

## ONDUGLASS ACRYLIC

### Field of Use and Description

The ONDUGLASS ACRYLIQUE range offers solutions for interior and exterior applications. ONDUGLASS ACRYLIC sheets are extruded polymethyl methacrylate (PMMA) sheets. ONDUGLASS ACRYLIC sheets have an excellent transparency coefficient and good properties mechanical, they resist UV, offer remarkable resistance to atmospheric conditions and aging.

Uses: domes - block letters - partition walls - shop displays - door glazing - shop fittings - canopies - illuminated graphic panels - skylights for caravans - noise barriers - machine housings - machine protection cover.

### Main Features

Characteristics	Value	Units	Tolerances (+/-)		Standards
Density	1.19	g/cm <sup>3</sup>	-	-	ISO 1183
Tensile Strength	70	Mpa	-	-	ISO 527-2
Elongation at break	4	%	-	-	ISO 527-2
Resistance to bending	115	Mpa	-	-	ISO 178
Curvature Module	3300	Mpa	-	-	ISO 178
Vicat Temperature	105	Celsius	-	-	ISO 306
Thermal Conductivity	0.18	W/mK	-	-	DIN 52612
Temp. Max Continuous use	70	Celsius	-	-	-
Temp. Max Service brief use	90	Celsius	-	-	-
Degradation Temperature	280	Celsius	-	-	-
Coefficient of Linear Expansion	0.07	Mm/m C	-	-	DIN 53752
Ligth Transmission	92	%	-	-	DIN 5036-3
Refractive Index	1,492	nD	-	-	ISO 489
Fire Classification	E	-	-	-	EN 13501-1
Traction Module	3200	Mpa	-	-	ISO 527.-

### Dimensions and packaging

Characteristics	Value	Units	Tolerances (+/-)		Standards
Thickness	2, 4, 6	mm	-5%	+5%	-
Width	1,000	mm	-	+0.3%	-
Length	500, 1000, 2000	mm	-	+0.3%	-

Original wrapped plates should not be stored outdoors or exposed to large variations climatic or thermal. In case of storage accompanied by substantial temperature variations and humidity, distortion of the flatness of the plate may occur, even when stored flat and stacked. The polyethylene film protects the sheets from dust, mechanical stress and scratches. It is recommended leave the PE protective film in place until the final treatment. The PE protective film is not designed to long-term exposure or protection in the open air.

## Chemical characteristics

Acétone	-	Acétate d'éthyle	-	Acidité du vin	+
Ammoniaque	+	Glycérine	+	Xylène	-
Alcool amylique	-	Fioul	o	Paraffine	+
Benzène non aromatique	+	Hexane	+	Éther de pétrole	+
Benzole	-	Alcool isopropylique	o	Acide phosphorique 10%	+
Acide borique	+	Café	+	Acide sulfurique 10%	+
Alcool butylique	-	Hydroxyde de potassium	+	Acide nitrique 10%	+
Hydrocarbure chloré	-	Cétone	-	Acide hydrochlorique 10%	+
Chloroforme	-	Chlorure de méthylène	-	Acide hydrochlorique conc. 35%	+
Eau / air chloré	o	Acide lactique 10%	+	Carbonate de sodium	+
Phtalate de dibutyle	-	Pétrole	+	Vinaigre	+
Phtalate de dioctyle	-	Soude caustique	+	Acide stéarique	+
Acide acétique glacial	-	Vernis nitrocellulosique	-	Thé	+
Essence acétique	-	Acide oxallique	+	Térébenthine	+
Acide acétique aqueux	+	Cire	+	Toluène	-
Ethanol	o	Peroxyde d'hydrogène	o	Agent diluant	-

### Notes:

(+) = Resistant, (o) = Limited Resistance, (-) = Non-Resistant

## Environmental characteristics

ONDUGLASS ACRYLIC sheets do not contain any toxic components or heavy metals that could constitute a risk for the environment or health. They are not water soluble or subject to classification in hazardous materials. ONDUGLASS ACRYLIC sheets are easy to recycle.

## Installation Guide

### Sawing / Cutting:

ONDUGLASS ACRYLIC sheets can be machined with most metal tools. The speeds of cutting and advancement should be such that the material does not melt. Circular or jigsaws can be easily used with the plates. The use of tungsten carbide blades has proven to be very effective.

- Cutting speed circular saw 3000 rpm.
- Jigsaw cutting speed: 1000-3000 m / min.

A cut is possible with the cutter in the case of small thicknesses and small lengths of cut.

### Drilling:

Commercial grade metal twist drills can be used. The best drilling capacity is obtained for a cutting speed of 25-80 rpm and a feed speed of 0.1-0.2 mm / revolution.

### Collage:

The faces must be cleaned before bonding. Organic solvent adhesives are particularly suitable for bonding small flat surfaces. Polymer adhesives are also suitable for large irregular surfaces to be bonded. Silicones are frequently used to bond windows. Only silicones compatible with acrylic can be used for this purpose.

### Hot folding:

The hot bending technique involves extensive heating of the plates followed by bending and fixing until the plates have completely cooled. The heating time depends on the equipment used, it increases considerably with the thickness of the material. The bending radius must be twice as large as the thickness of the material to avoid creases and stresses high. The heating width must be at least 3 to 5 times greater than the thickness of the plate. A heating width equal to 3 times the thickness of the plate is correct for small bending radii.