

# Aikon® AR 4023

## 2-sides coated abrasion-resistant cast acrylic sheet

Aikon® AR 4023 is a clear transparent hard coated cast acrylic sheet, which offers superior 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

spectator protection in ice hockey arenas  
yacht glazings  
noise barrier walls

PHYSICAL	Test Conditions	Typical values(1)	Unit	Standard
Density	ISO 1183	1,2	g/cm <sup>3</sup>	
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 D1003

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 <sup>-5</sup>	°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) Test data of Momentive SilFORT™ PHC XH100P Hard Coat

**Optical**

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

**Impact Resistance**

Charpy impact strength	unnotched	15	kJ/m <sup>2</sup>	ISO 179/1fu
Izod impact strength	notched	1.5	kJ/m <sup>2</sup>	ISO 180/1A

**Permanent Service Temperature:**

The permanent service temperature without load is approx. -40°C - +80°C.

**Fire Behaviour**

UL94 fire rating HB

**Delivery formats**

Aikon® AR 4023 is available in clear transparent colour and in thicknesses from between 3-30mm. Available in size 3000 x 1980mm. Other sizes, colours, and sheet thicknesses on request.

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