POLYVANTIS

PRODUCT DATASHEET

LEXAN™ H6900 SHEET

DESCRIPTION

LEXAN™ H6900 is a flame-retardant opaque polycarbonate sheet containing glass fibres. In addition to meeting the EN45545-2 R6-HL2 requirements, it offers good impact resistance, high stiffness, and ease of processing, making it suitable for a wide variety of rail vehicle applications.

TYPICAL PROPERTY VALUES*

PROPERTY	TEST METHOD	UNITS	VALUE
PHYSICAL			
Density	ISO 1183	g/cm³	1.29
MECHANICAL			
Tensile Modulus, 5 mm/min, +23 °C	ISO 527	MPa	3850
Tensile Stress, yield, 5 mm/min, +23 °C	ISO 527	MPa	42
Tensile Stress, break, 5 mm/min, +23 °C	ISO 527	MPa	40
Tensile Strain, break, 5 mm/min, +23 °C	ISO 527	%	13
Flexural modulus, 2mm/ min +23 °C	ISO 178	MPa	3800
Flexural strength, 2mm/min, +23 °C	ISO 178	MPa	80
IMPACT			
Charpy Impact, V-notched, 3 mm, +23 °C	ISO 179	kJ/m²	15
Izod Impact, notched, 3.2mm, +23 °C	ASTM D256	J/m²	143
Izod Impact, notched, 80*10*4 +23 °C	ISO 180/1A	kJ/m²	17
Izod Impact, notched, 80*10*4 - 30 °C	ISO 180/1A	J/m²	10
THERMAL			
Vicat Softening temperature, B/ 120 °C/h	ISO 306	°C	124
HDT/Af 1.8 MPa Flatw 80*10*4 sp=64mm	ISO 75/Af	°C	118
HDT/Bf 0.45 MPa Flatw 80*10*4 sp=64mm	ISO 75/Bf	°C	126
CTE, -40 °C to 90°C, flow	ISO 11359-2	1/°C	$3.6X10^{-5}$
CTE, -40 °C to 90°C, xflow	ISO 11359-2	1/°C	$7.4X10^{-5}$

*These property values have been derived from LEXAN™ resin data for the material used to produce this sheet product. These typical values are not intended for specification purposes.

PROPERTY SHEET◊	TEST METHOD	UNITS	VALUE
IMPACT			
Multiaxial impact, MAI	ISO 6603	J	16
MECHANICAL			
Tensile modulus 5MM/MIN	ISO 527	MPa	3300
FIRE RATINGS			
EN45545-2			R6/HL2
MARHE	ISO 5660-1:2015/AMD1:2019	KW/m2	<90
Smoke toxicity	ISO 5659-2	a.u.	$Ds_4 < 300$ / $VOF_4 < 600$
Smoke density	ISO 5659-2	CIT_g	< 0.90

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PROCESSING

LEXAN™ H6900 sheet is suitable for thermoforming. To reach optimal results the materials needs to be heated with sandwich type heating systems to reach uniform heat uptake. Pre-drying of this material is necessary. For pre-drying guidelines, please follow standard guidelines for pre-drying standard LEXAN™ sheet.
LEXAN H6900 has a processing window between 170 and 210°C. When forming a draft angle of 3 degrees should be allowed. Post mold shrinkage is dependent on tool temperature and environmental circumstances but will typically be in the range of 0.4-0.6%. It is strongly recommended to evaluate impact of part and mold design prior to production. The nature of filled products i.e. H6900 can be different from traditional unfilled products.

SAFETY

The processing guidance given in this documentation is given in good faith and the trust that in all cases you wear the correct Personal Protective Equipment (PPE), e.g. helmet, proper gloves, safety goggles etc. to safely fabricate, e.g. (but not limited to) sawing, cutting, forming our sheets and films. In all cases you should follow local and national regulations around the wear of PPE's prescribed or mandatory to perform these tasks in a safely manor.

PRODUCT AVAILABILITY

Product code:	LEXAN™ H6900
Color:	7G8B1494- Off white
Textures:	H6906 Polished/Suede
Gauges:	2-3mm (0.118"- 0.197")
Standard width:	1300mmm

For colors and dimensions, please contact your POLYVANTIS sales representative.

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