POLYVANTIS

PRODUCT DATASHEET

LEXAN™ MARGARD™ MR5 IR SHEET

DESCRIPTION

High abrasion resistant, weatherable, LEXAN™ MARGARD™ MR5 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 outstanding IR absorption. 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	UNITS	VALUE
PHYSICAL			
Density	ISO 1183	g/cm³	1.20
Water absorption, 50% RH, 23 °C	ISO 62	%	0.15
Water absorption, saturation, 23°C	ISO 62	%	0.35
MECHANICAL			
Yield stress 50 mm/min	ISO 527	MPa	>60
Yield strain 50 mm/min	ISO 527	%	6
Nominal strain at break 50 mm/min	ISO 527	%	>100
Tensile modulus 1 mm/min	ISO 527	MPa	2300
Flexural strength 2 mm/min	ISO 178	MPa	90
Flexural modulus 2 mm/min	ISO 178	MPa	2300
Taber haze - 100 cycles, 500-gram, CS-10F	ASTM D1044	%	1 - 3
Taber haze - 500 cycles, 500-gram, CS-10F	ASTM D1044	%	3-8
THERMAL			
Vicat softening temperature, B/120	ISO 306	°C	145
Temperature of deflection under load (type A), 1.8 MPa, flat	ISO 75-2	°C	127
Thermal conductivity	ISO 8302	W/m.°C	0.2
Coefficient of linear thermal expansion, 23-55°C	ISO 11359-2	1/°C	$7x10^{-5}$
Ball pressure test 125 ±2°C	IEC 60695-10-2	-	Pass
ELECTRICAL			
Volume resistivity	IEC 60093	Ohm.cm	$>10^{15}$
Dielectric strength, in oil, 3.2 mm	IEC 60243-1	kV/mm	18

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

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CHEMICAL RESISTANCE

LEXAN™ MARGARD™ MR5 IR sheet has high resistance at the coated side to many chemicals, such as: diesel fuel, toluene, acetone dichloromethane. In applications where it will come into contact with aggressive chemicals, specific (application related) testing of the material is strongly recommended. We recommend you to test the chemicals in contact with LEXAN MARGARD MR5 IR prior to usage in a chemical aggressive environment.

CLEANING

For cleaning instructions consult guidelines. Do not use abrasive or highly alkaline cleaners, never scrape the sheet with squeegees, razor blades or other sharp instruments. Do not clean LEXAN MARGARD sheet products in hot sun or at elevated temperatures. For removal of paints, marking pen, inks, lipstick etc. use Butyl Cellusolve. To remove labels, stickers etc. the use of kerosene, naphta, or white spirits is generally effective. Afterwards, a warm final wash should be made, using a mild soap solution, and ending with a thorough rinsing with cold water.

PRODUCT AVAILABILITY

Product code:	**LEXAN™ MARGARD™ MR5IR**
Standard gauges:	3,6,8 & 12 mm
Standard size:	2000 x 3000mm
Color:	IR Green GN8A081T

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

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