



## Cyclocac\* Resin FR30U

### Americas: COMMERCIAL

Flame retardant ABS. Good indoor UV properties. Excellent moldability with no bloom. V-1/V-0/5VB rated.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	UNIT	STANDARD
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	400	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	330	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.3	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	10	%	ASTM D 638
Tensile Modulus, 5 mm/min	22400	kgf/cm <sup>2</sup>	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	690	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	24700	kgf/cm <sup>2</sup>	ASTM D 790
<b>IMPACT</b>			
Izod Impact, notched, 23°C	32	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	407	cm-kgf	ASTM D 3763
<b>THERMAL</b>			
Vicat Softening Temp, Rate B/50	94	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	88	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	75	°C	ASTM D 648
CTE, -40°C to 40°C, flow	8.46E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.82E-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
<b>PHYSICAL</b>			
Specific Gravity	1.17	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.5 - 0.8	%	GE Method
Melt Flow Rate, 230°C/3.8 kgf	5.3	g/10 min	ASTM D 1238
Melt Viscosity, 200°C, 1000 sec-1	3500	poise	ASTM D 3825
Melt Flow Rate, 220°C/5.0 kg	7	g/10 min	ISO 1133

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity.  
All properties, except 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 by this or any other material under actual fire conditions.  
4) Own measurement according to UL.



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<b>PHYSICAL</b>			
Melt Flow Rate, 220°C/5.0 kg	7	g/10 min	ISO 1133
Melt Volume Rate, MVR at 220°C/10.0 kg	28	cm <sup>3</sup> /10 min	ISO 1133
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94V-1 Flame Class Rating (3)	2.31	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	2.99	mm	UL 94
UL Recognized, 94-5VB Rating (3)	2.31	mm	UL 94

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PROCESSING PARAMETERS	TYPICAL VALUE	UNIT
<b>Injection Molding</b>		
Drying Temperature	80	°C
Drying Time	2 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.01	%
Melt Temperature	205 - 245	°C
Nozzle Temperature	205 - 245	°C
Front - Zone 3 Temperature	205 - 225	°C
Middle - Zone 2 Temperature	200 - 215	°C
Rear - Zone 1 Temperature	170 - 180	°C
Mold Temperature	50 - 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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