SABIC Innovative Plastics™

Cycolac* Resin CRT3370F

Europe-Africa-Middle East: COMMERCIAL

CYCOLAC CRT3370F is a 17% glass reinforced injection moulding grade of ABS. It exhibits high rigidity and excellent dimensional stability combined with medium/high heat performance and good flow charasteristics.

TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Taber Abrasion, CS-17, 1 kg	35	mg/1000cy	SABIC Method
Tensile Stress, break, 5 mm/min	62	MPa	ISO 527
Tensile Stress, break, 50 mm/min	67	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
Tensile Strain, break, 50 mm/min	2	%	ISO 527
Tensile Modulus, 1 mm/min	5100	MPa	ISO 527
Flexural Stress, break, 2 mm/min	90	MPa	ISO 178
Flexural Modulus, 2 mm/min	4700	MPa	ISO 178
Hardness, H358/30	120	MPa	ISO 2039-1
Hardness, Rockwell R	117	-	ISO 2039-2
IMPACT			
Izod Impact, unnotched 80*10*4 +23°C	20	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	7	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	6	kJ/m²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	7	kJ/m²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	6	kJ/m²	ISO 179/1eA
THERMAL			
Thermal Conductivity	0.2	W/m-°C	ISO 8302
CTE, -40°C to 40°C, flow	4.E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	4.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	PASSES	-	IEC 60695-10-2
Ball Pressure Test, approximate maximum	100	°C	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	101	°C	ISO 306

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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TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
THERMAL			
Vicat Softening Temp, Rate B/120	103	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	101	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	96	°C	ISO 75/Ae
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			
Mold Shrinkage on Tensile Bar, flow (2) (5)	0.3 - 0.6	%	SABIC Method
Density	1.17	g/cm³	ISO 1183
Water Absorption, (23°C/sat)	1	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.2	%	ISO 62
Melt Flow Rate, 220°C/10.0 kg	14	g/10 min	ISO 1133
Melt Volume Rate, MVR at 220°C/10.0 kg	14	cm³/10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	>1.E+15	Ohm-cm	IEC 60093
Surface Resistivity, ROA	>1.E+15	Ohm	IEC 60093
Dielectric Strength, in oil, 0.8 mm	35	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 1.6 mm	26	kV/mm	IEC 60243-1
Dielectric Strength, in oil, 3.2 mm	18	kV/mm	IEC 60243-1
Relative Permittivity, 50/60 Hz	2.7	-	IEC 60250
Relative Permittivity, 1 MHz	2.6	-	IEC 60250
Dissipation Factor, 50/60 Hz	0.004	-	IEC 60250
Dissipation Factor, 1 MHz	0.008	-	IEC 60250
Comparative Tracking Index	450	V	IEC 60112
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.5	mm	UL 94

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TYPICAL PROPERTIES [1]	TYPICAL VALUE	UNIT	STANDARD
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating 2nd value (3)	2.5	mm	UL 94
Glow Wire Flammability Index 650°C, passes at	3.2	mm	IEC 60695-2-12

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
Injection Molding		
Drying Temperature	85 - 95	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.1	%
Melt Temperature	230 - 260	°C
Nozzle Temperature	220 - 250	°C
Front - Zone 3 Temperature	230 - 260	°C
Middle - Zone 2 Temperature	230 - 260	°C
Rear - Zone 1 Temperature	220 - 250	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	40 - 80	°C

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