

Lexan* SG-410 Sheet

Product Datasheet

Description

Lexan* SG-410 Solar Grade sheet is a pigmented UV-resistant sign material offering extended color stability and weathering performance. Lexan SG-410 sheet offers excellent aesthetics, high impact strength and has a 10-year limited written warranty against breakage and weathering[#] In addition, Lexan SG-410 sheet is easily fabricated and maintained. Lexan SG-410 sheet is available in standard colors (including white) and custom colors.

Typical Property Values ♦

Property	Test Method	Unit	Value
Physical			
Specific gravity	ASTM D792	-	1.20
Rockwell hardness	ASTM D785	-	M70, R118
Mechanical			
Tensile strength @ yield	ASTM D638	MPa	63
Flexural strength	ASTM D790	MPa	90
Compressive strength @ yield	ASTM D695	MPa	77
Elongation	ASTM D638	%	120
Modulus of elasticity	ASTM D638	MPa	2,170
Dynatup impact strength 3 mm	ASTM D3763	J	47
			56
			56
Thermal			
Coefficient of Thermal Expansion	ASTM D 696	mm/mm/°C	6.75 x 10 ⁻⁵
Heat deflection temperature	ASTM D 648	°C	
@ 1.8 MPa			127
@ 0.46 MPa			138

♦ These are typical properties and are not intended for specification purposes. If minimum certifiable properties are required, please contact your local GE-Plastics representative or the GE-Plastics Quality Services Department.

Request details of limited warranty

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Drying

Lexan* SG-410 sheet should be dried prior to thermoforming to eliminate the possibility of moisture bubbling during processing. The universal sign masking used as a protective film on the Lexan SG-410 sheet can be left on the sheet during the drying process, but care must be taken to prevent the sheets from touching in the oven. This masking is also thermoformable and can be left on the sheet throughout the forming process. (Note) The masking must be removed on the side of the sheet that contacts the mold surface. Dry the sheet in a vented, hot air circulating oven at 80 to 110 °C +/- 5 °C. The sheet should be hung vertically in the oven or racked horizontally with a minimum separation of 2.5 cm between each sheet. After the sheet is dried, it is usable for up to 8- hours without redrying, depending on the relative humidity. When automatic forming equipment is used, the sheets should be cooled to room temperature before forming to insure a uniform cycle.

Recommended drying times in circulating air ovens

Sheet thickness (mm)	Drying time (hours)	
	110 ° C	82 ° C
2/2.4	4.5	8
3	6.5	14
3.8	9.5	21
4.5	14.5	32
6	25.5	56

Forming

The forming procedure for Lexan SG410 sheet, when using a male mold, is similar to those used for standard Lexan sheet for signs (see Sign Processing Guide SPP- 6001B for details.) When female molds are utilized, the UV treated/appearance surface of the sheet will contact the mold. To minimize the surface mark-off of the UV treated surface and to reduce the potential of the material sticking to the mold, the proper selection of mold materials and design are critical. Porous materials such as wood should be avoided. Fiberglass and epoxy mold materials do reduce the materials tendency to stick to the mold surface and have produced acceptable surface finishes.

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