

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 |
|---|-----------------------------------|--------------------|-----------------------------------|---------------|
| PHYSICAL | | | | |
| 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 | |
| MECHANICAL | | | | |
| 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 ² | ISO 180 |
| THERMAL | | | | |
| 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 ⁻⁴ .K ⁻¹ | 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 |
| ELECTRICAL | | | | |
| Dielectric strength | | 30 | kV/mm | ASTM D150 |
| Volume resistivity | | 1016 | Ohm-cm | ASTM D150 |
| Dissipation factor | at 100 MHz | 10 | 10 ⁻⁴ | ASTM D150 |
| | at 1 MHz | 80 | 10 ⁻⁴ | 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.

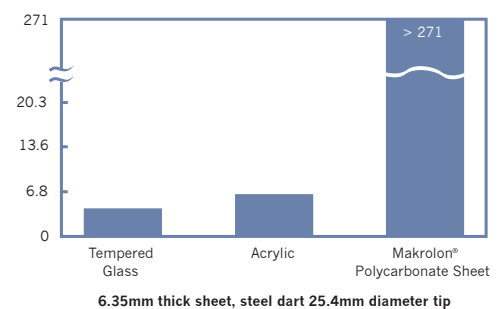
Cleaning and Maintenance:

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.

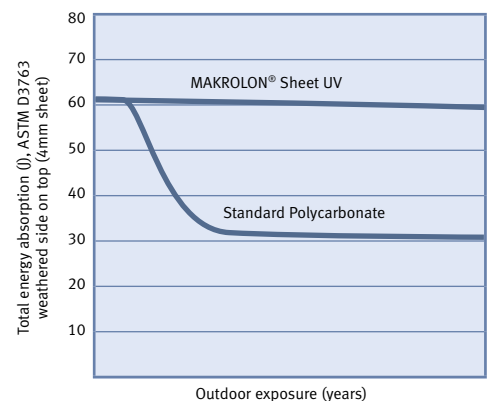
Performance Warranty:

Bayer Material Science 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



LAS037/DS/UV/JU09



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VIVAK®



MAKROLON® Sheet