

## Solid Polycarbonate Sheets



MAKROLON® Sheet Ultra Violet (UV) has a polished surface and is UV protected on both sides. MAKROLON® Sheet UV offers extreme impact strength, exceeding the physical properties of any product in its class. It combines temperature resistance in a wide range (-100°C up to +120°C) with high optical clarity and good fire behaviour. It offers the perfect choice for a long service life owing to their good weather resistance. These attributes are backed up by our 10 year guarantee on weather resistance, subject to conditions.

### Applications:

MAKROLON® Sheet UV is ideal for outdoor applications. Glazing and roofing applications include covered walkways, barrel vaults, skylights, bus shelters, and balcony glazing and thermoformed skylights. Signage applications include publicity columns, elevated sign masts and other harsh environment installations.

### YOUR BENEFITS

- Extreme impact strength
- Broad temperature resistance
- UV resistant
- Good fire behaviour
- High transparency

### TYPICAL PROPERTIES

	TEST CONDITIONS	TYPICAL VALUES	UNIT	STANDARDS
<b>PHYSICAL</b>				
Specific gravity		1.20	kg/m	ISO1183A
Hardness		70 ~ 90		ISO 62
Refractive index		1.59		ISO 489
Light transmission		85 ~ 91		ASTM D1003
Water absorption	Saturation value in water at 23°C	0.15%	ISO 62	
<b>MECHANICAL</b>				
Tensile strength		58.8 ~ 68.6	MPa	ISO 527
Tensile modulus		2400	MPa	ISO 527
Flexural strength		80.5 ~ 95.2	MPa	ISO 178
Flexural modulus		2400	MPa	ISO 527
Elongation		90 ~ 140	%	ISO 527
Compressive strength		73.5 ~ 88.2	MPa	ISO 604
IZOD notched impact strength		70 ~ 100	kJ/m <sup>2</sup>	ISO 180
<b>THERMAL</b>				
Temperature of deflection under load	Method A: 1.80 MPa	128	°C	D648
Vicat softening temperature	50 N; 50°C/h	147	°C	ISO 306
Coefficient of linear thermal expansion		0.7	10 <sup>-4</sup> .K <sup>-1</sup>	ASTM D696
Thermal conductivity ratio		0.19	W(m·k)	ASTM C177
Continuous use temperature		120	°C	
Combustibility		Self extinguishing		ISO 1210:1992
Flammability UL94	1.5mm	HB	Class	UL94
	3.0mm	HB	Class	UL94
	6.0mm	HB	Class	UL94
<b>ELECTRICAL</b>				
Dielectric strength		30	kV/mm	ASTM D150
Volume resistivity		10 <sup>16</sup>	Ohm·cm	ASTM D150
Dissipation factor	at 100 MHz	10	10 <sup>-4</sup>	ASTM D150
	at 1 MHz	80	10 <sup>-4</sup>	ASTM D150

**Product Liability Clause:** This information and our technical advise whether verbal, in writing or by way of trials, are given in good faith but without warranty. Our advice does not release you from the obligation to verify the information provided in our safety data and technical information sheets and to test the products as to their suitability for the intended use and processes. The application, use and processing of our products and the products manufactured by you on the basis of our technical advise are beyond our control and therefore entirely your own responsibility. Our products are sold in accordance with the current version of our Terms and Conditions of Sale. The high-tech material made of Test Conditions Typical Values Unit Standards

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## LIGHT TRANSMISSION

	CLEAR		DIFFUSER OPAL	GREY TINT	
	3.0mm	6.0mm	4.5mm	3.0mm	6.0mm
LUMINOUS TRANSMITTANCE%	87.4	85.0	14.4	21.5	19.8
U-VALUE	6.3	5.5	5.9	6.3	5.5
SHADING CO-EFFICIENT	1.05	1.02	0.34	0.60	0.57

### High Impact Strength:

MAKROLON® Sheet UV is virtually unbreakable with 250 times the impact strength of float glass and 30 times that of acrylic. For more information please visit the web site or contact your local Laserlite Sales office.

### Availability:

MAKROLON® UV Sheets are available in:

Grades: UV 2 sides

Colours: Clear, Diffuser opal & Grey tint

Gauges: From 1.0mm to 12mm

Standard Size: 2440mm x 1220mm

2440mm x 1830mm (>2.0mm gauge, <12mm)

Other sizes and thickness on request subject to conditions.

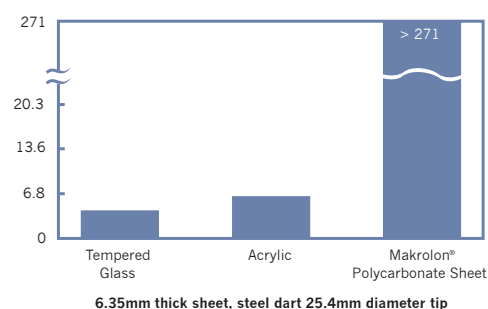
### Cleaning and Maintenance:

Under normal conditions, MAKROLON® Sheet UV should be washed on a regular basis with mild solution of soap and warm water, using a soft cloth or sponge. To prevent water spots, thoroughly dry with a chamois or sponge. Do not use abrasive cleaners or sharp instruments such as razors or scrapers that may gouge the surface.

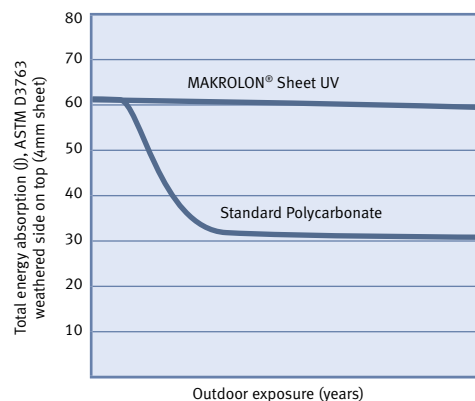
### Performance Warranty:

Bayer MaterialScience Pty Ltd warrants the original purchasers of MAKROLON® Sheet UV, that the product is free from defects due to manufacture or workmanship. Request warranty for full details.

## IMPACT RESISTANCE



## WEATHER RESISTANCE IMPACT STRENGTH



For more information please visit the web site or contact your local Bayer MaterialScience sales office.



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