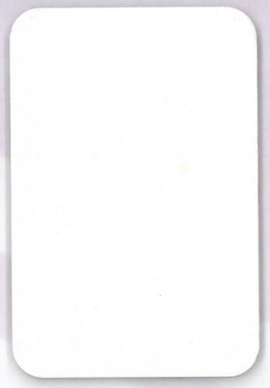
Polvere per verniciatura
Powder Coating
Pintura en polvo
Couleur en poudre

Decoral System®

LIGHT SERIES

MRK-005-0031R3

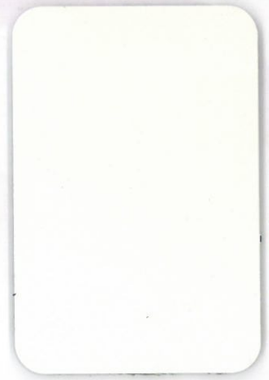
Powder Coating: PE 411 - LIGHT-001 + Heat Transfer Film: "Sign made by plotter"



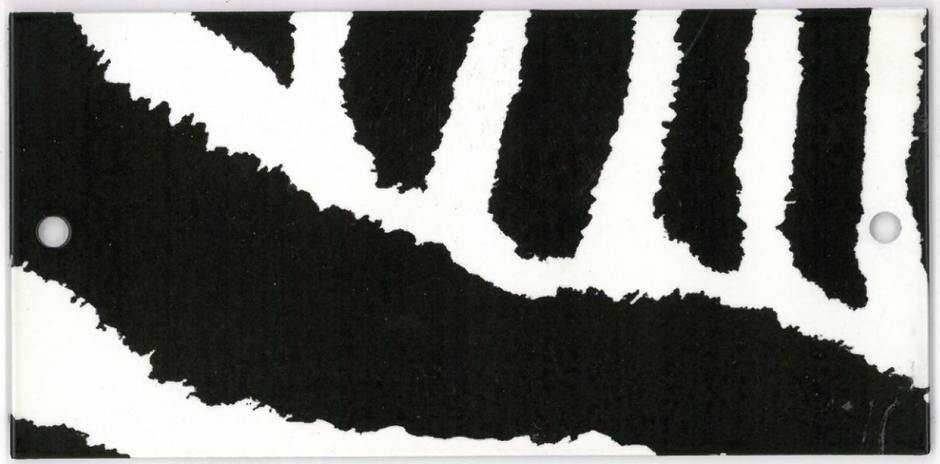
Powder Coating:
PE 411 - LIGHT-001

Powder Coating: PE 411 - LIGHT-001 + Heat Transfer Film: 6037/01

Powder Coating: PE 411 - LIGHT-002 + Heat Transfer Film: "Sign made by plotter"

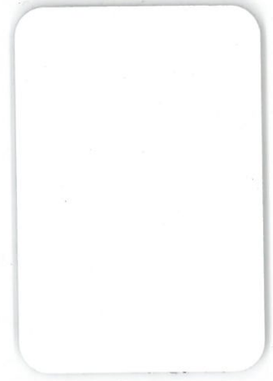


Powder Coating:
PE 411 - LIGHT-002

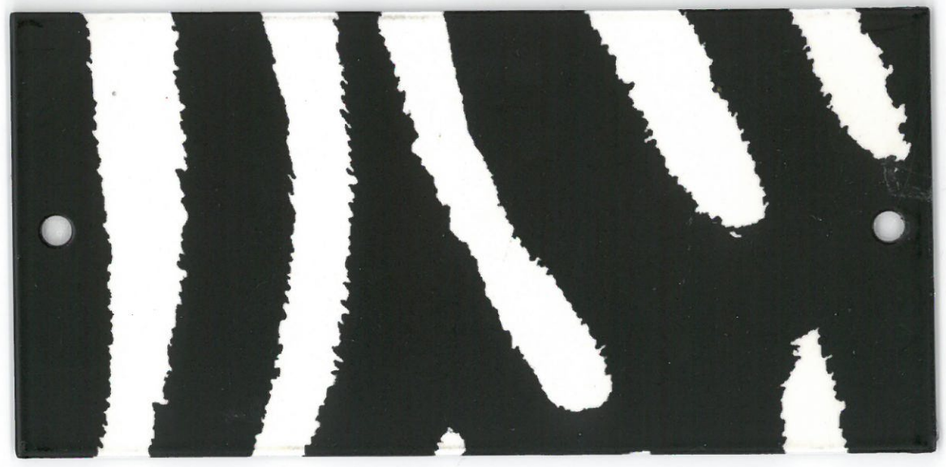


Powder Coating: PE 411 - LIGHT-002 + Heat Transfer Film: 6037/01

Powder Coating: PE 411 - LIGHT-003 + Heat Transfer Film: "Sign made by plotter"



Powder Coating:
PE 411 - LIGHT-003



Powder Coating: PE 411 - LIGHT-003 + Heat Transfer Film: 6037/01

L'idoneità all'impiego in esterno degli abbinamenti tra **prodotti vernicianti poliuretanici Decoral System®** e **film sublimatici Decoral System®** dovrà essere valutata sul sito internet *www.decoral-system.com* (alla voce **FINITURE ADATTE PER USO ESTERNO**) oppure contattando il nostro laboratorio.

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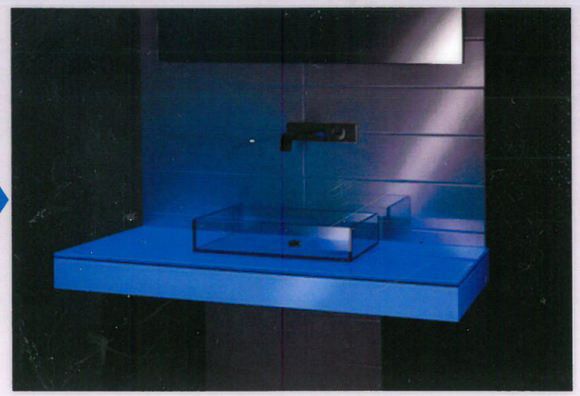
Suitability for outdoor use of different combinations between **polyurethane Decoral System® Powder coatings** and **heat transfer film Decoral System®** must be assessed on *www.decoral-system.com* (link: **TESTED FOR OUTDOOR USE**) or contacting our laboratory.

DESCRIPTION OF THE APPLICATION

- First coat layer of White Polyester, code PE 411 or PE 411M ;

- Second coat layer of photoluminescent powder LIGHT-001 (yellow) or LIGHT-002 (green) or LIGHT-003 (blue)



APPLICATION

1. FIRST LAYER:

• WHITE POLYESTER COD PE 411 OR PE 411M

The thickness of the first layer (base) of powder must be of 50 microns.

The base must be cured for 15 minutes with a temperature of 170 ° C in a such way the first layer is not completely cured, in order to help the adherence of the second layer of powder.

2. SECOND LAYER:

For the second layer you can use:

• LIGHT-001 or LIGHT-002 or LIGHT-003

The thickness of the second layer must be of 60 – 80 microns.

The second layer must be cured for 20 minutes with a temperature of 200° C on the piece.

SUBLIMATION: The process of sublimation must be carried out with a temperature of 200° C.

Decorations: Marbles, Granites, Fantasies.

Decoral System

Technical Data Sheet

PHOTOLUMINESCENT POWDER	Cod. LIGHT-XXX
Powder Coatings:	TGIC FREE POLYURETHANE
Use:	Indoor
Suggested for:	Base coat for heat transfer process
Application	Corona Charging
Curing Cycle:	25' X 195°C (Metal Temperature) **20' X 200°C (Metal Temperature)** 15' X 205°C (Metal Temperature)

Chemical and Mechanical Properties

1 - Packing	20 Kg. Boxes with PE-bag, palletized and shrink-wrapped		
2- Shelf-life	In a dry place with a temperature lower than 35 °C for 06 months		
3 - Specific weight	1.20 ± 0.09 g/cm3		
4 – Yield m2/Kg. considering 60 microns film thickness	13 m^2/Kg		
5 - Appearance	Semimatt		
	RIF Standard	**Miniumum Tollerance Limit**	**Result**
6 - Gloss (Gardner 60°)	ISO 2813	15 ± 5 gloss	OK
7 - Buchholz hardness	ISO 2815	minimum 80	OK
8 - Adhesion	ISO 2409	No loss of Adhesion	OK
9 - Thickness (Minim. thickness)	ISO 2360	60 microns	OK
10 - Direct Impact Test *	ASTM D2794	2,5 N/m	No Coating detaching
11 - Reverse Impact Test*	ASTM D2794	2,5 N/m	No Coating detaching
12 - Bending *	ISO 1519	5 mm diameter	No Coating detaching

* Tests carried out on 1 mm. thickness alloy AA5005 H24 chromate aluminium sheets and 60 microns coating layer .

This technical information is reliable to the best of our and our customers' experience but non warranty or guarantee is implied

Users will assume responsibility for the application of the product testing its characteristics on their own equipment and carriers

Product application

Photo luminescent powder coating is a transparent powder with photo luminescent pigments, which can absorb only UV rays and not visible radiations

In order to let the stimulated coating emit the maximum of radiation, the photo luminescent powder should be applied as following

1 - A first coating layer in white Polyester (to improve the reflection) : it is possible also to use a mildly pigmented powder with the same colour of the photo luminescent light (yellow / yellow- green / ocean blue).

2 - A second coating layer in photo using luminescent coating powder

How to use it

Step 1

Coating Layer Charge

As above explained, to obtain the phosphorescence effect, it is absolutely necessary to charge the painted surface up using light energy sources

Maximum of charge could be obtained by one of the following systems

A 5-10 minutes by artificial light (150-200 Watt) full of UV rays (halogen lamps, with lower UV rays, require more time)
B 5-6 minutes by sunlight exposition;
C Immediately, by Black light (or Wood light) (emissions mainly consist of UV-A rays)

Step 2
Radiation

After the end of Step 1), the paint coated will immediately start radiating visible light. The darker the environment, the more noticeable the effect will be (Photoluminescence intensity indeed is lower than other artificial light radiation)

Step 3
Radiation Durability

During the first hour, light radiation loss is 80-90%, keeping stable for the following 9-10 hours.

Integration with the heat-transfer process

It is possible to perform heat-transfer process into this special photo luminescent coating.

Whereas a dark/black colour is transferred, the photo luminescent effect is masked

So it is possible to sublimate a pattern in black, and with standard lightening you can see the black pattern in a white background, so in the dark the photo luminescent pattern will be seen IN NEGATIVE

Applications of photo luminescent powders

1) Indoor Design project.
2) Safety-focused indoor finishing (emergency exits, emergency signs, etc.).
3) Energy-saving indoor finishing (big painted surfaces have an extraordinary light emission that could avoid traditional light use)

ONLY FOR INDOOR USE

Emission Date 24/02/2010 Revision 01

TECHNICAL DATA SHEET

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