

Vitroflex CLEAR is the methacrylate cast sheet colourless and totally transparent to light.

It is divided into three groups depending on the thickness:

- Fine from 2 to 8 mm
- Medium from more than 8 to 25 mm
- Thick (blocks) of more than 25 mm

PROPERTIES

- CLEAR range stands out for its absolute transparency, more than 92% in the visible, this being above the value offered by the glass.
- High optical quality without distortion.
- It is easily machined and can be manipulated as a hardwood. Milling, turning, drilling, grinding, polishing, etc.
- Lower thicknesses can be slightly cold bent.
- It can be thermoformed.
- Lighter than other materials.
- High impact resistance.
- Low thermal conductivity.

APPLICATIONS

- Protections of machines.
- Protections of sports facilities such as tennis hockey, squash, etc.
- Aquariums
- Noise barriers for roads, railways, etc.
- Covering pools, pergolas, etc.
- Anti-vandal Windows for prisons, kindergartens, banks, etc.

- Furniture.
- Exhibitors for food in restaurants and bars.
- Signage.

OPERATION

- It can be stacked, bended, thermoformed, perforated, polished, milled, etc. just as the standard quality Vitroflex.
- The protective film can be kept during the entire production line, including the thermoformed.¹

MAINTENANCE

- As its surface is compact and not porous, it can be easily cleaned using a gentle soap solution (neutral pH) with warm water and a nonabrasive cloth. The use of aggressive detergents with non-neutral pH can reduce the service life.
- If an adequate disinfection is required, it is advisable to refer to the table of chemical resistance of Vitroflex, test a piece with no value, and preferably use the manufacturer recommended products only.
- The use of glass washers with alcohol or other similar products may negatively affect the properties and reduce the service life.
- In case the surface has small scratches due to the daily use, they can be removed using a specific polish for car bodies that is used manually. If deep scratches appear or if it is necessary to polish large surfaces, it is advisable to use an orbital eccentric polishing machine.

¹ It is advisable to run previous tests because heating temperatures and timing should be adjusted in order to get optimum results.

- Size:
 - Up to 25 mm they are manufactured with the European standard 3050 x 2050 mm.
 - Greater thicknesses are produced in 3000 x 2000 mm.
 - Custom-cut sizes can be supplied, with an accuracy of ± 1 mm cut.
- Thickness:
 - The standards are:
 - In the finest range 2, 3, 4, 5 and 6 mm.
 - In the medium range 8, 10, 12, 15, 20 and 25 mm.
 - And in the thick range (blocks) 30, 40, 50, 60, 80, 100 and 120 mm.
 - It can be produced with any thickness on request.

QUALITY

- In compliance with the rule ISO 7823/1 applicable to methacrylate cast sheets.
- All pieces are controlled.

OTHER AVAILABLE INFORMATION

- Table of resistance for various chemical products.
- "Safety Data Sheet" for operation.

Vitroflex CLEAR

TECHNICAL FEATURES ISO 7823-1²

Physical properties			
Relative density - Volumetric mass (A Method)	1,19	g/cm ³	ISO 1183
Water absorption (Method 1)	0,3	%	ISO 62
Mechanical properties			
Tensile strength (Type 1 Test, B speed)	72	MPa	ISO 527
Traction elasticity module (Type 1 Test, B speed)	3000	MPa	ISO 527
Elongation at break (Type 1 Test, B speed)	5	%	ISO 527
Impact strength. Charpy method	17	KJ/m ²	ISO 179/2D
Rockwell hardness (M Scale)	100		ISO 2039/2
Bending strength	100	MPa	ISO 178
Electrical properties			
Specific resistance	>10 ¹⁵	Ohm	DIN 53458
Volume resistance	>10 ¹⁵	Ohm.cm	DIN 53458
Dielectric constant a) 50 Hz b) 0,1 Hz	3,6 2,8		DIN 53483
Thermal properties			
Coefficient of linear expansion	70,6.10 ⁻⁶	K ⁻¹	EN 2155-12
VICAT softening temperature	105-120	°C	ISO 306
Bending temperature under load (A Method, 1,8 MPa)	105	°C	ISO 75
Dimension variation at elevated temperatures (shrinkage)	2,3	%	Annex
Optical properties			
Light transmittance a) Total light transmission at 380-780 nm b) Light transmission at 420 nm c) UV light transmission 315-380 nm ³	93 92,6 91,04	%	ISO 2857
Ageing under artificial light a) Light transmission at 420 nm after 672 hours of exposure to a high pressure mercury lamp	82	%	ISO 2857
HAZE turbidity value	0,4	%	EN 2155-9
Refractive index n ⁰ (A Method)	1,492	-	ISO/R 489

² The values of this table refer to the sample of Vitroflex MCI100NN0030. Typical values are not intended for the design.

³ It's guaranteed a minimum of 75% UV light transmission on the coloured sheets.

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