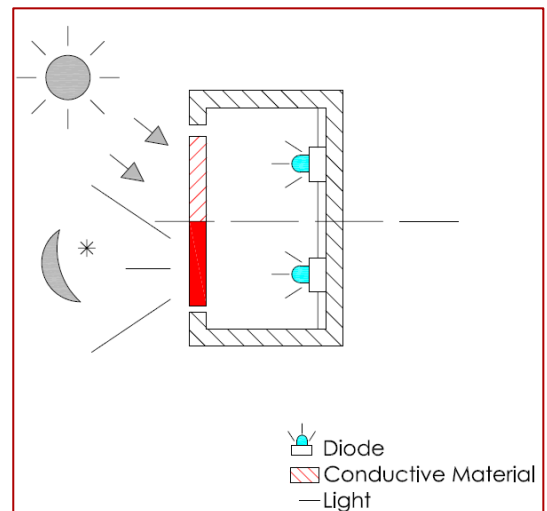


vitroflex® DAY & NIGHT features

Vitroflex DAY & NIGHT is a coloured methacrylate cast sheet that changes colour when it's illuminated by back.

PROPERTIES

- DAY & NIGHT range changes its colour when it's illuminated by back.
- Allows backlighting dark bodies, almost black, such as bright signs obtaining vivid colours, or vice versa backlighting vivid colours obtaining white light.
- Allows illuminate black surfaces. Black & White colour is black and when it's illuminated by back becomes white.
- High efficiency lighting.
- High power light diffusion.
- Suitable for outdoor use.
- 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.



Light box with front diffuser Black & White

APPLICATIONS

- Signage.
- Backlighting of surfaces such as:
 - Buildings façades
 - Interior walls
 - Closet doors
- Illumination, lamps.



Vitroflex DAY & NIGHT panels, Black & White colour

OPERATION

- 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.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.

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

- 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

- Size:
 - They are manufactured according to the European standard of 3050 x 2050 mm.
 - Custom-cut sizes can be supplied.
- Colours²:

| Reference | | Colour | | % Visible light transmission (± 5%) |
|-----------|-----------------|-----------------|-------------|-------------------------------------|
| | | Not illuminated | Illuminated | |
| N079MN | Black & White | Black | White | 20 |
| N681MN | Black & Blue | Black | Blue | 25 |
| N682MN | Black & Green | Black | Green | 10 |
| N683MN | Black & Magenta | Black | Magenta | 10 |
| N684MN | Black & Red | Black | Red | 20 |
| Z680MN | Blue & White | Blue | White | 55 |
| V686MN | Green & White | Green | White | 54 |
| F685MN | Red & White | Red | White | 70 |

- Thickness:
 - The standard thickness is 3 mm.
 - It can be produced with any requested thickness.

QUALITY

- 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.

² Other colours can be provided at request.

OTHER AVAILABLE INFORMATION

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

Vitroflex DAY & NIGHT

TECHNICAL FEATURES ISO 7823-1³

| 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) Light transmission at 420 nm after 1000 hours in the xenon lamp | It depends on the colour | % | ISO 2857 |
| HAZE turbidity value | Does not apply | % | EN 2155-9 |
| Refractive index n ⁰ (A Method) | Does not apply | - | ISO/R 489 |

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

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