# APPLICATION GUIDE.
# **Rayston Floor EP 20 OS8** System

by Krypton Chemical

# Contents

# 1. General

## RECOMMENDATIONS

### MANUFACTURER

The manufacturer of the products used in the work described in this specification shall demonstrate in writing that its Quality Assurance System complies with the requirements of Spanish Standard UNE-ISO 9001.

### APPLICATOR

For the correct application of the systems specified in this report, it is recommended that the application company has successfully completed a training program on their installation or application and the appropriate methods for preparing the substrate. It must also have the necessary equipment for the correct application of the product.
The application company must have the necessary means and equipment in suitable condition for the correct application of the system.

## APPLICATION PROCEDURE:

### ENVIRONMENTAL CONDITIONS

Before starting the work described in this specification, check that the environmental conditions, the work site, and the substrate are suitable for application.
The final responsibility for any decision regarding the application of the system on site shall lie with the site manager, construction manager, and/or builder, and in no case with the product supplier.

### PREPARATION

Proper preparation of the substrate is vital for the correct application of the products. The technical instructions recommended by the manufacturer must be followed.

### APPLICATION

We recommend applying or installing the products described in this report in accordance with the manufacturer's instructions and in compliance with current regulations.

### PROTECTION SYSTEMS

Before starting the application work, the necessary measures must be taken to protect workers in accordance with Occupational Risk Prevention regulations, and to ensure that personnel not involved in the work are not affected by the application.

## 2. Proposed solution

This document is intended to assist you and the applicator during the application of the **RAYSTON FLOOR EP 20 OS8** system. Two-component, self-leveling, 100% solid, polyurethane resin-based, pigmented, with a non-slip top coat for the protection of concrete surfaces and floors.

To this end, the preliminary actions to be carried out on the surface must be defined in order to mitigate the risk of future injuries. In addition, we will take into account the minimum properties that the substrate must meet in order to mitigate future risks.

## 3. System steps

The system must follow these steps:

- Primer: Rayston Epoxy 100
- Intermediate Coat: EP Coat 100 Clear
- System Sealant: EP Coat 100 (pigmented)

## 4. Substrate requirements and treatment of details and specific areas

1 Substrate requirements:

The concrete substrate must have the following properties:

- Minimum cohesion (pull-out/tensile strength) of 1.5 N/mm$^2$ .
- The concrete substrate must be compact and have sufficient compressive strength (minimum 25 N/mm$^2$ ).



- HR <4%
- No cracks
- Cohesive
- Uncontaminated
- Level

(Otherwise, the coating will highlight any existing irregularities)

## 2 Moisture content, ambient temperatures and substrate.

Before application, confirm the moisture content of the substrate, RH, dew point or condensation. If the substrate moisture content is above 8 %, and if possible, dry the surface using suitable equipment; otherwise, other types of primer should be evaluated.

The ambient and substrate temperatures and humidity must be monitored throughout the application cycle (before, during and after) (min. + 10ºC and max. + 30ºC) to prevent accelerated reactions. In addition, the dew point or condensation point must also be monitored (always apply when the temperature is 3ºC above).

Note: The speed of any chemical reaction depends on the temperature; as a general rule, the higher the temperature, the faster the reaction. Condensation on the substrate must be at least 3ºC above the dew point, and the ambient humidity must not exceed 85%.

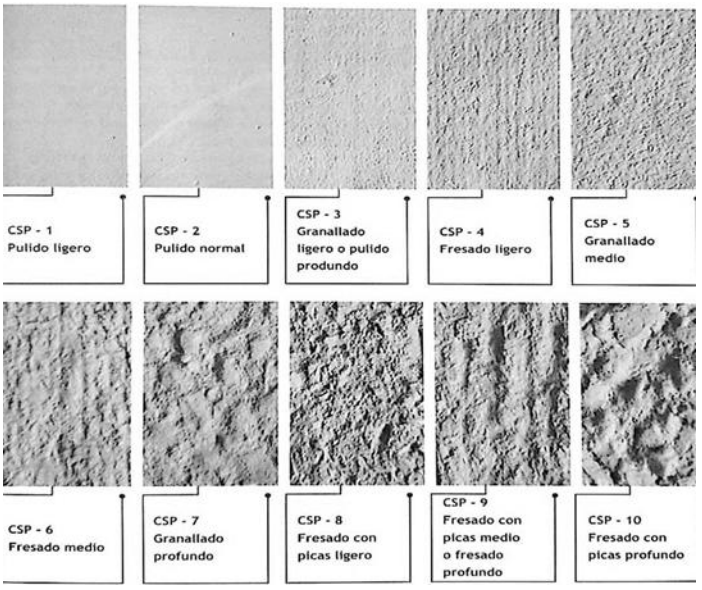
## 3 Substrate preparation:

To ensure good compatibility of the system with the existing substrate and to obtain good adhesion, it is very important that the substrate meets the minimum requirements and has the following properties:

1. Cohesive.
2. Regular and homogeneous.
3. Completely continuous.
4. Free of cracks, fissures, and cavities (which must be treated beforehand).
5. Clean and free of dust, grease, fluids, and any other type of chemical contaminant.
6. Fully cured.
7. Free of particles and other materials not completely adhered to the substrate.
8. As dry as possible (no risk of negative pressure).

The substrate should be washed with a high-pressure water machine to remove dirt (degreasing) and impurities. It is important that no material residues remain, as may affect the adhesion of the membrane to the substrate.

The degree of roughness of the concrete must be CSP1-CSP2 according to Technical Guide No. 03732 of the ICRI (International Concrete Repair Institute) "Selection and Specification of Concrete Surface Preparation for Polymeric Coatings, Sealants, and Coatings."




4 Treatment of damage and impact:

Before priming the surface, local treatments shall be carried out with dry mortar based on Rayston Epoxy 100 resin, with aggregate of 0.4 to 0.9 mm grain size or equivalent, or with R4 type cementitious repair mortar, ensuring complete aesthetic homogeneity with the existing treatment. Any cracks or small cavities shall be filled with Rayston Flex polyurethane filler or equivalent.

# 5. Steps and application of the system

## 5.1 Primer

**RAYSTON EPOXY 100** is a high viscosity, high solids epoxy system consisting of 2 pre-dosed components. Depending on the porosity of the substrate, it can be diluted with Rayston solvent to improve liquid penetration and adhesion performance. Ideally applied in two stages to achieve maximum adhesion.

Apply 0,4 – 0,6 Kg/m$^2$ of Rayston Epoxy 100 in two coats. The first coat of primer can be diluted with 10%-15% Rayston Solvent to help it penetrate (anchor) into the surface and aid consolidation. A total of 0.2 Kg/m$^2$ should be applied in this first coat.

Once the first coat has cured, apply the second coat with a light dusting of 0.3-0.8 mm aggregate while still damp. Apply a total of 0,5 Kg/m$^2$.

To apply, spread the material evenly, avoiding accumulations, and work within the product's pot life (see FT) using a rubber trowel or roller.

Important: The primer is applied to seal the porosity of a surface and should never be applied when there is rising air, i.e. when there is direct sunlight on a porous exterior surface that is gradually heating up. The recommended product in this system, RAYSTON EPOXY 100, can only be used if the substrate moisture content is less than 4%. (If it is higher, ask the technical office for a list of primers).

Application tools Rayston Epoxy 100:

## 5.2 Intermediate Coat

**EP COAT 100 Clear** is a two-component, 100% solids epoxy coating for the protection of concrete surfaces and floors. Designed for universal use in multi-layer systems from primer to self-levelling finish, it can also be used as an epoxy paint.

In the base coat of the EP 20 OS8 system, apply a 1:0.5 ratio of EP Coat 100 resin + aggregate. This should be done by adding the following proportion of aggregate to the EP Coat 100 (Clear) mixture: for every 1 Kg/m² of resin, add 0.5 Kg/m² of aggregate with a grain size of 0.1 - 0.3 mm, mixing well. To apply the EP COAT 100 Clear resin mixture with aggregate, we recommend using a metal trowel. The mixture must be applied immediately after preparation. Please note that, depending on the temperature, the working time
is approximately 25 minutes at 23 °C.
Once the product is dry, sweep or vacuum the excess aggregate from the surface before applying the next coat.

## 5.3 System Sealant

**EP COAT 100 pigmented** is a two-component epoxy coating for protecting concrete surfaces and floors. Designed for universal use in multi-layer systems from primer to finish, it can also be used as an epoxy paint.

In the main coat of the EP 20 OS8 System, apply a layer of 0.6-0.7 Kg/m² of EP Coat 100 pigmented using a roller.

## 6. Certificates

### EP COAT 100

Test type:

- CE mark - UNE-EN 13813: 2003
- Resistance to adherence, UNE-EN13892-8: 2003
- Impact resistance, UNE-EN ISO 6272-1: 2012
- Wear resistance BCA, UNE-EN 13892-4: 2003
- Determination of the slip / slip resistance value of unpolished floors (USRV). UNE-ENV 12633: 2003
- Clasification to fire - EN 13501-1: 2007

## 7. Maintenance

It is advisable to maintain the facilities and carry out periodic cleaning, removing surface residues and dirt before cleaning.

A minimum frequency of two visual inspections per year is recommended, one at the beginning of spring and the other at the beginning of autumn.

In addition, the roof should always be inspected after other professionals have carried out work such as construction, installation of new equipment, or repair of existing equipment.

## 8. Conclusions

The **RAYSTON FLOOR EP 20 OS8** system proposed by Krypton Chemical has been used in many construction and renovation projects in Spain and other countries. It has a long track record of success.

This system is completely continuous (without joints), remains adhered to the treated surface, and offers high resistance over time. In addition, it is a system that easily and effectively solves all the unique issues that may be encountered in a facility of this type.

This system, applied on site by a Krypton Chemical-approved company, has CE marking based on tests carried out by the APPLUS laboratory.

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