



CYCOLAC™ Resin DL100
Americas: COMMERCIAL

CYCOLAC DL100 is a high heat, high impact, low emissions ABS/PC blend.

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	90	%	ASTM D 638
Tensile Modulus, 5 mm/min	22800	kgf/cm ²	ASTM D 638
Hardness, Rockwell R	104	-	ASTM D 785
Tensile Stress, yield, 5 mm/min	46	MPa	ISO 527
Tensile Stress, yield, 50 mm/min	45	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.5	%	ISO 527
Tensile Strain, break, 5 mm/min	60	%	ISO 527
Tensile Strain, yield, 50 mm/min	3.4	%	ISO 527
Tensile Strain, break, 50 mm/min	10	%	ISO 527
Tensile Modulus, 1 mm/min	2200	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	69	MPa	ISO 178
Flexural Modulus, 2 mm/min	2250	MPa	ISO 178
Hardness, H358/30	91	MPa	ISO 2039-1
IMPACT			
Izod Impact, notched, 23°C	71	cm-kgf/cm	ASTM D 256
Izod Impact, notched, 23°C, 6.4mm	56	cm-kgf/cm	ASTM D 256
Izod Impact, notched 80*10*4 +23°C	35	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	15	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	34	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm	14	kJ/m ²	ISO 179/1eA
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	105	°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			
HDT, 1.82 MPa, 3.2mm, unannealed	88	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	90	°C	ASTM D 648
CTE, 23°C to 60°C, flow	9.8E-05	1/°C	ISO 11359-2
CTE, 23°C to 60°C, xflow	9.8E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	105	°C	ISO 306
Vicat Softening Temp, Rate B/120	107	°C	ISO 306
HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm	104	°C	ISO 75/Be
HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm	87	°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)	0.5 - 0.7	%	SABIC Method
Density	1.08	g/cm ³	ISO 1183
Melt Flow Rate, 220°C/10.0 kg	7	g/10 min	ISO 1133
Melt Volume Rate, MVR at 260°C/5.0 kg	8	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	1.5	mm	UL 94
UL Recognized, 94HB Flame Class Rating 2nd value (3)	3	mm	UL 94

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	90 - 100	°C
Drying Time	2 - 4	hrs
Maximum Moisture Content	0.1	%
Melt Temperature	250 - 280	°C
Nozzle Temperature	245 - 275	°C
Front - Zone 3 Temperature	250 - 280	°C
Middle - Zone 2 Temperature	250 - 280	°C
Rear - Zone 1 Temperature	230 - 260	°C
Hopper Temperature	60 - 80	°C
Mold Temperature	40 - 80	°C

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