Product data sheet, May 2025

Exolon® WS - Welding Shield

Solid polycarbonate sheet for arc welding processes

I Line
Innovative

Your benefits:

- certified according to DIN EN ISO 25980 : 2014
- extreme impact strength
- easy to fabricate

Exolon® WS sheets are polycarbonate sheets which comply with requirements for transparent screens in arc welding processes. They protect against the hazardous radiation emitted during arc welding processes and meet the requirements on light transmission, UV-stability and fire resistance specified in EN ISO 25980: 2014. The sheets are available in different colours.

Exolon® WS sheets offer extreme impact strength that exceeds the physical properties of other products of their class. They resist to temperatures of -100 to +120 °C.

Applications:
Exolon® WS can be used in cases where people outside of the welding area need to be protected against the hazardous radiation of arc welding processes.

Typical applications for **Exolon® WS** are shielding of machines, robots or facilities where arc welding is taking place, such as windows in welding cabins or as separation walls between welding robots.

Exolon® WS is not suitable as a welding filter or visor in welding helmets, or for workplaces where the welder has to be protected against the reflection of welding light.

	Test Conditions	Typical values[1]	Unit	Standard
PHYSICAL				
Density		1200	kg/m³	ISO 1183-1
Water absorption saturation	water at 23 °C	0.30	%	ISO 62
Water absorption equilibrium	23 °C, 50% relative humidity	0.12	%	ISO 62
Refractive index	Procedure A	1.587	–	ISO 489
MECHANICAL				
Tensile modulus	1 mm/min	2350	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	2350	MPa	ISO 178
Flexural strength	2 mm/min	90	MPa	ISO 178
Charpy impact strength	23 °C, unnotched	non-break	kJ/m²	ISO 179-1eU
Charpy impact strength	23 °C, 3 mm, notched	80P	kJ/m²	ISO 179-1eA
Izod impact strength	23 °C, 3.2 mm, notched	70P	kJ/m²	ISO 180-A
THERMAL				
Vicat softening temperature	50 N, 50°C/h	148	°C	ISO 306
Thermal conductivity	23°C	0.20	W/mK	ISO 8302
Coefficient of linear thermal expansion	23 to 55°C	0.65	10^{-4}/K	ISO 11359-1, -2
Temperature of deflection under load	1.80 Mpa	128	°C	ISO 75-1, -2
Temperature of deflection under load	0.45 Mpa	140	°C	ISO 75-1, -2

[1] These values are measured on injection molded samples, and are not intended for specification purposes.

Made of makrolon®

Product data sheet, May 2025

Exolon® WS - Welding Shield

Solid polycarbonate sheet for arc welding processes

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.

Available sizes:
Exolon® WS sheets are available in thicknesses 3 and 4 mm in the following size:

Size (standard):
1.250 x 2.050 mm

Colours:
Exolon® WS green 658
Exolon® WS bronze 888
Exolon® WS red 333

Hazard level: as defined in DIN EN ISO 25980 : 2014

	green 658	bronze 888	red 333
3 mm	0,4	0,7	0,5
4 mm	0,5	0,7	0,5

Exolon Group NV
Wakkensesteenweg 47
8700 Tielt

Belgium

www.exolongroup.com
sales@exolongroup.com