SABIC Innovative Plastics™

Cycolac* Resin GDT6400

Asia Pacific: COMMERCIAL

AUTOMOTIVE. Low gloss for unpainted interior applications. Available in custom colors.

TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	450	kgf/cm²	ASTM D 638
Tensile Modulus, 5 mm/min	22400	kgf/cm²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	710	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	22400	kgf/cm²	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	25	cm-kgf/cm	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	300	cm-kgf	ASTM D 3763
Instrumented Impact Energy @ peak, -30	117	cm-kgf	ASTM D 3763
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	92	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	78	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	83	°C	ASTM D 648
CTE, -40°C to 60°C, flow	1.55E-04	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, 220°C/10.0 kgf	16	g/10 min	ASTM D 1238
Melt Viscosity, 260°C, 1000 sec-1	1600	poise	ASTM D 3825
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.49	mm	UL 94

1) Typical values only. Variations within normal tolerances are possible for variose colours.All values are measured at least after 48 hours storage at 230C/50% relative humidity.
All properties, expect 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.

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	80 - 90	°C
Drying Time	2 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.01	%
Melt Temperature	230 - 275	°C
Nozzle Temperature	230 - 275	°C
Front - Zone 3 Temperature	230 - 245	°C
Middle - Zone 2 Temperature	215 - 225	°C
Rear - Zone 1 Temperature	200 - 210	°C
Mold Temperature	25 - 60	°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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