SABIC Innovative Plastics™

Cycolac* Resin X37

Americas: COMMERCIAL

ABS, injection moulding, high heat grade.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	490	kgf/cm²	ASTM D 638
Tensile Modulus, 5 mm/min	24600	kgf/cm²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	840	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	24600	kgf/cm²	ASTM D 790
Hardness, Rockwell R	109	-	ASTM D 785
IMPACT			
Izod Impact, notched, 23°C	21	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -40°C	5	cm-kgf/cm	ASTM D 256
Gardner, 23°C	138	cm-kgf	ASTM D 3029
THERMAL			
HDT, 1.82 MPa, 6.4 mm, unannealed	103	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.92E-05	1/°C	ASTM E 831
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			
Specific Gravity	1.05	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.8	%	SABIC Method
Melt Flow Rate, 230°C/3.8 kgf	1	g/10 min	ASTM D 1238
OPTICAL			
Gloss, untextured, 60 degrees	94	-	ASTM D 523
ELECTRICAL			
Dielectric Strength, in air, 1.6 mm	36.8	kV/mm	ASTM D 149
Arc Resistance, Tungsten {PLC}	6	PLC Code	ASTM D 495
Hot Wire Ignition {PLC}	3	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	1	PLC Code	UL 746A

(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
ELECTRICAL			
High Ampere Arc Ign, surface {PLC}	0	PLC Code	UL 746A
Comparative Tracking Index (UL) {PLC}	0	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.6	mm	UL 94

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	95 - 100	°C
Drying Time	2 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.01	%
Melt Temperature	245 - 275	°C
Nozzle Temperature	245 - 275	°C
Front - Zone 3 Temperature	245 - 255	°C
Middle - Zone 2 Temperature	225 - 240	°C
Rear - Zone 1 Temperature	200 - 210	°C
Mold Temperature	50 - 80	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	30 - 60	rpm
Shot to Cylinder Size	50 - 70	%
Vent Depth	0.038 - 0.051	mm

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