

# Makrolon® UV2

## Solid Polycarbonate Sheet

### Your benefits:

- excellent weathering resistance
- extreme impact strength
- resistance to a wide range of temperatures

Makrolon® UV sheets are made from clear-transparent polycarbonate sheets with UV protection on both sides. They are the perfect choice for a long service life owing to their good weathering resistance.

### Applications

- Typical applications for Makrolon® UV sheets include lighting fixtures, luminair covers, balcony guards, wall and door partitions.
- The sheets offer protection against involuntary breakage

	Test Method	Properties
Density		1.2 g/cm <sup>3</sup>
Thickness		1.0mm ~15.0mm
Max Width		2,440 mm (≥2mm)
Coefficient of heat expansion		7 mm/mm/°C × 10 <sup>-5</sup>
Tensile Strength	ISO 527-1	≥ 55
Elongation	ISO 527-1	≥ 60
Heat Deflection Temperature	ISO 75-1,-2	≥ 130 °C
VICAT Temperature	ISO 306	≥ 145 °C
Fire Behavior	UL 94	V2 (≤1.5mm)

The mechanical properties were measured on sheets of 4 mm or 3 mm thickness flat sheet

### Available sizes and colors:

Makrolon UV2 sheets are available in thicknesses of 1.0 – 15.0 mm. Other sizes, colors and sheet thicknesses are available on request.

### UV Protection

Polycarbonate sheet are produced with the coextruded UV-protective layer, which is homogenously fused with the polycarbonate sheets material.

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### Light transmittance :

Test Method according to ASTM D 1003

The stated thicknesses are not all available as standard. Please ask us for more information.

The stated values are typical values only

Color	Code	Thickness (mm)								
		1.0	1.5	2.0	3.0	4.5	6.0	8.0	9.5	12.0
Clear	000	90.0	89.0	89.0	89.0	87.0	85.0	85.0	84.0	84.0
Grey	710				23.0	23.0	23.0		23.0	
Opal	110			27.0	27.0	27.0	27.0			

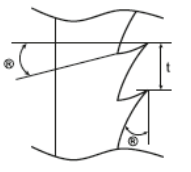
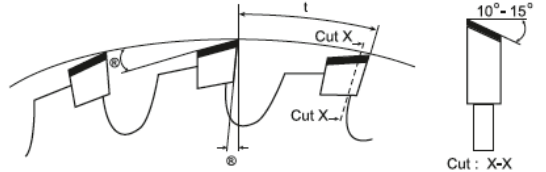
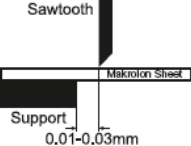
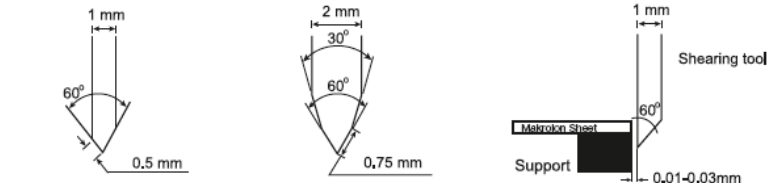
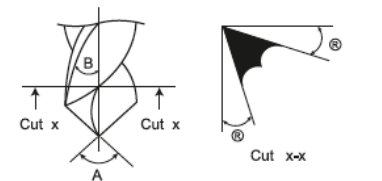
### Warranty

- The Product shall not lose more than 6% of its light-transmitting capability (hereinafter “decrease”) for a period of 10 years from the commencement date, as defined below, as a direct and exclusive result of solar radiation impact (as measured pursuant to the procedures specified in ASTM D-1003). The Product shall not display a change in yellowness of more than 10 units delta for a period of 10 years from the commencement date, as a direct and exclusive result of solar radiation impact (as measured pursuant to the procedures specified in ASTM D-1925).
- This guaranty shall only apply to original Makrolon solid sheet with UV surface protection and correct exposure with the protected surface facing the light. In the no UV side, it can not guaranteed by a direct and exclusive solar radiation impact.

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### Cutting instruction

<p>Ribbon saw</p> 	<p>Circular saw: Used for product with thickness of 2mm or greater</p>  <p>Cut : X-X</p>																
<p>Sawtooth</p>  <p>Support 0.01-0.03mm</p>	<p>Specifications</p> <table border="1"> <tr> <td>Clearance angle ©</td> <td>Ribbon saw</td> <td>Circular saw</td> </tr> <tr> <td>Rake angle ©</td> <td>20 - 40°</td> <td>10 - 30°</td> </tr> <tr> <td>Cutting speed v(m/sec)</td> <td>0 - 5°</td> <td>5 - 15°</td> </tr> <tr> <td>Spacing t(mm)</td> <td>10 - 17</td> <td>17 - 50</td> </tr> <tr> <td></td> <td>1.5 - 3.5</td> <td>2 - 10</td> </tr> </table>	Clearance angle ©	Ribbon saw	Circular saw	Rake angle ©	20 - 40°	10 - 30°	Cutting speed v(m/sec)	0 - 5°	5 - 15°	Spacing t(mm)	10 - 17	17 - 50		1.5 - 3.5	2 - 10	
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<p>Shearing: For product with thickness of 3mm or less</p>  <p>Shearing tool</p> <p>Support 0.01-0.03mm</p>																	
<p>Drill</p>  <table border="1" data-bbox="512 1261 895 1440"> <thead> <tr> <th colspan="2">Specifications</th> </tr> </thead> <tbody> <tr> <td>Clearance angle ©</td> <td>5 - 15°</td> </tr> <tr> <td>Rake angle ©</td> <td>0 - 5°</td> </tr> <tr> <td>Point angle A</td> <td>110 - 130°</td> </tr> <tr> <td>Helix angle B</td> <td>19 - 40°</td> </tr> <tr> <td>Cutting speed</td> <td>15-30 m/min</td> </tr> <tr> <td>Feed</td> <td>0.1-0.3 mm/rev</td> </tr> </tbody> </table>			Specifications		Clearance angle ©	5 - 15°	Rake angle ©	0 - 5°	Point angle A	110 - 130°	Helix angle B	19 - 40°	Cutting speed	15-30 m/min	Feed	0.1-0.3 mm/rev	
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<p>Refer to the fabrication guide for more details on cutting and drilling feed and speed rates.</p>																	



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