

Cycoloy* Resin CY6010 Americas: COMMERCIAL

Cycoloy CY6010 resin is a flame retardant PC/ABS blend featuring excellent flow together with good impact and UL-94 V0 listing at 1.5mm. Its excellent flow combined with balanced heat and good practical impact makes it an ideal candidate for a wide variety of applications.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	640	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	480	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	34	%	ASTM D 638
Tensile Modulus, 5 mm/min	28400	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	980	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	26800	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 50 mm/min	63	MPa	ISO 527
Tensile Stress, break, 50 mm/min	43	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4	%	ISO 527
Tensile Strain, break, 50 mm/min	40	%	ISO 527
Tensile Modulus, 1 mm/min	2670	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	95	MPa	ISO 178
Flexural Modulus, 2 mm/min	2650	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	9	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	6	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	203	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*3 +23°C	10	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	5	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	10	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	5	kJ/m ²	ISO 179/1eA

¹ Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 230C/50% relative humidity. All properties, except 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 this or any other material under actual fire conditions.
⁴ Own measurement according to UL.
⁵ Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

Dongguan Yi-Ming Plastic Chemical Co., Ltd.

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THERMAL			
Vicat Softening Temp, Rate B/50	0	°C	ASTM D 1525
HDT, 1.82 MPa, 3.2mm, unannealed	81	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.3E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.8E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	7.1E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.2E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	88	°C	ISO 306
Vicat Softening Temp, Rate B/120	92	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	73	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.18	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.43 - 0.47	%	SABIC Method
Melt Flow Rate, 260°C/2.16 kgf	34	g/10 min	ASTM D 1238
Density	1.18	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.1	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.05	%	ISO 62
Melt Volume Rate, MVR at 220°C/10.0 kg	0	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/2.16 kg	30	cm ³ /10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/10 kg	0	cm ³ /10 min	ISO 1133
Melt Viscosity, 260°C, 1500 sec-1	100	Pa-s	ISO 11443
FLAME CHARACTERISTICS			
UL Compliant, 94V-1 Flame Class Rating (3)(4)	1	mm	UL 94 by GE
UL Compliant, 94V-0 Flame Class Rating (3)(4)	1.5	mm	UL 94 by GE

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