

Vivak®

Solid copolyester sheet

Your benefits:

- excellent thermoformability
- good impact strength
- suitable for food-contact applications
- good fire rating

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

Vivak® clear 099 is a clear transparent sheet with extremely high light transmission and high gloss. Vivak® clear 099 can be used for food-contact applications.

Applications:

Ideal fields of application for **Vivak®** are: P.O.S. (displays, price tag holders, shelf partitions), direction signs, promotional symbols, food containers and trays, flat and formed machine coverings, partitions.

Vivak® can be rapidly thermoformed at low energy consumption, short production cycles, extreme degrees of stretching and accurate mold surface reproduction, without predrying. The sheets are easy to screen print, 3D-print and machine.

	Test Conditions	Typical values	Unit	Standard
PHYSICAL Density Moisture absorption Refractive index	after storage in standard climate 23 °C/50 %r.F. after storage in water at 23 °C until saturation 20 °C	1.27 0.2 0.6 1.567	g/cm ³ % % –	ISO 1183-1 ISO 62-4 ISO 62-1 ISO 489
MECHANICAL Tensile stress at yield Elongation at yield Tensile strength Elongation at break Elastic modulus Limiting flexural stress Impact strength	Charpy, unnotched Charpy, notched Izod notched	> 45 4 > 45 > 35 2,020 ca. 80 no break ca. 7 ca. 6	MPa % MPa % MPa MPa kJ/m ² kJ/m ² kJ/m ²	ISO 527-2/1B/50 ISO 527-2/1B/50 ISO 527-2/1B/50 ISO 527-2/1B/50 ISO 527-2/1B/1 ISO 178 ISO 179/1fU ISO 179/1eA ISO 180/1A
THERMAL Vicat softening temperature Thermal conductivity Coeff. of linear thermal expansion Heat deflection temperature under load	Method B50 Method A: 1.80 MPa Method B: 0.45 MPa	80 0.2 0.05 63 70	°C W/m K mm/m K °C °C	ISO 306 DIN 52612 DIN 53752-A ISO 75-2 ISO 75-2
ELECTRICAL Dielectric strength Volume resistivity Surface resistivity Dielectric constant Dissipation factor	at 10 ³ Hz at 10 ⁶ Hz at 10 ³ Hz at 10 ⁶ Hz	16.1 10 ¹⁵ 10 ¹⁶ 2.6 2.4 0.005 0.02	kV/mm Ohm·cm Ohm	IEC 60243-1 IEC 60093 IEC 60093 IEC 60250 IEC 60250 IEC 60250 IEC 60250

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

Light Transmission:

Test method according to DIN EN ISO 13468. The stated thicknesses are not all available as standard. Please ask us for more information. The stated values are typical values only.

Light transmission in %	0.6	0.75	1	1.5	2	2.5	3	4	5	6	8	10	12	15
Vivak® clear 099	90	90	90	90	89	89	88	88	87	86	85	84	80	80

Available sizes:

Vivak® clear 099 is available in thicknesses of 0.6-15 mm. Our standard sizes are the dimensions: 2,050 x 1,250 mm and 3,050 x 2,050 mm.

Other colors are on request.

Please contact us, if you need other dimensions.

Thermoforming:

Due to their excellent flow and mold surface reproduction, **Vivak®** sheets can be thermoformed at low temperatures without predrying. Because of its low specific heat capacity, **Vivak®** requires little energy for thermoforming.

Permanent Service Temperature:

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

Food compatibility

Vivak® clear 099 can be used for food-contact applications.

Fire Rating (*):

Country	Standard	Rating	Thickness	Color
Europe	EN13501-1	B-s1, d0 B-s2, d0	2-8 mm 2-6 mm	clear 099 all colors
UK	BS 476 Part 7	Class 1Y	2&15 mm	clear 099
Germany	DIN 4102	B1 (indoors)	0.6-12 mm	all colors
Italy	CSE RF 2/75/A CSE RF 3/77	Classe 1 (wall)	2-8 mm	all colors

(*): fire certificates are limited in time, always check if the mentioned certificate is still valid.

Glow wire flammability index, IEC 60695-2-12, in °C (*)

	0.6	0.75	1	1.5	2	2.5	3	4
Vivak® clear 099	960	960	900	960	960	960	960	960
Vivak® bronze 850					960		960	

