

Cycoloy* Resin CX7720

Asia Pacific: COMMERCIAL

Cycoloy resin CX7720 is a non brominated and non chlorinated flame retardant PC/ABS resin grade featuring high heat resistance and thin wall FR. It is UL-94 listed at 1.2 mm V0 and 1.5mm 5VB. Its high heat deflection temperature allows this product to be considered for applications requiring higher heat resistance than conventional FR PC/ABS.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	65	MPa	ASTM D 638
Tensile Stress, brk, Type I, 50 mm/min	66	MPa	ASTM D 638
Tensile Strain, yld, Type I, 50 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 50 mm/min	126	%	ASTM D 638
Tensile Modulus, 50 mm/min	2860	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	99	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2810	MPa	ASTM D 790
Tensile Stress, yield, 50 mm/min	65	MPa	ISO 527
Tensile Stress, break, 50 mm/min	65	MPa	ISO 527
Tensile Strain, yield, 50 mm/min	5	%	ISO 527
Tensile Strain, break, 50 mm/min	122	%	ISO 527
Tensile Modulus, 1 mm/min	2900	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	97	MPa	ISO 178
Flexural Modulus, 2 mm/min	2090	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	150	J/m	ASTM D 256
Izod Impact, notched, -30°C	63	J/m	ASTM D 256
Instrumented Impact Total Energy, 23°C	62	J	ASTM D 3763
Izod Impact, notched 80*10*3 +23°C	11	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	8	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 +23°C	8	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	11	kJ/m ²	ISO 179/1eA
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	11	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	127	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	122	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	110	°C	ASTM D 648

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.
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.

Source, GMD, Last Update:

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
THERMAL			
HDT, 0.45 MPa, 6.4 mm, unannealed	124	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	115	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.06E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.59E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	6.06E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.59E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	127	°C	ISO 306
Vicat Softening Temp, Rate B/120	129	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	110	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.22	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 260°C/2.16 kgf	9	g/10 min	ASTM D 1238
Melt Flow Rate, 260°C/5.0 kgf	25	g/10 min	ASTM D 1238
Density	1.22	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.15	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.07	%	ISO 62
Melt Volume Rate, MVR at 260°C/5.0 kg	22	cm ³ /10 min	ISO 1133
ELECTRICAL			
Hot Wire Ignition (PLC)	2	PLC Code	UL 746A
High Ampere Arc Ign, surface (PLC)	0	PLC Code	UL 746A
Comparative Tracking Index (UL) (PLC)	3	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94V-1 Flame Class Rating (3)	1	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	1.2	mm	UL 94

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	UNIT	STANDARD
FLAME CHARACTERISTICS			
UL Recognized, 94-5VA Rating (3)	2.5	mm	UL 94
UL Recognized, 94-5VB Rating (3)	1.5	mm	UL 94

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