

TECHNICAL INFORMATION C8/0508

## vitroflex® METAL features

Vitroflex METAL is a methacrylate cast sheet that imitates metals like gold, silver and bronze.

### PROPERTIES

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- The range METAL provides metallic colours.
- Depending on the size of the particle can be smooth or grainy effect (without relief) colours.
- The pigment that provides the metallic effect is incorporated in the methacrylate is not a coating as paint.
- Developed for use out-doors limited to moderate climatic conditions and exposure to the sun.
- It is easily machined.
- It can be polished to give a total brightness.
- It can be slightly cold bent.
- It can be thermoformed.
- Lighter than other materials.
- High impact resistance.
- Low thermal conductivity.

### APPLICATIONS

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- Decorative pieces (gifts, flower shops, hotels, etc.)
- Signage.
- Railings, screens and divisions.
- Furniture.
- Façade panels.
- Wall cladding.

## 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 in 2030 x 1540 mm.
  - Custom-cut sizes can be supplied.
- Colours<sup>2</sup>:
  - The metal particles may have different sizes according to the desired effect.
    - LIGHT SILVER MC9052
    - DARK SILVER MC9054
    - GOLD MC9055
- Thickness:
  - The standard thickness is 3 mm.
  - It can be also manufactured in 5 mm.

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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.
- The incorporated pigments are physiologically innocuous, and do not pollute as they are not water soluble and are free of heavy metals. They are not combustible or autoinflammable. They do not conduct electricity and can withstand very high temperatures.

## **OTHER AVAILABLE INFORMATION**

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

# Vitroflex METAL

## 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)	0,3	%	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)	5	%	ISO 527
Impact strength. Charpy method	17	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	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
<b>Optical properties</b>			
Light transmittance a) Total light transmission at 380-780 nm b) Light transmission at 420 nm c) Light transmission at 420 nm after 1000 hours in the xenon lamp	It depends on the colour (see the colour sheet)	%	ISO 2857
HAZE turbidity value	Does not apply	%	EN 2155-9
Refractive index n <sup>o</sup> (A Method)	Does not apply	-	ISO/R 489

<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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