

# Axpet®

## Solid polyester sheet



S Line  
Standard

### 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 and a good fire rating. Axpet® is resistant to chemicals and fully recyclable.

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

**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, 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
<b>PHYSICAL</b>				
Density		1.33	g/cm <sup>3</sup>	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
<b>MECHANICAL</b>				
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 <sup>2</sup>	ISO 179/1fU
	Charpy, notched	ca. 4	kJ/m <sup>2</sup>	ISO 179/1eA
	Izod, notched	ca. 3	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL</b>				
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
<b>ELECTRICAL</b>				
Dielectric strength		60	kV/mm	IEC 60243-1
Volume resistivity		10 <sup>15</sup>	Ohm·cm	IEC 60093
Surface resistivity		10 <sup>16</sup>	Ohm	IEC 60093
Dielectric constant	at 10 <sup>3</sup> Hz	3.4		IEC 60250
	at 10 <sup>6</sup> Hz	3.1		IEC 60250
Dissipation factor	at 10 <sup>3</sup> Hz	0.015		IEC 60250
	at 10 <sup>6</sup> Hz	0.056		IEC 60250

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

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Covestro 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 EN ISO 13468-2. 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/ Axpet® UV clear 2099	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			

**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  
 Axpet® NR clear 099                Axpet® white 130

### Sizes (standard):

2,050 x 1,250 mm  
 3,050 x 2,050 mm

### Food compatibility

Axpet® clear 099 can be used for food-contact applications

### Permanent Service Temperature:

The maximum permanent service temperature without load is approx. 60°C.

### Fire Rating (\*):

Country	Standard	Rating	Thickness	Color
Europe	EN 13501-1	B-s1, d0	0.8 - 5 mm 0.8 - 2 mm	clear 099 NR clear 099
Germany	DIN 4102	B1 (indoors)	0.8 - 6 mm 0.8 - 2 mm 1 - 4 mm	clear 099 NR clear 099 white 130
UK	BS 476 Part 7	Class 1Y	1.5 & 6 mm	clear 099
France	NF P 92-501 & 505	M2	2 - 4 mm	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.

Covestro 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.sheets.covestro.com](http://www.sheets.covestro.com).



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The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance, information and recommendations to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by Covestro. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent. This product is not designated for the manufacture of a medical device or of intermediate products for medical devices<sup>1)</sup>. Nonetheless, any determination as to whether a product is appropriate for use in a medical device or intermediate products for medical devices, for food contact products or cosmetic applications must be made solely by the purchaser of the product without relying upon any representations by Covestro.  
 1) Please see the „Guidance on Use of Covestro Products in a Medical Application“ document.

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