

# Exolon® UV AdLight

## Solid polycarbonate sheet for Signs



### Your benefits:

- high light diffusion in combination with high light transmission
- extreme impact strength
- good fire rating

Solid **Exolon® UV AdLight** sheets are polycarbonate diffuser sheets for backlit signage applications. **Exolon® UV AdLight** combines high light diffusing properties with good light transmission, as required in state-of-the-art sign projects based on LED technology. They offer extreme impact strength that exceeds the physical properties of other products of their class. **Exolon®** sheets resist temperature ranges of -100 to +120°C and have a good fire rating.

**Exolon® UV AdLight** is available with a matt finish on one side and a glossy finish on the other side, both with improved weatherability, so that either side can be used, depending on the required finish. It has a bright appearance, also when it is not backlit. When illuminated, it will transmit the light practically unchanged, yet provide a uniform light spreading.

### Applications:

Typical applications for **Exolon® UV AdLight** include all types of illuminated signs such as fascia signs, channel letters, totems and logos. It can be used for displays and other applications which incorporate lighting.

### Your benefits:

**Exolon® UV AdLight** minimizes breakage losses, eliminates LED hot spots and allows for optimum design freedom.

	Test Conditions	Typical Values <sup>(1)</sup>	Unit	Test Method
<b>PHYSICAL</b>				
Density		1200	kg/m <sup>3</sup>	ISO 1183-1
Water absorption saturation	water at 23°C	0.3	%	ISO 62
Water absorption equilibrium	23°C, 50 % RH	0.12	%	ISO 62
<b>MECHANICAL</b>				
Tensile modulus	1 mm/min	2300	MPa	ISO 527-1,-2
Yield stress	50 mm/min	>60	MPa	ISO 527-1,-2
Yield strain	50 mm/min	6	%	ISO 527-1,-2
Strain at break	50 mm/min	120	%	ISO 527-1,-2
Flexural modulus	2 mm/min	2300	MPa	ISO 178
Flexural strength	2 mm/min	90	MPa	ISO 178
Charpy impact strength	23°C, unnotched	non-break	kJ/m <sup>2</sup>	ISO 179-1eU
Charpy impact strength	23°C, 3 mm, notched	70P	kJ/m <sup>2</sup>	ISO 179-1eU
Izod impact strength	23°C, 3.2 mm, notched	70P	kJ/m <sup>2</sup>	ISO 180-A
<b>THERMAL</b>				
Vicat softening temperature	50 N; 50°C/h	144	°C	ISO 306
Thermal conductivity	23°C	0.2	W/(mK)	ISO 8302
Coefficient of thermal expansion	23 to 55°C	0.65	10 <sup>-4</sup> K	ISO 11359-1,-2
Temperature of deflection under load	1.8 Mpa	126	°C	ISO 75-1,-2
	0.45 Mpa	138	°C	ISO 75-1,-2
<b>ELECTRICAL</b>				
Electrical strength	1 mm	34	kV/mm	IEC 60243-1
Volume resistivity		1E14	Ohm.m	IEC 60093
Surface resistivity		1E16	Ohm	IEC 60093
Relative permittivity	100 Hz	3.1	-	IEC 60250
Relative permittivity	1 MHz	3	-	IEC 60250
Dissipation factor	100 Hz	5 10 <sup>-4</sup>	-	IEC 60250
Dissipation factor	1 MHz	90 10 <sup>-4</sup>	-	IEC 60250

<sup>(1)</sup> These values are measured on injection molded samples, and are not intended for specification purposes.

# Exolon® UV AdLight

## Solid polycarbonate sheet for Signs



Ideas, innovative, intelligent, interesting... Exolon Group 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.

### Light Transmission:

Test Method according to CIE 130-1998, on a spherical photometer with a diameter of 1.5 m. Please ask us for more information. The stated values are typical values only.

Sample Thickness (mm)	2	3	4	5
Light Transmission $\tau_{D65}$	61	59	55	51

### Light diffusion:

According to DIN 5036-3 with a swivel-arm device using a luminance meter of class L (Fa. LMT) and a illuminance meter of class A (Fa. Czibula & Grundmann GmbH). The stated values are typical values only.

Sample Thickness (mm)	3	4	5
Half-power angle $ \gamma $	77°	77°	78°
Light diffusion factor $ \sigma $	0.86	0.89	0.90

### Dimensions:

Thicknesses: **Exolon® UV AdLight** is available in 2 - 5 mm

Sizes: **Exolon® UV AdLight** is available in 2,050 x 3,050 mm

### Permanent Service Temperature:

The permanent service temperature without load is approx. 120 °C.

### Fire Rating\*:

Country	Standard	Rating	Thickness
Europe	EN 13501-1	B-s2-d0	2 - 5 mm
USA	UL 94	HB	2 - 5 mm

\*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.

### Glow Wire Flammability Tests:

Glow Wire Flammability Index (GWFI): 2.0 mm: 850°C

Glow Wire Ignition Test (GWIT): 3.0 - 5.0 mm: 960°C



Exolon Group NV  
Wakkensesteenweg 47  
8700 Tielt

Belgium

www.exolongroup.com  
sales@exolongroup.com

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance, information and recommendations to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by Exolon Group. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

Makrolon® is a registered trademark, owned and licensed by Covestro Group