



CYCOLAC™ Resin MG37EPX
Americas: COMMERCIAL

ABS plating grade optimized for a broad processing window for both painted and plated applications. NSF standard 61 compliant (80 sq in/L)

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	440	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	54	%	ASTM D 638
Tensile Modulus, 5 mm/min	25200	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	920	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	28600	kgf/cm ²	ASTM D 790
Hardness, Rockwell R	106	-	ASTM D 785
Tensile Stress, yield, 5 mm/min	48	MPa	ISO 527
Tensile Stress, break, 5 mm/min	36	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2	%	ISO 527
Tensile Strain, break, 5 mm/min	18.3	%	ISO 527
Tensile Modulus, 1 mm/min	2720	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	73	MPa	ISO 178
Flexural Modulus, 2 mm/min	2470	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	25	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -40°C	8	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	363	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	23	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	8	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -40°C	6	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	88	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	76	°C	ASTM D 648

(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.
 (6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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THERMAL			
CTE, -40°C to 40°C, flow	6.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	94	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	82	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.05	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.4 - 0.6	%	SABIC Method
Melt Flow Rate, 230°C/3.8 kgf	6.6	g/10 min	ASTM D 1238
Melt Viscosity, 240°C, 1000 sec-1	2170	poise	ASTM D 3825
Density	1.04	g/cm ³	ISO 1183
Melt Flow Rate, 220°C/10.0 kg	22	g/10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.52	mm	UL 94

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(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	80 - 95	°C
Drying Time	2 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	255 - 280	°C
Nozzle Temperature	255 - 280	°C
Front - Zone 3 Temperature	250 - 270	°C
Middle - Zone 2 Temperature	230 - 245	°C
Rear - Zone 1 Temperature	215 - 230	°C
Mold Temperature	40 - 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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