temp Index, Mech w/impact	60	°C	UL 746B
Relative Temp Index, Mech w/o impact	60	°C	UL 746B
PHYSICAL			
Mold Shrinkage on Tensile Bar, flow (2) (5)	0.5 - 0.7	%	SABIC Method
Density	1.12	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.7	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Volume Rate, MVR at 260°C/5.0 kg	24	cm ³ /10 min	ISO 1133
ELECTRICAL			
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, 1 MHz	2.7	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.002	-	IEC 60250
Dissipation Factor, 1 MHz	0.007	-	IEC 60250
Relative Permittivity, 50/60 Hz	2.8	-	IEC 60250





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FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.5	mm	UL 94
UL Recognized, 94HB Flame Class Rating 2nd value (3)	3	mm	UL 94
Glow Wire Flammability Index 650°C, passes at	3.2	mm	IEC 60695-2-12





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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	95 - 105	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	260 - 290	°C
Nozzle Temperature	260 - 290	°C
Front - Zone 3 Temperature	255 - 290	°C
Middle - Zone 2 Temperature	255 - 290	°C
Rear - Zone 1 Temperature	250 - 280	°C
Hopper Temperature	60 - 80	°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



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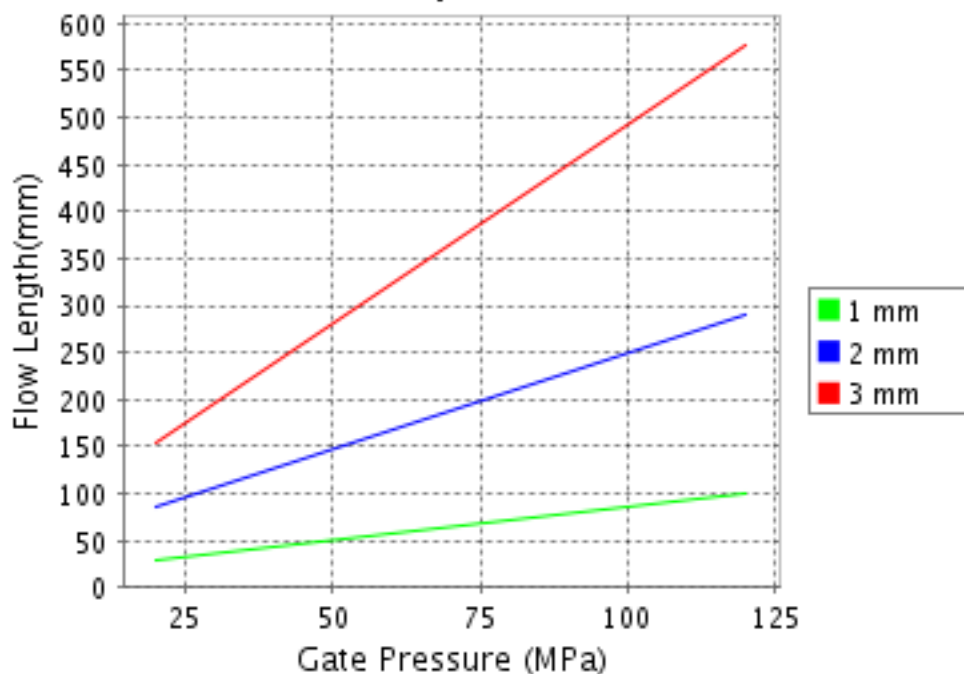
CALCULATED FLOW LENGTH INDICATION

Moldflow® Radial Flow Analysis

CYCOLOY® C1000HF

Melt Temperature : 275°C

Mold Temperature : 75°C



Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.

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