SABIC Innovative Plastics™

سابك sabic

Cycoloy* Resin LG9020

Americas: COMMERCIAL

Low Gloss Cycoloy. Available only in natural, to be custom color concentrated and UV stabilized at the molding press.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	550	kgf/cm²	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	540	kgf/cm²	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	4.6	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	120	%	ASTM D 638
Tensile Modulus, 5 mm/min	23200	kgf/cm²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	860	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	23200	kgf/cm²	ASTM D 790
Tensile Stress, yield, 50 mm/min	53	MPa	ISO 527
Tensile Stress, break, 50 mm/min	52	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	4.3	%	ISO 527
Tensile Strain, break, 50 mm/min	120	%	ISO 527
Tensile Modulus, 1 mm/min	2390	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	39	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	581	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	54	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	32	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	63	kJ/m²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	123	°C	ASTM D 1525

(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.
(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.

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TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	126	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	103	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.6E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	6.6E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	123	°C	ISO 306
Vicat Softening Temp, Rate B/120	125	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	101	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.13	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 260°C/5.0 kgf	18	g/10 min	ASTM D 1238
Density	1.13	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	0.39	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.12	%	ISO 62
Melt Volume Rate, MVR at 265°C/5.0 kg	20	cm³/10 min	ISO 1133

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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	240 - 290	°C
Nozzle Temperature	240 - 290	°C
Front - Zone 3 Temperature	240 - 290	°C
Middle - Zone 2 Temperature	240 - 285	°C
Rear - Zone 1 Temperature	240 - 275	°C
Hopper 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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