


Product data sheet, March 2013

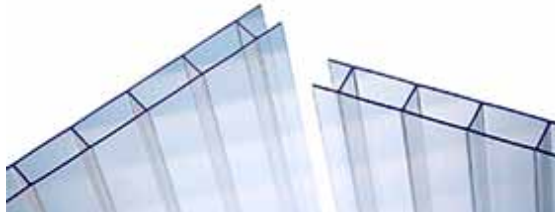
Makrolon® multi UV 2/16-30

Multiwall polycarbonate sheet



Your Benefits:

- excellent load bearing
- high surface quality
- two-side UV-protection



Makrolon® multi UV 2/16-30 is a twinwall polycarbonate sheet of 16 mm thickness. It combines high light transmission, thermal insulation and excellent weather resistance. The sheet is lightweight, impact resistant and easy to install.

Makrolon® multi UV 2/16-30 is ideal for flat glazing.

- industrial glazing
- greenhouses
- carports, porches, shelters
- covered walkways
- partition walls
- Restoration of glazed surfaces
- Hall skylights

The sheets are produced with a coextruded UV-protective layer on both sides, which is homogeneously fused with the sheet material. It provides **Makrolon® multi UV** with a highly effective protection against weathering, guaranteed for 20 years.

On request:

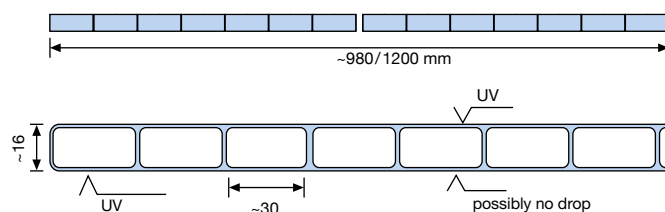
No drop

The “no drop” version of **Makrolon® multi UV** has an extremely durable water-dispersing coating on one side (side facing indoors). This coating causes condensation to flow off as a continuous film, preventing drops forming on the inside of the roof.

TECHNICAL DATA (TYPICAL VALUES)		
Area weight	3.6 kg/m ²	
Sheet width	980/1.200 mm	
Possible delivery lengths	2.000 to 7.000 mm	
Minimum permissible cold-bending radius ⁽¹⁾	2.400 mm	
Light transmittance τ_{D65} (UV-absorbing)	clear 2099: white 2146:	ca. 80 % ca. 70 %
Total energy transmission g	clear 2099: white 2146:	ca. 75 % ca. 69 %
Heat transfer coefficient U _g	2.5 W/m ² K	
Coefficient of thermal expansion α	0.065 mm/m °C	
Possible expansion due to heat and moisture	3 mm/m	
Max. service temperature without load	120°C	
Weighted sound reduction index	~24 dB	
Fire rating ⁽²⁾		
• Europe	clear 2099, white 2146	B-s2, d0 (EN 13501-1)
• Germany	clear 2099, white 2146	B2 (DIN 4102)

⁽¹⁾ The cold-bending must be parallel to the ribs of the sheets, never crosswise (risk of buckling).

⁽²⁾ Fire certificates are limited in time and scope, always check if the mentioned certificate is valid for the purchased Polycarbonate sheet type at the date of delivery. Polycarbonate sheets may change their fire behavior due to ageing and weathering. The indicated fire rating was tested on new / unweathered Product in accordance with the indicated fire classification standards, except for Product rated “B1” in accordance with DIN 4102.



dimensions in mm

Product Liability Clause: This information and our technical advice – whether verbal, in writing or by way of trials – are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to verify the information currently provided – especially that contained in our safety data and technical information sheets – and to test products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.

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Ideas, innovative, intelligent, interesting... Bayer MaterialScience i-line represents the next generation of quality products. This seal guarantees innovative and intelligent first-class solutions at all times for a multitude of requirements.

If **Makrolon® multi UV 2/16-30** is used in applications of roofing or walling, the forces applied by wind and snow loads must be absorbed by a suitable sub-structure. We recommend taking the support distance for each load from the diagram.

The diagram shows the load bearing capacity for **Makrolon® multi UV 2/16-30** (supported on all sides, rebate depth ≥ 20 mm). If the rebate depth is smaller, the support distances should be reduced suitably for the given load. For pure wind loads the loads may be increased by a factor of 1.1.

If sufficiently stable profiles are used, the load increases by a factor of 1.2.

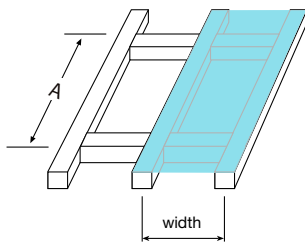
Load bearing characteristics (determination):

The system resistance (boundary state of load bearing capacity) of **Makrolon® multi UV 2/16-30** was determined in accordance with European guideline ETAG 10 (European Technical Approval on "self-supporting light-transmitting roofing systems", which came into force in September 2002) in real tests. The characteristic values of system resistance were determined in an unfavorable system, i.e. the sheets were not fixed, but laid loosely. The loads are applied as uniformly distributed linear loads, i.e. load components acting vertically on the sheet, e.g. snow.

These values are guide values, which were determined in extensive tests on real systems carried out by the ISP in Hueckelhoven/Germany (testing, monitoring and certification centre recognized by the building inspectorate). Adequate safety values, which should be assessed on a case-by-case basis, are to be observed with regard to these values.

In general, experience has shown that a safety factor of 1.3 is adequate with regard to the measured resistance values. This safety factor is included in the load table and the diagram.

These statements do not replace the specified national certificates, e.g. building inspectorate approval (Bauaufsichtliche Zulassung Germany), Avis Techniques (France), etc.



Load	kN/m ²	0.75	1	1.25	1.5	2	Width in mm
distance A	m	∞	∞	3,8	3	2.5	980
	m	∞	3.8	2.8	2.5	2.1	1.200

Bayer MaterialScience also produces solid sheets in polycarbonate (Makrolon® GP) and in polyester (Vivak® and Axpert®). For more information, take a look at www.bayersheeteurope.com.



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