

TECHNICAL INFORMATION C6/0508

## vitroflex® HIDDEN features

Vitroflex HIDDEN is the white colour methacrylate cast sheet that turns coloured when it's illuminated with black light (UV).

### PROPERTIES

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- The HIDDEN range stands out because of its very bright colours when it's illuminated with black light (UV).
- Illuminated with natural light or with white light lamps are obtained opal white colours with very good light diffusion.
- It can be illuminated both front (light reflection) and back (light transmission), always obtaining the same effect of colour change.
- It can be easily mechanized.
- It can be slightly cold bended.
- It can be thermoformed, being able to reproduce complex shapes.
- Lighter than other materials.
- High impact resistance.
- Low thermal conductivity.

### APPLICATIONS

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- Lettering and interior signage. For example, in dark rooms as cinemas, theatres, etc. it allows beacon stairs, doors, etc. without wiring, because the simply lighting of an environmental black light produces a strong contrast.
- Security elements, which are required to highlight display in some situations.
- Interior design and decoration to obtain special effects. For example, locals with two environments, one diurnal predominantly white colours and a nocturne one with many vivid colours that seem to have own light.
- Dual-function lamps, with black light illuminate in combination with tones of the room, and with white light illuminate without altering the colours.

## OPERATION

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- It can be stuck, 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.<sup>1</sup>

## MAINTENANCE

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- 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.

## RANGE

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- Size:
  - They are manufactured according to the European standard of 3050 x 2050 mm.
  - Custom-cut sizes can be supplied.
- Colours<sup>2</sup>:

– WHITE&ROSE FLUO	MCB701FN
– WHITE&RED FLUO	MCB702FN
– WHITE&BLUE FLUO	MCB703FN
– WHITE&GREEN FLUO	MCB704FN
- Thickness:
  - The standard thickness is 3 mm.
  - It can be produced with any requested thickness.

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

<sup>2</sup> Other colours can be provided at request.

## **QUALITY**

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- In compliance with the rule ISO 7823/1 applicable to methacrylate cast sheets.
- All pieces are controlled.
- Use of high quality shining pigments with maximum resistance to ageing.

## **OTHER AVAILABLE INFORMATION**

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

# Vitroflex HIDDEN

## TECHNICAL FEATURES ISO 7823-1<sup>3</sup>

<b>Physical properties</b>			
Relative density - Volumetric mass (A Method)	1,19	g/cm <sup>3</sup>	ISO 1183
Water absorption (Method 1)	0,18	%	ISO 62
<b>Mechanical properties</b>			
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)	11	%	ISO 527
Impact strength. Charpy method	>13	KJ/m <sup>2</sup>	ISO 179/2D
Rockwell hardness (M Scale)	100		ISO 2039/2
Bending strength	100	MPa	ISO 178
<b>Electrical properties</b>			
Specific resistance	>10 <sup>15</sup>	Ohm	DIN 53458
Volume resistance	>10 <sup>15</sup>	Ohm.cm	DIN 53458
Dielectric constant a) 50 Hz b) 0,1 Hz	3,6 2,8		DIN 53483
<b>Thermal properties</b>			
Coefficient of linear expansion	70,6.10 <sup>-6</sup>	K <sup>-1</sup>	EN 2155-12
VICAT softening temperature	110	°C	ISO 306
Bending temperature under load (A Method, 1,8 MPa)	101	°C	ISO 75
Dimension variation at elevated temperatures (shrinkage)	2,3	%	Annex

<sup>3</sup> The values of this table refer to the sample of Vitroflex MCI100NN0030. Typical values are not intended for the design.

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