

Everlux LLL

Photoluminescent safety signage system for floor level installation
Low Location Lighting System

1. Product

Ⓢ **Everlux[®]-LLL** Photoluminescent safety signage system for floor level installation (*Low Location Lighting System*)

2. Product Description

LLL system suitable for vertical applications (signs and strips for walls): 2 mm rigid plastic with a high photoluminescent intensity, antistatic and easy to clean.

LLL system suitable for horizontal applications (signs, strips for floors and stairs and “L” shapes for stair/step application): 0.3mm non-slip self-adhesive polycarbonate with a high photoluminescent intensity and easy to clean.

Everlux Discs:

- Everlux Disc - 0.3mm non-slip self-adhesive polycarbonate disc with a high photoluminescent intensity and easy to clean. Everlux metallic disc - 1mm aluminium disc coated with a 0.3mm non-slip self-adhesive polycarbonatesurface with a high photoluminescent intensity and easy to clean.
- Everlux metallic disc - 1mm aluminium disc coated with a 0.3mm non-slip self-adhesive polycarbonatesurface with a high photoluminescent intensity and easy to clean. The discs are also supplied with a butterfly screw for use with metallic structures

3. Fire Reaction

Signs and strips for walls:

LLL products are all manufactured to be non-flammable and, self-extinguishable corresponding to fire resistance class M1. The materials used have high fire resistance properties and do not help propagate fire. They are classified as being flame-retardant in accordance to Norm IEC 60092-101:2002.

4. Abrasion and Slip-Resistance

Strips and signs for floors and stairs and “L” for stairs:

Ⓢ **Everlux[®]-LLL** photoluminescent, polycarbonate self-adhesive strips are rated as having a high level of abrasion resistance being classified as Abrasion Class (PEI) IV in accordance with EN ISO 10545-7:2000. This is quantified as being the product’s resistance to wear and tear caused by the passing of people and movement of objects,

The coefficient of friction is the parameter that characterises slip resistance. Ⓢ **Everlux[®]-LLL** photoluminescent, polycarbonate self-adhesive strips are classified as being a safe anti-slip product where the coefficient of friction is >0.70). According to norm ASTM C 1028-96 the strips present the following results:

Static coefficient of friction of Ⓢ Everlux[®]-LLL	
Dry	0.76
Humid	0.71

Everlux LLL

Photoluminescent safety signage system for floor level installation
Low Location Lighting System

According to DIN 51130:2004, that evaluates the anti-slip properties, ☒ Everlux®-LLL Strips and signs present the following results:

Anti-Slip Properties ☒ Everlux®-LLL	
Angle	18,1°
Evaluation	R 10

The classification R10 (according to BGR 181) provides a guarantee that ☒ Everlux®-LLL photoluminescent, polycarbonate self-adhesive strips and signs are suitable for installation in the following applications: *halls, commercial kitchens, hotels, exposition halls, shops, sanitary and dressing rooms, laundries, warehouses, parking places, schools, health services (laboratories, doctor's offices, pharmacies, waiting rooms...)etc.*

5. Corrosion Resistance

Metallic discs:

Metallic discs (with or without butterfly screw attachment) are manufactured using Zincor®. Zincor® is a metallic base product which is supplied with a zinc coating that has been applied using an electrolysis process. This process ensures that the oxidation of the zinc is inhibited by chemical treatment which, in turn, provides a good resistance to corrosion. The surface characteristics Zincor® include a smooth surface finish which is highly resistant to corrosion, characteristics which make this material suitable for use in the automotive industry, in electrical applications, steel furniture and accessories for a variety of application areas.

6. Photoluminescent Properties

☒ Everlux®-LLL products fully conform to the International Norms ISO 16069 and IMO A.752 (18) Resolution.

When stimulated with an ambient light emitting 25 lux for 15 minutes the photoluminescent characteristics are as follows:

Time after removing the exciting light (in minutes)	Luminescent intensity (mcd/sqm)
10 minutes	80 ¹
60 minutes	10
Luminescent intensity 100 times greater than the limit of human visibility	Period of light decay (minutes)
0.3 mcd/m ²	1000

- When stimulated with ambient light of only 1000 lux during 5 minutes, the photoluminescent characteristics are as follows:

¹The luminescent intensity of the non-slip self-adhesive strips on the floor may be lower due to the protective layer of the polycarbonate.

Everlux LLL

Photoluminescent safety signage system for floor level installation
Low Location Lighting System

Time after removing the exciting light (in minutes)	Luminescent intensity (mcd/m ²)
10 minutes	150
60 minutes	21
Luminescent intensity 100 times greater than the limit of human visibility	Period of light decay (minutes)
0.3 mcd/m ²	2000

7. Dimensions, Pictograms and Colours

The products conform with the Everlux catalogue and are according to National and International Norms and Legislation.

8. Printing

Serigraph process using high quality gloss paint with UV resistance.

9. Positioning and Mounting

According to the Everlux Catalog, in the chapter "Everlux-LLL".

When using of self-adhesive products, 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, in order 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.

Product application

Removal of the protective paper from the sign adhesive - Remove the self adhesive 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.

Everlux LLL

Photoluminescent safety signage system for floor level installation
Low Location Lighting System

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 installation by screwing.

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 (eg primary application). 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.

Examples are the following materials: Polypropylene (PP), Polystyrene (PS), Polyolefin Thermoplastic (TPO), Polytetrafluoroethylene (PTFE), Polybutylene Terephthalate (PBT), Polyvinylidene Fluoride (PVDF), Polyurethane (PU), among others

10. Cleaning

Signs and strips for walls:

The products do not require any particular attention and can be cleaned using either with a dry or damp clean cloth. Do not use detergent products.

Strips and signs for floors and stairs:

As a preference, the products require manual cleaning using water and no detergents. The use of automatic cleaning systems with brushes must be assessed with regard to the aggressiveness and pressure of the relevant cleaning system being considered.

11. Guarantee

Signs and strips for walls:

Under normal conditions of mounting and with appropriate cleaning we offer a 5 years guarantee. For exterior applications, consideration regarding exposure to factors such as varying temperatures, humidity and other extreme environments must be given as this can result in the guarantee being affected.

Strips and signs for floors and stairs:

Ⓢ **Everlux**[®]-LLL photoluminescent, polycarbonate self-adhesive strips have a high abrasion resistance and are classified as being Abrasion Class (PEI) IV (in accordance to norm EN ISO 10545-7:2000)

This classification means that in terms of application the product is adequate for floors which have a high level of traffic (i.e. people and moving objects) such as industrial applications and public areas (hotels, exhibition halls, shops, parking places, etc).

For a maximum durability of the Ⓢ **Everlux**[®]-LLL strips the type and state of floor on which it is to be placed, the type of traffic and the methods of cleaning have to be adequate.

Everlux LLL

Photoluminescent safety signage system for floor level installation
Low Location Lighting System

The ☒ **Everlux**[®]-LLL polycarbonate self adhesive strips and signs have had excellent results in

- Metro stations (platform limitation and fire exit staircases)
- Stores
- Warehouses in which fork lifts are used.
- Floors in industrial premises having high wear and tear from fork lifts.

Metallic discs:

Under normal conditions of mounting and with appropriate cleaning we offer a 5 years guarantee. For exterior applications, consideration regarding exposure to factors such as varying temperatures, humidity and other extreme environments must be given as this can result in the guarantee being affected.

12. Health and safety

The product does not contain any radioactive substances and in terms of toxicity the product is considered safe according to the European Norm EN 71-3.

13. Quality and Certification

☒ **Everlux**[®]-LLL products have Lloyd's Register Type Approval Certification.

The quality of ☒ **Everlux**[®]-LLL products is ensured and maintained by means of a rigorous process of quality control using testing measures conducted in our own laboratory whilst observing all applicable Norms and Standards;

14. Legislation and Normative references

All of our signs fully conform to the following Norms:

- ISO 16069
- ISO 7010
- Norms ISO 3864
- ISO 15370: 2010(Ships)
- IMO Resolution A.752 (18)
- Norms DIN 67510