



LEXAN™ Resin 3412HF
Americas: COMMERCIAL

20% glass reinforced, high flow PC. UL rated V-1 at 0.059",

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	1010	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	1080	kgf/cm ²	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	4	%	ASTM D 638
Tensile Modulus, 5 mm/min	35100	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	1590	kgf/cm ²	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	1680	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	56200	kgf/cm ²	ASTM D 790
IMPACT			
Izod Impact, unnotched, 23°C	54	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	10	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	34	cm-kgf	ASTM D 3763
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	141	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	137	°C	ASTM D 648
Relative Temp Index, Elec	80	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	80	°C	UL 746B
PHYSICAL			
Specific Gravity	1.34	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.2 - 0.4	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.45 - 0.65	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	8.5	g/10 min	ASTM D 1238
FLAME CHARACTERISTICS			
UL Recognized, 94V-1 Flame Class Rating (3)	1.49	mm	UL 94
UL Recognized, 94V-0 Flame Class Rating (3)	2.99	mm	UL 94

(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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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	120	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	48	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	315 - 340	°C
Nozzle Temperature	310 - 330	°C
Front - Zone 3 Temperature	315 - 340	°C
Middle - Zone 2 Temperature	305 - 325	°C
Rear - Zone 1 Temperature	295 - 315	°C
Mold Temperature	80 - 115	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	40 - 70	rpm
Shot to Cylinder Size	40 - 60	%
Vent Depth	0.025 - 0.076	mm

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