



CYCOLOY™ Resin C7410

Asia Pacific: COMMERCIAL

CYCOLOY C7410 resin is a talc-filled PC+ABS, nonhalogenated FR for thinwall molding applications.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	550	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	440	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3.5	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	74	%	ASTM D 638
Tensile Modulus, 5 mm/min	33700	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	970	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	32400	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 5 mm/min	58	MPa	ISO 527
Tensile Stress, break, 5 mm/min	38	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.6	%	ISO 527
Tensile Strain, break, 5 mm/min	78	%	ISO 527
Tensile Modulus, 1 mm/min	3340	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	95	MPa	ISO 178
Flexural Modulus, 2 mm/min	3260	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	32	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	7	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	0	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	31	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	7	kJ/m ²	ISO 180/1A
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	103	°C	ASTM D 1525

(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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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	80	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	87	°C	ASTM D 648
CTE, -40°C to 40°C, flow	6.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	6.E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 75°C +/- 2°C	----	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/50	103	°C	ISO 306
Vicat Softening Temp, Rate B/120	106	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	83	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.22	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.3 - 0.5	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.3 - 0.5	%	SABIC Method
Melt Flow Rate, 260°C/2.16 kgf	13.4	g/10 min	ASTM D 1238
Density	1.22	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.26	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.06	%	ISO 62
Melt Volume Rate, MVR at 260°C/2.16 kg	12	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	0.8	mm	UL 94
UL Recognized, 94-5VB Rating (3)	0	mm	UL 94

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	80 - 90	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	8	hrs
Maximum Moisture Content	0.04	%
Melt Temperature	245 - 275	°C
Nozzle Temperature	245 - 275	°C
Front - Zone 3 Temperature	245 - 275	°C
Middle - Zone 2 Temperature	220 - 265	°C
Rear - Zone 1 Temperature	220 - 255	°C
Mold Temperature	60 - 80	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	40 - 70	rpm
Shot to Cylinder Size	30 - 80	%
Vent Depth	0.038 - 0.076	mm

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