

Lexan* Margard* MR5 IR Sheet

Product Datasheet

Description

High abrasion resistant – weather-able, Lexan* Margard* M5 IR sheet is a both-side hard coated polycarbonate sheet offering excellent abrasion resistance, excellent dimensional stability, impact resistance, optical clarity in combination with an excellent IR absorption . This excellent Infra Red absorption with a Light to Solar gain ratio of 1.22 ♦ for the colour GN9A047T and 1.17 ♦ for the colour GN8A081T results in outstanding heat-management properties . The Solar Transmission at 6.00mm for GN8A081T is 63.5% (+/-5%) and the Solar Transmission at 6.00mm for GN9A047T is 51% (+/-5%)
Typical applications can be flat glazing in specialty vehicles , separations screens and flat glazing systems needing impact resistance combined with chemical and abrasion resistance and heat management .

Typical Property Values ♦

Property	Test Method	Unit	Value
Physical			
Density ³⁾	ISO 1183	g/cm ³	1.20
Water Absorption 23°C/Sat	ISO 62	%	0.35
Optical			
Light transmission (6mm) GN9A047T	ASTM D1003	%	62
Light transmission (6mm) GN8A081T	ASTM D1003	%	74.5
Solar transmission (6mm) GN9A047T		%	51
Solar transmission(6mm) GN8A081T		%	63.5
Taber abrasion ¹⁾			
CS10F, 500g, 500 cycles (ASTM D1044)	ASTM D1003	%haze	≤ 12
Mechanical			
Tensile stress, yield ²⁾	ISO 527	MPa	60
Tensile modulus ²⁾	ISO 527	MPa	2350
Elongation, yield ²⁾	ISO 527	%	6
Elongation, break ²⁾	ISO 527	%	100
Flexural strength, yield ³⁾	ISO 178	Mpa	90
Flexural modulus ³⁾	ISO 178	MPa	2300
Thermal			
Vicat Softening Temp, Rate B /120 ³⁾	ISO 306	°C	145
HDT/Be, 0.45 MPa ³⁾	ISO 75/Be	°C	138
Thermal Expansion ³⁾	ISO 11359-2	1 / °C	7×10 ⁻⁵

1) The target value for this property is 10% however, the reproducibility of the test method between laboratories is variable in that single, individual measurements can be as high as 12%.

2) Coating will crack before specified value.

3) Property of the base sheet and/or uncoated side.

4) These typical values and are not intended for specification purposes. If minimum certifiable properties are required please contact your local GE Advanced Materials , Specialty Film & Sheet representative.

♦ These property values have been derived from Lexan* resin data for the material used to produce this sheet product.



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Chemical resistance

Lexan* Margard* MR5IR sheet has high resistance at the coated side to many chemicals. In applications where it will come into contact with aggressive chemicals, specific (application related) testing of the material is strongly recommended.

Assembling

Parts made from Lexan Margard MR5IR sheet can be assembled with plastics, metals, rubber and other materials using many types of adhesive bonding, welding and mechanical fastening techniques. Since some of these techniques can cause environmental stress cracking, please ensure that you have carried out tests regarding its suitability for your applications or end use.

Product Availability **)

gauge (mm)	width (mm)	length (mm)	color	
3.00	2000	3000	GN8A081T	GN9A047T
6.00	2000	3000	GN8A081T	GN9A047T
8.00	2000	3000	GN8A081T	GN9A047T
12.0	2000	3000	GN8A081T	GN9A047T

**) Other gauges and other dimensions upon request and are subject to minimum order quantities.

Installation

For some applications the ripple orientation may play an important role while installing the Lexan Margard MR5IR sheet. The ripple orientation is indicated for this purpose of the protective masking.

Cleaning

- Never scrape the sheet with squeegees, razorblades or other sharp instruments.
- Do not clean Lexan Margard MR5IR sheet products under sunny and/or hot environments.
- For removal of paints, marker pen inks, lipstick, and graffiti etc., we recommend to use Butyl Cellusolve and products mentioned in the Lexan solid sheet processing manual. Do not use abrasive or alkaline cleaners.
- To remove labels, stickers etc. the use of kerosene, naphta or white spirit is generally effective.
- After having cleaned the Lexan Margard MR5IR sheet a final wash should be made, using a mild soap solution and finishing with a thorough rinsing with cold water.

Americas:

GE Advanced Materials
Specialty Sheet & Film
One Plastics Avenue
Pittsfield, MA 01201
USA
Tel. (1) (413) 448 7110
Fax. (1) (413) 448 7506

Europe:

GE Advanced Materials
Specialty Sheet & Film
Plasticslaan 1
PO Box 112
NL - 4600 AC Bergen op Zoom
The Netherlands
Tel. (31) (164) 292742
Fax. (31) (164) 291986

Pacific:

GE Advanced Materials
Specialty Sheet & Film
1266 Nanjin Road (W)
16th Floor, Plaza 66
200040 Shanghai
China
Tel. (86) 21 6288 1088
Fax. (86) 21 6288 0818

For more information call:

(800) 451-3147

Visit us online at:
www.geadvancedmaterials.com

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