



Bayer Sheet Europe



Makrolon® UV ClimateControl –  
sunny prospects for your building projects.



**makrolon**®  
ClimateControl

# Makrolon® UV ClimateControl – sunny prospects for your building projects.

## More light – less heat

For many projects, transparent sheets are the first choice of architects, planners and builders. Yet in summer, heat accumulation is becoming more of an issue. This is where the new **Makrolon® UV ClimateControl** steps in and reduces the heat build-up drastically. It can be processed without problems, it is translucent and at the same time creates a pleasant climate over a wide temperature range.

## Innovation in the Makrolon® product line.

**Makrolon® UV ClimateControl** is a transparent polycarbonate sheet with a protective UV coating on both sides. The sheets substantially reduce high temperatures caused by sunlight as they block out the majority of infrared light.

## Guaranteed resistivity

**Makrolon® UV ClimateControl** is extremely resistant to permanent environmental impacts and has a long service life. The maximum permissible temperature for long-term use in the absence of loads is in the region of 120°C. An additional benefit, is that the sheets come with a 10-year warranty on weather resistance, transparency and breaking strength.

## Makrolon® UV ClimateControl – the advantages:

- Significantly reduced heat input
- Good transparency
- Excellent weather resistance
- Maximum impact strength
- Thermally deformable and cold bendable

## Typical applications of Makrolon® UV ClimateControl.

**Makrolon® UV ClimateControl** is ideally suited for all applications which would benefit from reduced heat transmission through the glazing, e.g.:

- Roofings of passenger platforms, shelters, open areas and conservatories
- Barrel vaults and skylights
- Public buildings
- Roof and cladding constructions

## Makrolon® UV ClimateControl – sizes and colours:

**Makrolon® UV ClimateControl** is available in thicknesses of 2 to 12 mm and in the sizes indicated below. Other sizes and thicknesses available on request.

### Colour:

bronze 2855  
grey 2755  
green 2655  
blue 2555

### Size:

2.050 x 1.250 mm  
3.050 x 2.050 mm  
6.110 x 2.050 mm



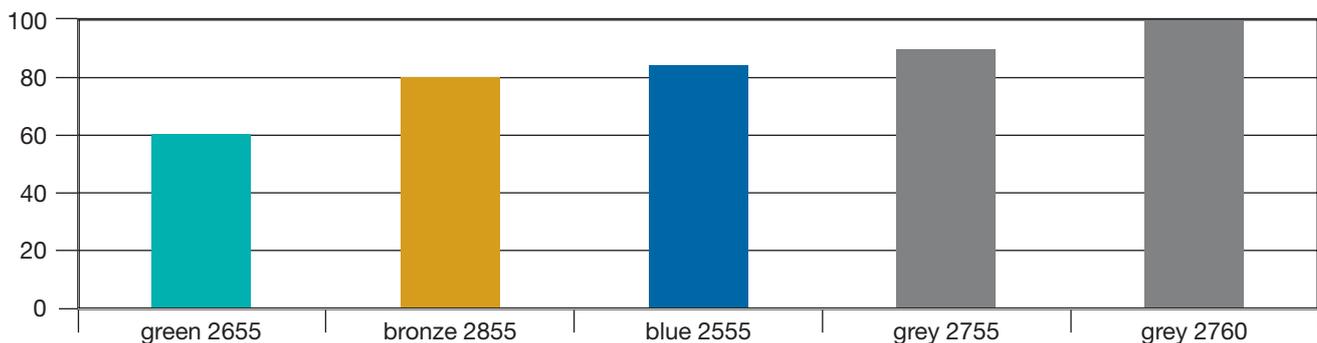
# Makrolon® UV ClimateControl.

## An innovation in numbers.

	Test conditions	Typical values	Unit	Test Method
<b>PHYSICAL</b>				
Density		1.2	g/cm <sup>3</sup>	ISO 1183-1
Moisture absorption	after storage in standard climate 23 °C/50 % RH	0.15	%	ISO 62-4
	after storage in water at 23 °C until saturation	0.35	%	ISO 62-1
<b>MECHANICAL</b>				
Tensile stress at yield		> 60	MPa	ISO 527-2/1B/50
Elongation at yield		ca. 6	%	ISO 527-2/1B/50
Tensile strength		> 60	MPa	ISO 527-2/1B/50
Elongation at break		> 70	%	ISO 527-2/1B/50
Elastic modulus		2400	MPa	ISO 527-2/1B/1
Limiting flexural stress		ca. 90	MPa	ISO 178
Impact strength	Charpy, unnotched	no break	kJ/m <sup>2</sup>	ISO 179/1fU
	Charpy, notched	ca. 11	kJ/m <sup>2</sup>	ISO 179/1eA
	Izod, notched	ca. 10	kJ/m <sup>2</sup>	ISO 180/1A
	Izod, notched <sup>1)</sup>	ca. 70	kJ/m <sup>2</sup>	ISO 180/4A
<b>THERMAL</b>				
Vicat softening temperature	Method B50	148	°C	ISO 306
Thermal conductivity		0.2	W/m K	DIN 52612
Coeff. of linear thermal expansion		0.065	mm/m K	DIN 53752-A
Heat deflection temperature under load	Method A: 1.80 MPa	127	°C	ISO 75-2
	Method B: 0.45 MPa	139	°C	ISO 75-2
<b>ELECTRICAL</b>				
Dielectric strength		35	kV/mm	IEC 60243-1
Volume resistivity		10 <sup>16</sup>	Ohm-cm	IEC 60093
Surface resistivity		10 <sup>14</sup>	Ohm	IEC 60093
Dielectric constant	at 10 <sup>2</sup> Hz	3.1		IEC 60250
	at 10 <sup>6</sup> Hz	3		IEC 60250
Dielectric factor	at 10 <sup>2</sup> Hz	0.0005		IEC 60250
	at 10 <sup>6</sup> Hz	0.009		IEC 60250

The mechanical properties were measured on sheets of 4 mm or 3 mm<sup>1)</sup> thickness.

**Reduction of heat input by Makrolon® UV ClimateControl as compared to standard sheet, grey 2760.\***  
Relative heat input at 55 % LT



\* Typical product for sun protection applications.

For further information on Makrolon® UV ClimateControl or other Bayer Sheet Europe products:

Distributor:



**ideas, innovative, intelligent, interesting...**

Bayer Sheet Europe 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.



**Bayer Sheet Europe**

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