

► Product identification

AKRYLON XT is the brand name for extruded Polymethyl methacrylate (PMMA) sheets.

The **AKRYLON XT** programme offers solutions to both indoor and outdoor applications.

AKRYLON XT is available in clear and opal white standard products, and a wide range of colours.

AKRYLON XT sheets are produced and tested according to EN ISO 7823-2.

► Characteristics

AKRYLON XT sheets have good optical properties and a brilliant surface.

AKRYLON XT sheets offer excellent transparency, good mechanical properties, are UV resistant, have very good weathering and ageing resistance and remain colour constant for years.

AKRYLON XT sheets can be used in contact with foodstuffs, as they meet all current European food control legislation.

AKRYLON XT sheets do not contain any toxic materials or heavy metals, which may cause environmental damage or health risks. It is insoluble in water, and not subject to hazardous materials identification.

AKRYLON XT sheets are easy to recycle.

► Applications

Construction components

- Light domes
- Partition walls
- Door glazing
- Roofing
- Skylights for caravans

Advertising and signage

- Moulded letters
- Store Displays
- Shop fittings
- Illuminated graphics panels

Lighting

- Lighting control lenses
- Domestic light fittings

Other applications

- Containers
- Lettering templates
- Solariums (special grade, UV-transmitting)
- Sound walls barrier

Engineering components

- Machine housings
- Machine safety covers

► Fabrication and finishing techniques

AKRYLON XT sheets are easy to handle.

They can be machined using all the usual methods, such as sawing, drilling, polishing etc., and are easy to thermoform.

More detailed information on these items can be found in our 'USER GUIDE', further in this brochure.

► Technical information

GENERAL

Property	Method	Units	AKRYLON XT
Density	ISO 1183	g/cm ³	1.19
Water absorption 24h/23°C – 50x50x4mm ³	ISO 62	%	0.2
Forming temperature air pressure		°C	140-160
Forming temperature vacuum		°C	160-190
Moulding shrinkage		%	0.5-0.8

MECHANICAL

Property	Method	Units	AKRYLON XT
Tensile strength	ISO 527-2	Mpa	70
Elongation at break	ISO 527-2	%	4
Tensile modulus	ISO 527-2	Mpa	3200
Flexural strength	ISO 178	Mpa	115
Flexural modulus	ISO 178	Mpa	3300
Ball indentation hardness	ISO 2039-1	N/mm ²	175
Impact strength Charpy unnotched	ISO 179-1	kJ/m ²	17
Impact strength Charpy notched	ISO 179-1	kJ/m ²	2

THERMAL

Property	Method	Units	AKRYLON XT
Vicat temperature (B 50)*	ISO 306	°C	105
Specific heat capacity	IEC 1006	J/gK	1.47
Linear thermal expansion	DIN 53752	K ⁻¹ *x10 ⁻⁵	7
Thermal conductivity	DIN 52612	W/mK	0.18
Service temperature continuous use		°C	70
Max. temperature short term use		°C	70
Degradation temperature		°C	90

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OPTICAL

Property	Method	Units	AKRYLON XT
Light transmission (3mm)	ISO 13468-1	%	93
Refractive index	ISO 489	nD	1.492

ELECTRICAL

Property	Method	Units	AKRYLON XT
Surface resistivity	IEC 60093	Ω	3x10 ¹⁵ - 3x10 ¹⁶
Volume resistivity	IEC 60093	$\Omega \times m$	1x10 ¹³ - 5x10 ¹³
Electrical strength	IEC 60243-1	kV/mm	10
Dielectric strength	DIN 53481	kV/mm	30
Dielectrical dissipation factor 50 Hz	DIN 53483-2		0.06
Dielectrical dissipation factor 1 KHz	DIN 53483-2		0.04
Dielectrical dissipation factor 1 MHz	DIN 53483-2		0.02
Relative permittivity 50 Hz	DIN 53483-2	kJ/m^2	2.7
Relative permittivity 1 KHz	DIN 53483-2		3.1
Relative permittivity 1MHz	DIN 53483-2		2.7

*pre-treatment 16h at 80°C

Note: These technical data of our products are typical ones; the actually measured values are subject to production variations. The particulars given herein are based on our actual knowledge and experience. They do not release the user from the obligation of carrying out own tests and trials due to the abundant factors which may affect processing and application of our products, and they do neither imply any legally binding assurance of certain properties or suitability for specific purposes. It is the user's responsibility to ensure that any protective rights and existing laws and regulations are observed.