CYCOLOY™ Resin C7210A
Asia Pacific: COMMERCIAL

Cycoloy* C7210A resin is talc-filled PC+ABS, nonhalogenated FR for thinwall molding applications. Very good modulus-ductility balance.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	640	kgf/cm²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	490	kgf/cm²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3.6	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	80	%	ASTM D 638
Tensile Modulus, 5 mm/min	35800	kgf/cm²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	1080	kgf/cm²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	32000	kgf/cm²	ASTM D 790
IMPACT			
Izod Impact, unnotched, 23°C	190	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	17	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	483	cm-kgf	ASTM D 3763
THERMAL			
Vicat Softening Temp, Rate B/50	101	°C	ASTM D 1525
HDT, 0.45 MPa, 3.2 mm, unannealed	92	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	82	°C	ASTM D 648
CTE, -40°C to 40°C, flow	5.94E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.66E-05	1/°C	ASTM E 831
Relative Temp Index, Elec	90	°C	UL 746B
Relative Temp Index, Mech w/impact	85	°C	UL 746B
Relative Temp Index, Mech w/o impact	90	°C	UL 746B
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)	0.4 - 0.6	%	SABIC Method

(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.

Source GMD, last updated:

(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.

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TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
PHYSICAL			
Melt Flow Rate, 260°C/2.16 kgf	16.4	g/10 min	ASTM D 1238
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	1.19	mm	UL 94
UL Recognized, 94-5VB Rating (3)	1.98	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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