

#### 1. Product

Ⓢ Everlux® self-adhesive photoluminescent maritime safety signs.

#### 2. Product Description

Photoluminescent safety signs consisting of a self-adhesive photoluminescent vinyl layer, 0.39mm thickness.

#### 3. Installation

The installation of the product must follow the following indications:

##### Preparation of the application surface:

All surfaces on which signs are to be installed shall be considered as contaminated.

**Cleaning and Degreasing** - For this operation a degreasing solution must be used; for example, isopropyl alcohol in the proportion 70% isopropyl alcohol and 30% water.

The cleaning operation must be done in two phases:

- 1st apply the degreasing solution to the surface and clean the whole surface in circular movements with paper or cloth that does not leave residues, to remove dirt and grease.
- Apply the degreasing solution to the surface and clean only in one direction only.

**Drying** – Let it dry, waiting 2 to 3 minutes until all cleaning solution evaporates. Do not touch the previously cleaned and degreased surfaces with your fingers.

**Primary application** – Apply a thin, uniform coating to the bonding surface. Use the minimum amount that will fully coat the area to be taped.

Application may be done with a clean lint-free cloth, pad, felt tipped dauber, absorbent paper towel or disposable tissue. Brushes, rollers, or spraying tend to apply excessive amounts should therefore be avoided.

Allow to dry completely prior to application of adhesive safety sign. Depending on temperature and humidity, the drying and reacting time of adhesion promoter can vary. Typical drying time will be 1-2 minutes.

Apply the adhesive safety sign within 8 hours or reapply adhesion promoter.

We suggest the usage of 3M™ Adhesion Promoter 111.

##### Product application

**Removal of the protective paper from the sign adhesive** - Remove the adhesive backing paper in one corner of the product without touching the adhesive.

**Application of the product** - Apply the sign in the previously prepared place, avoiding the formation of bubbles and exerting pressure throughout the sign area. It is recommended to use a roller for better distribution of forces throughout the surface.

The quality of the adhesion will depend on the amount of contact between the adhesive and the installation surface. A strong, homogenous pressure promotes union.

The application should be made at the room temperature between 15°C and 25°C, and never be less than 15°C.

Once applied, at the recommended application temperature, possible temperature changes are generally well tolerated by the glue, without modifying the adhesion properties of the glue.

**Adhesion time** - Until adhesion is considered complete, some time is required: approximately 50% final adhesion is obtained after 20 minutes, 90% after 24 hours and 100% after 72 hours (at room temperature).

**Caution** - before installation it is essential that the installer evaluate the surface where the signs are to be installed:


**Rough or porous surfaces** - A rough or porous surface will not allow the application of self-adhesive elements and may require other installation type.

**Parallelism of the surface to be installed** - Surface parallelism is essential to adhesion quality. On surfaces where there is no complete parallelism, the need for alternative installation solutions such as mastic glue or structural glue, or bolting to support structures or directly to the surface, must be considered.


**Curved Surfaces** - Self-adhesive products are ideal for flat surfaces. Although the application on curved surfaces is possible, it must be verified in each case whether the tension created by the curvature of the surface does not exceed the adhesiveness of the product.

**Special surfaces** - Some surfaces have special characteristics such as the presence of coatings that impart specific characteristics to the surfaces. This type of surface usually has a low surface energy and may require special preparation. It is the responsibility of the installer to evaluate the surface and, if necessary, to ask the manufacturer for instructions on the correct preparation of the surface.

#### 4. Photoluminescent properties


The  Everlux® products fully conform to the International norms, ISO 16069, IMO A.752 (18) Resolution and ISO 15370. When stimulated with 1000lux during 5 minutes, the photoluminescent characteristics are as follows:

Time after removing the exciting light (in minutes)	Luminescent intensity (mcd/m <sup>2</sup> )
10 minutes	140
60 minutes	20
Luminescent intensity 100 times greater than the limit of human visibility	Period of light decay (minutes)
0.3 mcd/m <sup>2</sup>	1800

According to the ISO 15370, in conditions of stimulation with 25lux during 24 hours and a fluorescent tube 8W-4100K, the  Everlux® products have the following photoluminescent properties:

Time after removing the exciting light (in minutes)	Luminescent intensity (mcd/m <sup>2</sup> )
10 minutes	57
60 minutes	10.7
Luminescent intensity 100 times greater than the limit of human visibility	Period of light decay (minutes)
0.3 mcd/m <sup>2</sup>	3000

#### 5. Dimensions, Pictograms and Colours

The products are in conformity to  Everlux® catalogue and according to National and International Norms and Legislation.

#### 6. Printing

High quality gloss paint with UV resistance.

#### 7. Cleanliness

The products do not require any particular attention, clean with a dry clean cloth or a cloth humidified with water (without detergents).


#### 8. Guarantee

In normal conditions of mounting and adequate cleanness, the products have an indoor durability in excess of 5 years. For exterior applications, considering exposition to varying temperatures, humidity and other extreme environments, this guarantee can be diminished.

#### 9. Health and safety

The product does not contain any radioactive substances. In toxic terms the product is considered as safe (European norm EN 71-3).

#### 10. Quality and Certification

The  Everlux® product is certified by DNV according to MED (Council Directive 2014/90/EU and of the council of 23 July 2014 on marine equipment and repealing Council Directive 96/98/EC, Module B in the Directive), SOLAS 74 as amended, Regulation II-2/13 and FSS Code 11.

The quality of  Everlux® products is ensured by a rigorous process of quality control with tests in our own laboratory observing all applicable norms.


#### 11. Legislation and Normative references

All of our signs are in conformity to the following standards and regulations:

- ISO 24409-1, 2 and 3
- ISO 16069
- EN ISO 7010
- ISO 3864-1,2,3 and 4
- ISO 17631
- ISO 15370
- ISO 14726
- DIN 67510-1
- IMO Resolution A.654 (16)
- IMO Resolution A.752 (18)
- IMO Resolution A.760 (18)
- IMO Resolution A.952 (23)
- IMO Resolution A.1116 (30)
- IMO POLAR Code
- Solas Convention 2004 chapter II-2 Reg. 13.3.2.5
- Solas Convention 2004 chapter II-2 Reg. 13.7.2.2
- Solas Convention 2004 chapter III-2 Reg. 9.2.3
- MARPOL Annex V, 2012 Revision

- ISPS Code 2003
- ICAO and IMO document 9636
- IMDG Code
- ISM Code
- European Commission Directive 2014/90/EU
- MERCHANT SHIPPING NOTICE - MSN 1874 (M+F)

## 12. Specificities

The  Everlux® signs for external environments or wet environments with the presence of water with strong acid or alkaline content (eg limestone, salt and chlorine) should be protected by a transparent anti-graffiti film. This film, besides the anti-vandalism features, provides effective protection to environmental aggressions (such as pollution, humidity, UV radiation and chemicals).