GRIPHEN™

GRIPHEN™ is a transparent glycol modified copolyester that fullfill the most diverse requirements. It is extremely easy to fabricate and to thermoform. The easy fabrication combined with the high transparency and high impact strength has made GRIPHEN™ to a reliable solution in many applications where A-PET, PVC, PMMA or PC traditionally has been used. GRIPHEN™ is a cost effective plastic. Faster forming cycles save time, labour and money.

Qualities:
- No pre drying required
- Easy to fabricate
- Very high resistance to chemicals
- Excellent transparency
- Light weight compared to glass
- Excellent impact strength
- Good thermoforming properties
- Compatible with foodstuffs (not UV version)

GRIPHEN™ UV provides an enhanced weather resistance. The co-extruded protection layer contains an ultraviolet absorber that protects the sheet from the harmful effects of sunlight.

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).

Available in:
Colours upon request.

Case above:
Commercial sign.

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ARLA PLAST AB SWEDEN

GRIPHEN™ Properties

Property	Unit	Value	Standard
Physical properties			
Density	g/cm^3	1,27	ISO 1183
Light transmission	%	86-91	ASTM D1003
Water absorption 24 hours in water 23°C	%	0,2	ISO 62
Refractive index at 20°C		1,57	ISO 489
Mechanical Properties			
Tensile strength at yield (at break)	N/mm^2	53	ISO 527
Elongation at yield (at break)	%	40	ISO 527
Elastic modulus	N/mm^2	2200	ISO 527
Charpy unnotched impact strength +23°C	kJ/m^2	no break	ISO 179/2D
Izod notched impact strength +23°C	kJ/m^2	11,5	ISO 180/1A
Izod notched impact strenght -30°C	kJ/m^2	4,4	ISO 180/1A
Rockwell hardness		R115	ISO 2039-2
Thermal Properties			
Linear coefficient of thermal expansion (-30-40°C)	mm/mm, K	$5,1 \times 10^{-5}$	ASTM D696
Heat deflection temperature, HDT A (1,80 N/mm^2)	°C	68	ISO 75
HDT B (0,45 N/mm^2)		72	
Thermal conductivity	W/m, K	0,19	DIN 52612
Fire Properties			
Fire classification according to UL94, 3,2 mm	Class	V2	UL 94
France: Epiradiateurtest	Class	M2	NFP 92 501
Oxygen Index	%	26	ASTM D2863-77
Electrical Properties			
Volume resistivity, dry	Ω x cm	10^{15}	IEC 93
Surface resistivity, dry	Ω	10^{16}	IEC 93
Dielectric constant, dry 1 MHz		2,4	IEC 250
Dissipation factor (tan δ), dry 1 MHz		0,02	IEC 250

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. Spectar is a registered trademark of Eastman Chemical Company.

Arla sheets are produced from resins that are certified according to UL 94. Furthermore, several products have been tested according DIN 4102 (class B1 and B2), DIN 5510 (class S3, SR1 and SR 2, ST1 and ST2), BS 476 part 7 (class 1Y), NF P 92-501 (M2), CSE/75/A (class 1), CSE/RF/3/77 (class 1), UNE 23.727-90 (class M.4). A list of products that have been tested and their respective classification is presented on www.arlaplast.se. If information regarding classifications according to other standards is needed, it is often possible to retrieve information from our raw material suppliers. Please contact our technical support.