



# GRIPHEN®

GRIPHEN® is high impact transparent sheet. The product is easy to fabricate and thermoform without pre-drying offering faster cycle times hence cost saving. The product offers high definition on thermoforming and clarity on cold and hot bending. The product can be used in point of sale and point of purchase applications,

GRIPHEN® can be used for applications where food contact is required. GRIPHEN® also offers excellent colour range, UV protected product and also the unique frosty (satin) look

#### ALSO AVAILABLE:

GRIPHEN® UV, (UV protected), GRIPHEN® COLOUR (transparent and opal colours), GRIPHEN® COLOUR UV (transparent colours with UV protection) GRIPHEN® FROST (anti reflex frost surface)

#### GRIPHEN® BENEFITS:

- Very easy to thermoform and no pre drying needed
- Food contact approval
- Outstanding high clarity and surface quality
- GRIPHEN® has more than 2 times the impact strength of high impact PMMA
- Good chemical resistance

#### APPLICATION AREAS:

Indoor and outdoor signs, shelving and racking systems, food displays/bin/dividers, thermoformed covers, vending machine faces, medical equipment (packaging etc), industrial equipment (machine coverings, machine protections and many different kinds of technical parts).

#### DELIVERY PROGRAM:

Standard size: 1250 x 2050 mm, 2050 x 3050 mm

Thickness range: 1,5 – 10 mm

Colour: Clear and Transparent colours

## GRIPHEN® TECHNICAL SPECIFICATIONS

Property	Value	Unit	Standard
<b>Physical properties</b>			
Density	1,27	g/cm <sup>3</sup>	ISO 1183
Refractive index (20 °C)	1,57		ISO 489
Moisture absorption 24 hours, 23 °C, 50% RH	0,2	%	ISO 62
<b>Mechanical properties</b>			
Tensile strength at break	55	MPa	ISO 527
Elongation at yield (at break)	40	%	ISO 527
Elastic modulus	2200	N/mm <sup>2</sup>	ISO 527
Flexural modulus	2300	N/mm <sup>2</sup>	ISO 178
Charpy unnotched impact strength +23 °C	NB	kJ/m <sup>2</sup>	ISO 179/1eU
Izod notched impact strength +23 °C	11,5	kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength -30 °C	4,4	kJ/m <sup>2</sup>	ISO 180/A
Rockwell hardness	R115	R-scale	ISO 2039-2
Tensile strength at yield (at break)		N/mm <sup>2</sup>	ISO 527
<b>Thermal properties</b>			
Linear coefficient of thermal expansion (23-70 °C)	51x10 <sup>-6</sup>	K <sup>-1</sup>	ISO 11359-2
Heat deflection temperature, HDT A (1,80 N/mm <sup>2</sup> )	68	°C	ISO 75
Heat deflection temperature, HDT B (0,45 N/mm <sup>2</sup> )	72	°C	ISO 75
Thermal conductivity	0,19	W/m.K	DIN 8302
<b>Electrical properties</b>			
Volume resistivity, dry	10 <sup>16</sup>	Ω x cm	IEC 60093
Surface resistivity, dry	10 <sup>15</sup>	Ω	IEC 60093
Dielectric strength, dry	30	kV/mm	IEC 60243
Dielectric constant, dry 1 MHz	2,4		IEC 60250
Dissipation factor (tan δ), dry 1 MHz	0,02		IEC 60250

Properties reported here are typical values. Arla Plast makes no representation that the material in any particular shipment will conform exactly to the values given. The above information is based upon experience and given in good faith. Due to many factors which are outside our knowledge and control, no warranty is given or is to be implied with respect to such information. Detailed product specification and technical manual/information is available on request.