



CYCOLOY™ Resin XCY620

Americas: COMMERCIAL

PC+ ABS Automotive applications, High Impact and High Flow, ductility at low temperature, excellent properties retention after Hydrolytic and Heat Aging

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	560	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	530	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4.7	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	115	%	ASTM D 638
Tensile Modulus, 5 mm/min	23400	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	900	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	23400	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 50 mm/min	54	MPa	ISO 527
Tensile Stress, break, 50 mm/min	51	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.5	%	ISO 527
Tensile Strain, break, 50 mm/min	115	%	ISO 527
Tensile Modulus, 1 mm/min	2200	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	83	MPa	ISO 178
Flexural Modulus, 2 mm/min	2200	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	65	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	48	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	571	cm-kgf	ASTM D 3763
Instrumented Impact Total Energy, -30°C	713	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*3 +23°C	70	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	45	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 +23°C	55	kJ/m ²	ISO 180/1A





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IMPACT			
Izod Impact, notched 80*10*4 -30°C	45	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	70	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	45	kJ/m ²	ISO 179/1eA
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	60	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	45	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	127	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	107	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ASTM E 831
Thermal Conductivity	0.2	W/m-°C	ISO 8302
CTE, -40°C to 40°C, flow	7.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	Pass	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	127	°C	ISO 306
Vicat Softening Temp, Rate B/120	129	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	126	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	105	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.14	-	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	22	g/10 min	ASTM D 1238
Density	1.14	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.4	%	ISO 62





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PHYSICAL			
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 260°C/5.0 kg	18	cm ³ /10 min	ISO 1133
Melt Viscosity, 260°C, 1500 sec-1	195	Pa-s	ISO 11443
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





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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	95 - 105	°C
Drying Time	2 - 4	hrs
Drying Time (Cumulative)	6 - 8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	260 - 290	°C
Nozzle Temperature	240 - 280	°C
Front - Zone 3 Temperature	250 - 290	°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
Back Pressure	0.3 - 0.7	MPa
Shot to Cylinder Size	30 - 80	%



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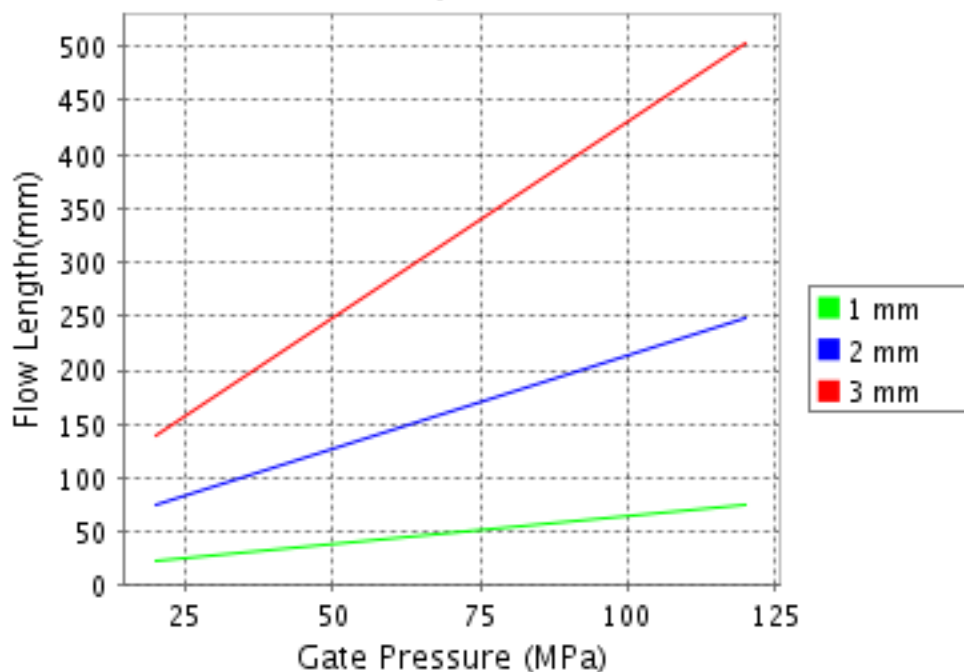
CALCULATED FLOW LENGTH INDICATION

Moldflow® Radial Flow Analysis

CYCOLOY® XCY620

Melt Temperature : 265°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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