



Industrial floor treatment and coating using **COLODUR** aliphatic Polyurethane single component resin.

THE PROBLEM.

Concrete floors in industrial buildings, warehouses, parking lots, etc. are submitted to important wear and aggressions. Concrete is by itself a very porous and “basic” material, which generates dust, in itself with extremely abrasive properties.



With time, and even if the surface is obtained through the use of levelling machines (“helicopters”), so that a proper “fine” and pore free finish is obtained, continuous friction, wear, changes in temperature and humidity, water, stains, etc. end up damaging the surface and generate alterations in concrete floors, causing important and expensive repair and maintenance jobs.

It is for these reasons extremely important to treat floors previously, obtaining a proper-continuous finish, free of joints, without porosity, and which does not generate dust and can be cleaned properly.

TREATMENT AND APPLICATION SYSTEM.

1. PRE-TREATMENT.

Pre-treatment is the most important part of this process, in order to be successful.

It is important before any treatment that the



substrate is clean and dry, without dust, etc.

In case of new floors, it is important to wait until water has evaporated and concrete cured properly.



In case of restaurations, it is also convenient to assure the removal of any previous treatments, together with impurities, etc.

It is recommended in all case to abrade the surface with mechanical tools, opening pores and allowing for later resin penetration into them.

It is also recommended to apply one coat of RAYSTON'S **PU PRIMER**, so that best adhesion can be achieved between **COLODUR** and the surface.

If final washing (before application of **COLODUR**) is as in this case by using a water washing machine, it is important to allow for some time in order to let the support dry.



2. CRACKS AND JOINTS.

In concrete floors, it is important to allow for movements due to temperature changes. Normal cavities allowed for this purpose, need to be filled with proper flexible products, so that the final result is a surface totally free of any joints, which could accumulate dirt.

In this case, this is achieved by using **RAYSTON'S MAXPUR**, a solvent free PU sealant, very economical and easy to use.

3. PRIMING.

It is always best to apply a first coat (250 gr/m²) of **PU PRIMER**, so that the best adhesion is achieved.

In normal porosity substrates, it is recommended to apply a second generous coat diluted up to 10-20% in solvent,

in order to let the product penetrate into pores, and seal the surface properly.

This first “proper” coat can also be used in order to apply anti-slip agents on the surface while the product is still fresh. It is important to eliminate excess of these granules or dust by brush or vacuum cleaning before applying the final coat.



4. TREATMENT.

The main final coat can be applied (without dilution), once the first coat is not sticky.

NOTE: it is always necessary to homogenise products properly with a low rpm electric mixer; letting product rest for a few minutes to allow for air bubbles to escape.

Productivity: a proper finish (inn this case, using **COLODUR 40%**), was obtained by using 400 gr/m², in 2 coats.

It is important to divide the different areas to treat, as well as floors, machinery, etc using proper Painter's tape. It is also very important to dispose of this tape in a short time after application, avoiding that product cures on it, and causing adhesion problems afterwards.



It is best to combine the efforts of several people in the coating phase, extending product generously, in a uniform and regular way, minimising overlaps between layers of fresh

product on product already cured.

It is extremely important to make sure that rolls and brushes are adapted to use with solvents (i.e. acrylic fibres). In corners, it is best to use brush, in order to avoid stains on walls.



If it is deemed necessary, (depending on the porosity of the substrate), there can be a 3rd final coat, ideally always applied crossing the previous one.

It is important to organize well the area to treat, combining the different colours, and calculating the quantity of product to be used, in order to avoid “closing one self” in the application area.

The final result in this process, is a totally sealed floor, with great scratch and abrasion resistance, which does not generate dust, and it easy to clean and maintain.



COLODUR reaches its maximum hardness after approx. 15 days, without losing its flexibility, so it provides a great shiny finish, with remarkable mechanical properties.

CONCLUSION:

Sing component **COLODUR / PAVIDUR** resins made by de **KRYPTON CHEMICAL** offer important advantages to obtain continuous seamless floors such as:

- Abrasion, scratch resistance.
- Optimum combination between hardness and flexibility.
- Good adhesion on all substrates.
- Total stability to alkaline (basic) elements present in concrete and to degradation by hydrolysis (water / humidity), as well as to most chemical agents.

