



Product data sheet, December 2007

Vivak® Design

Frosted solid copolyester sheets



Advantages:

- exclusive appearance
- excellent thermoformability
- good impact strength
- high fire rating

Vivak® Design are frosted solid sheets made of thermoplastic copolyester. They offer high impact strength, a good fire rating and are fully recyclable.

Applications:

Vivak® Design is ideally suited for use in partition walls, furniture, light elements, POS (displays, shelf partitions), trade show booths (walls, floors, pillars, etc.), shop-fitting systems, direction signs, advertising symbols and partitions.

Vivak® Design sheets can be rapidly thermoformed at low energy consumption without predrying, while retaining their frosted surface. The result: shorter production cycles, extreme degrees of stretching and accurate mould surface reproduction. In addition, the sheets are easy to screen print and machine.

	Test Conditions	Typical Values	Unit	Test Method
PHYSICAL				
Density		1.27	g/cm ³	ISO 1183-1
Moisture absorption	after storage in standard climate 23 °C/ 50% RH	0.2	%	ISO 62-4
	after storage in water at 23 °C until saturation	0.6	%	ISO 62-1
Gloss	20°	<7		DIN EN ISO 2813
MECHANICAL				
Tensile stress	at yield	> 45	MPa	ISO 527-2/1B/50
Elongation	at yield	4	%	ISO 527-2/1B/50
Tensile strength		> 45	MPa	ISO 527-2/1B/50
Elongation	at break	> 35	%	ISO 527-2/1B/50
Elastic modulus		2020	MPa	ISO 527-2/1B/1
Limiting flexural stress		ca. 80	MPa	ISO 178
Impact strength	Charpy, unnotched	no break	kJ/m ²	ISO 179/1fU
	Charpy, notched	ca. 7	kJ/m ²	ISO 179/1eA
	Izod, notched	ca. 6	kJ/m ²	ISO 180/1A
THERMAL				
Vicat softening temperature	Method B50	80	°C	ISO 306
Thermal conductivity		0.2	W/m K	DIN 52612
Coef. of linear thermal expansion		0.05	mm/m K	DIN 53752-A
Heat deflection temperature under load	Method A: 1.80 MPa	63	°C	ISO 75-2
	Method B: 0.45 MPa	70	°C	ISO 75-2
ELECTRICAL				
Dielectric strength		20	kV/mm	IEC 60243-1
Volume resistivity		10 ¹⁵	Ohm-cm	IEC 60093
Surface resistivity		10 ¹⁶	Ohm	IEC 60093
Dielectric constant	at 10 ³ Hz	2.6		IEC 60250
	at 10 ⁶ Hz	2.4		IEC 60250
Dissipation factor	at 10 ³ Hz	0.005		IEC 60250
	at 10 ⁶ Hz	0.02		IEC 60250

The mechanical properties were measured on sheets of 4 mm thickness.

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i-line

Ideas, innovative, intelligent, interesting, ...

Bayer Sheet Europe i-line represents the next generation of quality products. This seal guarantees innovative and intelligent first-class solutions at all times for a multitude of requirements.

Light Transmission:

Test Method according to DIN 5036

The stated thicknesses are all available as standard. Please ask us for more information.

The stated values are typical values only.

Light transmission in %	2	3	4	5
Vivak® Design clear 099	75 %	75 %	74 %	74 %
Vivak® Design white 145	68 %	45 %	33 %	28 %

Available sizes:

Vivak® Design is available in thicknesses from 2 to 5 mm and in the following colours and formats.

Colors:

Vivak® Design clear 099

Vivak® Design white 145

Size (Standard):

2,050 x 1,250 mm

Other sizes, colours and sheet thicknesses available on request.

Thermoforming:

Owing to their outstanding flow and mould surface reproduction, **Vivak® Design** sheets can be thermoformed at low temperatures without predrying. Because of its low specific heat capacity, **Vivak®** requires only a little amount of energy for thermoforming.

Permanent Service Temperature:

The permanent service temperature without load is approx. 65 °C.

Fire rating:

Vivak® sheets have been tested to various European standards, including EN13501-1 (B-s1 d0), DIN 4102 (B1), BS476 part 7 (class 1y), CSE/75/A & CSE/RF/3/77 (class 1) and NFP 92-501 (M2). In addition, the basic raw materials are UL94-V2 rated according to UL 94.

For detailed information on the individual fire ratings of Vivak® Design, please contact our Technical Support.

Bayer Sheet Europe also produces multiwall sheets in polycarbonate (Makrolon® multi UV), and solid sheets in polycarbonate (Makrolon® GP) and in polyester (Vivak® and Axpert®). For more information, take a look at www.bayersheeteurope.com

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