

# GEPAX™ 7000 SHEET

## PRODUCT DATASHEET

### DESCRIPTION

GEPAX™ 7000 sheet is an opaque polycarbonate sheet, specifically developed for a wide range of internal industrial applications previously dominated by metals and upgraded commodity plastics. GEPAX 7000 sheet combines extremely high impact performance with good stiffness over a wide temperature range (-30 to 110 °C). GEPAX 7000 sheet provides high impact performance, very good heat resistance and excellent formability.

### TYPICAL PROPERTY VALUES

PROPERTY	TEST METHOD	UNITS	VALUE
<b>PHYSICAL</b>			
Density	ISO 1183	g/cm <sup>3</sup>	1.20
Water absorption, 50% RH, 23 °C	ISO 62	%	0.15
Water absorption, saturation, 23°C	ISO 62	%	0.35
<b>MECHANICAL</b>			
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
<b>IMPACT</b>			
Charpy impact, notched 23°C, 3.0 mm	ISO 179/1eA	kJ/m <sup>2</sup>	75
Izod impact, unnotched 23°C, 3.0 mm	ISO 180/1U	kJ/m <sup>2</sup>	NB
Izod impact, notched 23°C, 3.0 mm	ISO 180/1A	kJ/m <sup>2</sup>	70
<b>THERMAL</b>			
Vicat softening temperature, rate B/120	ISO 306	°C	145
Temperature of deflection under load (type A), 1.8 MPa, flat	ISO 75	°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 <sup>-5</sup>
Ball pressure test 125 ±2°C	IEC 60695-10-2	-	Pass
<b>ELECTRICAL</b>			
Volume resistivity	IEC 60093	Ohm.cm	>10 <sup>15</sup>
Dielectric strength, in oil, 3.2 mm	IEC 60243-1	kV/mm	18
<b>FIRE RATINGS</b>			
Glow Wire Flammability Index (GWFI)	IEC 60695-2-12	°C	Pass 850°C (3mm)

◆ These property values have been derived from LEXAN™ resin data for the material used to produce this sheet product.

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## PROCESSING

GEPAX™ 7000 sheet is an excellent candidate for thermoforming. It offers high, deep draw ratios, equal wall thickness distribution, and it can be formed into complex shapes using standard thermoforming equipment. Sandwich type heating systems give the best results. GEPAX 7000 sheet has a forming temperature range of 180 - 220°C. When forming, a draft angle of at least 3° should be allowed, and post mold shrinkage of 0.5 - 0.9% taken into account.

## CHEMICAL RESISTANCE

GEPAX 7000 sheet has sufficient resistance to most mineral oils, greases, aliphatic hydrocarbons and acids under low or moderate stress levels. In applications where the GEPAX 7000 sheet will come into contact with aggressive chemicals, specific (application related) testing is always advised. Effective painting systems can improve chemical resistance.

## PRE-DRYING

It is important to ensure that GEPAX 7000 sheet is kept free of moisture prior to thermoforming. A hot air circulating oven set 120°C is recommended. Pre-drying times vary from 4-24hours, depending on sheet thickness.

## ASSEMBLING

Parts made from GEPAX 7000 sheet can be assembled with plastics, metals, rubber and other materials using many types of adhesive bonding, welding and mechanical fastening techniques. Further information and advice is available on request.

## PAINTING

For either functional or decorative reasons it may be necessary to apply a finish to sheets or vacuum formed parts. GEPAX 7000 sheet is an excellent candidate for use with a wide variety of modern decoration techniques. A list of approved paint systems and suppliers is available upon request.

## PRODUCT AVAILABILITY

<b>Product code:</b>	GEPAX 7000 sheet
<b>Standard width:</b>	Grade: 7000 – 1250mm & 2050mm Grade: 7005 / 7006 / 70011N - 1300mm & 2050
<b>Gauges:</b>	1.0 - 8.0mm
<b>Textures:</b>	Polished/Polished (0) Polished/Matt (5) Polished/Suede (6), Polished/Haircell(11N)
<b>Colors:</b>	Black 78927, Light Gray 78944, Off White 78943.

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