Axpet®
Solid polyester sheet

Your benefits:
- good impact strength
- good fire rating
- suitable for food-contact applications

Solid **Axpet®** sheets are made from thermoplastic polyester. They offer high impact strength, a good fire rating and are suitable for food-contact applications. **Axpet®** is resistant to chemicals and fully recyclable.

Axpet® clear 099 is a clear-transparent sheet with high light transmission and gloss.

Axpet® NR clear 099 is a transparent sheet with a matt non-reflective finish on one side.

Axpet® white 100 is a white sheet that is opaque even in small thicknesses.

Axpet® white 130 is a translucent sheet offering good light diffusion combined with a pleasant white color.

Axpet UV clear 2099 is a clear transparent sheet with UV protection on both sides to prevent visible yellowing.

Applications:
Ideal fields of indoor application for **Axpet®** are:
P.O.S. (displays, price tag holders, shelf partitions), poster glazing, poster boards (also backlit), direction signs, promotional symbols, food containers and trays, decorative inserts, pharmaceutical products, flat machine guards.

The sheets can be machined and screen printed with ease. Owing to the crystallization properties of polyester, the sheet may turn white during thermoforming. Line-bent **Axpet®** sheets show a hinge effect and are ideal for cold folding. For outdoor applications it is recommended to use **Axpet® UV** sheets.

	Test Conditions	Typical values	Unit	Standard
PHYSICAL				
Density		1.33	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	0.5	%	ISO 62-1
Refractive index	20 °C	1.585	–	ISO 489
MECHANICAL				
Tensile stress at yield		› 55	MPa	ISO 527-2/1B/50
Elongation at yield		4	%	ISO 527-2/1B/50
Tensile strength		› 55	MPa	ISO 527-2/1B/50
Elongation at break		› 25	%	ISO 527-2/1B/50
Elastic modulus		2,500	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. 4	kJ/m^2	ISO 179/1eA
	Izod, notched	ca. 3	kJ/m^2	ISO 180/1A
THERMAL				
Vicat softening temperature	Method B50	75	°C	ISO 306
Thermal conductivity		0.25	W/m K	DIN 52612
Coeff. 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		60	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	3.4		IEC 60250
	at 10^6 Hz	3.1		IEC 60250
Dissipation factor	at 10^3 Hz	0.015		IEC 60250
	at 10^6 Hz	0.056		IEC 60250

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

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> Bayer MaterialScience S-Line, the standard product line, represents a range of certified quality products which offer the reliable solution for most applications.

Light Transmission:
Test method according to DIN 5036. 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 %	0.8	1	1.5	2	3	4	5	6
Axpet® clear 099	90	89	89	88	87	86	85	84
Axpet® NR clear 099	88	87	87	86				
Axpet® white 100		‹ 2		‹ 1	‹ 1			
Axpet® white 130		28	28	28	30			
Axpet® UV clear 2099		89		88	87	86	85	84

Available sizes: Axpet® is available in thicknesses of 0.8-6 mm and in the following sizes; other sizes, colors and sheet thicknesses on request.

Colors:

Axpet® clear 099	Axpet® white 100	Axpet® UV clear 2099	**Sizes (standard):** 2,050 x 1,250 mm
Axpet® NR clear 099	Axpet® white 130		3,050 x 2,050 mm

Permanent Service Temperature:
The maximum permanent service temperature without load is approx. 60°C.

Fire Rating (*): Oxygen index (LOI) 25%, ISO 4589

Country	Standard	Rating	Thickness	Color
Germany	DIN 4102	B1 (indoors) burning droplets	0.8 – 6 mm 0.8 – 2 mm 1 – 4 mm	clear 099 NR clear 099 white 130
	DIN 5510 - 2	S4 SR2 ST2 S4 SR2 ST2	1 mm 1 mm	clear 099 NR clear 099
UK	BS 476 Part 7	Class 1Y	1.5 & 6 mm	clear 099
France	NF P 92-501 & 505	M2	0.8 – 6 mm 0,.8 – 4 mm 2 – 4 mm	clear 099 NR clear 099 white 130
	NF F 16-101 & 102	F1	0.8 – 6 mm 1 – 4 mm	clear 099 white 130

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

	0.8	1	1.5	2	2.5	3	4	5	6
Axpet® clear 099	960	960	960	960		960	960		
Axpet® NR clear 099		900							
Axpet® white 100		900		960					
Axpet® white 130		960	960	960		960	960		

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

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

Bayer MaterialScience