

Aikon® AR 3023

2-sides coated abrasion-resistant extruded acrylic sheet

Aikon® AR 3023 is a clear transparent hard coated extruded acrylic sheet, which offers good optical clarity combined with the glass-like abrasion-resistance from the thermally cured hard coating.

Acrylic material by standard has a very high resistance against UV-radiation, which is further improved with the hard coating, offering a very long lifetime against UV-radiation.

BENEFITS

glass-like abrasion resistance
superior UV resistance
good chemical resistance
good impact resistance

APPLICATIONS

health protection
partition walls
shop fittings
furniture

PHYSICAL	Test Conditions	Typical values(1)	Unit	Standard
Density	ISO 1183	1,2	g/cm ³	
Water Absorption	water at 23 °C	0.3	%	ISO 62

MECHANICAL

Tensile Strength		70	MPa	ISO 527-2
Elongation at break		4	%	ISO 527-2
Tensile Modulus		3300	MPa	ISO 527-2
Flexural Strength		104	MPa	ISO 178
Flexural Modulus		3000	MPa	ISO 178
Rockwell Hardness		100	-	M scale
Taber abrasion resistance (2)	Δ haze after 500 cycles (500 g CS 10F)	2-8	%	ASTM D1044

Thermal

Vicat Softening Temperature	50 N, 50°C/h	105-112	°C	ISO 306
Heat Deflection Temperature	1.82 Mpa	105	°C	ISO 75-1
Coefficient of linear thermal expansion	0-50°C	7x10 ⁻⁵	°K ⁻¹	
Thermal Conductivity		0.19	W/mK	ASTM C177

Electrical

Dielectric Strength		20-25	kV/mm	DIN 53481
Dielectric Constant (50Hz)		3.6		DIN 53483
Dissipation Factor tanδ (1 MHz)		0.06		DIN 53483
Surface Resistivity		>1015	Ohm	IEC 60093
Volume Resistivity		>1015	Ohm.cm	IEC 60093

(1) These values are measured on injection moulded samples by the sheet manufacturer, and are not intended for specification purposes.

(2) Measured in-house according to ASTM D1044

Optical

Refractive Index		1.49		ISO 489
Light Transmission	3mm transparent sheet	92	%	ASTM D1003
Haze	3mm transparent sheet	< 1	%	

Impact Resistance

Charpy impact strenght	unnotched	15	kJ/m ²	ISO 179/1fu
Izod impact strenght	notched	1.5	kJ/m ²	ISO 180/1A

Permanent Service Temperature:

The permanent service temperature without load is approx. -40°C - +70°C continuous, +90°C short term.

Fire Behaviour

UL94 fire rating HB

Delivery formats

Aikon® AR 3023 is available in clear transparent colour and in thicknesses from between 3-15mm. Available in size 3000 x 2000mm. Other sizes, colours, and sheet thicknesses on request.

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