

<i>IRC Spa</i>	PRODUCT BULLETIN CORLITE® HIGH INTENSITY GRADE CLASS 2	Rev. 02 dtd 26.01.07
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General Information:

CORLITE® H.I. GRADE CLASS 2 reflective sheeting is a retro reflective sheeting with top layer film protection, made of transparent and/or coloured transparent acrylic material. It has an optical system obtained from the incapsulation of the retro-reflective layer onto a white resin endowed with a high flexibility and mechanical resistance.

This particular optical system is realized through a soldering technique between the two main layers (external acrylic and internal white resin), following a diamond drawing which identifies the sheeting producer.

The sheetings are used in vertical traffic road sign applications and for those signs requiring an excellent retro reflective power, both in day and night light. CORLITE® H.I. GRADE CLASS 2 ensures a high resistance in terms of lifetime and against conditions of high humidity or sun light exposure.

CORLITE® H.I. GRADE CLASS 2 sheetings are available in all colours defined by the Norms regulating the products (DM 31.03.95, UNI EN ISO 12899)

Sheeting Identification Sign:

CORLITE® H.I. GRADE CLASS 2 sheetings come with an indelible mark (commercial mark) identifying the manufacturer and the granted exposure minimum lifetime.

The indelibility of the marking has been proved in accordance to the indications fixed by the Norms of the product.

This marking maintains the same features far beyond the granted life of the product.

Available Colours:

CORLITE® H.I. GRADE CLASS 2 sheetings are available in the following colours: White, yellow, red, green, blu.

Adhesive Properties:

Performance	Average result
Chemical composition	Acrylic
Peel adhesion 20'	19 N/25mm
Peel adhesion 24 h'	28 N/25mm
Quick stick	17 N/25mm
Shear	> 15h

Colorimetric properties:

CORLITE® H.I. GRADE CLASS 2 sheetings, for all available colours, are inside the colorimetric range (x,y system) and luminance (Y) parameters fixed by the Norms regarding retro reflective sheetings Class 2 (DM 31.03.95, UNI EN ISO 12899).

Photometric Properties:

CORLITE® HI GRADE CLASS 2 sheetings, in all colours available, widely comply with the minimum requirements for class 2 retro-reflective sheetings (DM 31.03.95, UNI EN ISO 12899), as follows:

Colour	Minimum Reflectiveness 0,2°, 5° (cd/lux mq)	Minimum Reflectiveness 0,33°, 5° (cd/lux mq)
White	250	180
Yellow	170	120
Red	45	25
Green	45	21
Blue	20	14

Other Features:

Physical features of the FILM:

Performance	Average result
Average Weight (with adhesive)	350 Gr/mq
Thickness	260 micron

Specific resistances:

in accordance to the specifications of the Norms inherent to the product (DM 31.03.95, UNI EN 12899-1), CORLITE® H.I. GRADE CLASS 2 sheetings meet the following requirements:

Test	reference	Result
Adhesivity	Norm specification	Sheeting creaking
Flexibility	Norm specification	Good visual properties
Resistance to sea-fog	Norm specification	Reflectiveness > 80% original value
Impact resistance	Norm specification	Good visual properties
Resistance to Heat	70 ±3 °C per 24h	Reflectiveness > 80% original value
Resistance to Cold	-35±3 °C per 72h	Reflectiveness > 80% original value
Fuel	Norm specification	Good visual properties
Detergent	Norm specification	Good visual properties



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Resistance to induced accelerated aging process:

CORLITE® H.I. GRADE CLASS 2 sheetings, in all colours available, last for at least 10 years in outdoor environment.

The exposure method used, complies with the Norm ASTM G26, which forecasts a permanent exposure to the light (minimum radiation power 0,35 watt/m², 280nm borosilicate filter) and a periodic exposure to light and water (102 minutes under light followed by 18 minutes under light and water).

After 2200 hours test (500 hours for Orange colour), CORLITE® H.I. GRADE CLASS 2 sheetings give results superior to 80% of the original retro reflectivity values, as per the measure of 0,33°/5°.

Type of Backing:

Monosilicon HDPE Film	weight	90 gr/m ²
Monosilicon polyestere	weight	70 gr/m ²

Available seizes:

Roll length: 50 linear meters

Available widths:

- 122 cm
- 93 cm
- 75 cm
- 61 cm

General information on the product usage:

CORLITE® H.I. GRADE CLASS 2 sheetings have to be adjusted to their ideal usage conditions for at least 48 hours (Temperature 23 °C, Humidity level 50%).

• **Preparation procedure of the bearings:**

The sheeting bearings that are commonly used (aluminium or painted plate) have to be previously sandpaper treated in order to make the adhesive application effective.

In order to remove impurities, the usage of weak solvents, as alcohol, is suggested. Aggressive solvents (aromatic or not volatile) could compromise the adhesion performance of the self-adhesive sheeting.

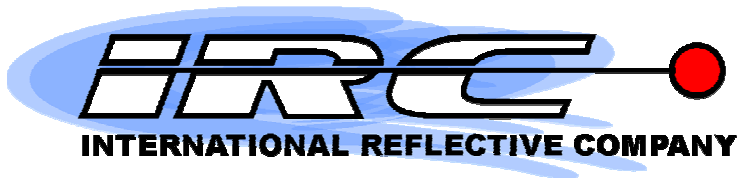
Before application of the sheeting, wash the bearing surface and dry it carefully.

The application has to be carried out in an environmental temperature not under 18° C (65° F).

While applying the sheetings on their bearings, by means of rotary press or rolls (manual), particular care has to be taken in order to avoid air bubbles in between that could make the sign faulty once placed on site.

The pressure of the rotary press has to be adjusted in order to avoid the creation of foldings (which might depend on the natural stiffness of the product).

The right parameter set-up has to be duly achieved by the user after prior trials.



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- **Sheeting cutting:**

In case you want to get sheets out of the CORLITE® HI GRADE CLASS 2 rolls, the cutting (as per the measures desired) must be followed by a resting time at the usage conditions for at least 12 hours . After this time, other operations can be carried out.

- **Printing procedure:**

Printing on CORLITE® HI GRADE CLASS 2 sheetings can be carried out through serigraphic technique, by using ink with poliurethanic basis, bi component, especially conceived for road signs.

Excellent results have been achieved and proved by using Marapur PU traffic inks (by manufacturer MARABU') and by serigraphic 90-threaded nets, covered by transparent protective paint (belonging to the same series) as the final print layer on the surface. The colorimetric values obtained through this particular technique are inside the range (x,y,Y system) fixed for Class 2 retro reflective sheetings (DM 31.03.95, UNI EN 12899-1). Also the photometric values widely comply with the minimum requirements fixed by the specific norms (basic white: 70 % of the minimum values; grey and basic yellow: 50 % of the minimum values).

In case of usage of other inks (not hereby suggested), it will be at the user's care, to verify the compliancy with the sheetings, by prior tests.

In this particular case, Autoadesivi Spa does not grant that, once exposed in outdoor environment, the original photometric and colorimetric properties would correspond to the ones hereby stated.

- **Storage:**

CORLITE® H.I. GRADE CLASS 2 sheetings have to be used not later than 1 year from goods receipt. Rolls must be kept in their original box. The sheetings already cut and/or applied on their panels have to be horizontally placed.