

Description

Gepax 3000 sheets are a series of one side co-extruded opaque polycarbonate sheet, consisting of a colored cap-layer and a black core. The Gepax 3000 sheet series offers, in addition to its excellent mechanical and thermal properties: high impact performance and excellent formability.

Typical Property Values ♦

Property	Test Method	Unit	Value
Physical			
Density	ISO 1183	g/cm ³	1.20
Water absorption, Equilibrium	ISO 62	%	0.35
Mechanical			
Tensile strength, yield	ISO 527	MPa	60
Tensile strength, break	ISO 527	MPa	55
Tensile modulus	ISO 527	MPa	2200
Tensile elongation, yield	ISO 527	%	6
break		%	100
Flexural strength, yield	ISO 178	MPa	90
Flexural modulus	ISO 178	MPa	2200
Izod Notched Impact 20 °C	ISO 180/1A	kJ/m ²	11
-20 °C		kJ/m ²	11
Gardner Impact 20°C	SABIC Method	J	>40
-40°C		J	>40
Flexed plate impact (3mm) at 20°C:	ISO6603/2	J	150
energy at break		J	150
failure mode			ductile
at -20°C:		J	120
energy at break		J	120
failure mode			ductile
Taber Abrasion, CS 17, 1000g, 1000 cycles	ASTM D1044	mg	10
Thermal			
Vicat Softening Temp, Rate B/ 120	ISO 306	°C	145
HDT, 1.80.45 MPa	ISO 75/Ae	°C	136
Ball Pressure Test 125 °C	IEC 335-1		Pass
Thermal Expansion Coefficient	ASTM D696		7x10 ⁻⁵
Flammability			
Oxygen Index	ISO 4589	%	25

♦ 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 3000 sheet is an excellent candidate for thermoforming. It offers color consistency at deep draw ratios (DR=3; DE £ 2) and it can be formed into complex shapes using standard thermoforming equipment. Sandwich type heating systems give the best results. Gepax 3000 sheet has a forming temperature range of 190 - 210°C. When forming, a draft angle of at least 3° should be taken into account. The post mold shrinkage is 0.6 - 0.8%.

Chemical Resistance

Gepax 3000 sheet has a good resistance to most mineral oils, greases, aliphatic hydrocarbons and acids under low or moderate stress levels. In applications where the Gepax 3000 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 3000 sheets are free of moisture prior to thermoforming. A hot air circulating oven set at 120°C is recommended. Pre-drying times vary from 3-24 hours, depending on sheet thickness.

Assembling

Parts made from Gepax 3000 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 3000 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

Product code:	Gepax 30211N sheet (= AB configuration with 11N texture)
Standard size:	1250 x 2050mm
Max. width:	1250mm
Gauges:	3.0 - 6.0mm
Textures:	Hair-cell 11N (top) / Sandblast (bottom) Color of core sheet: Black
Finishing colors:	White WH9220, Gray 78942, Yellow YW2003, Blue BL3337, Brown 58919



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