



APPLICATION GUIDE.

Rayston Floor PU 40 DECO EXT Mortar System

by Krypton Chemical

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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 PU 40 DECO EXT** system. One- and two-component stone carpet system based on two layers of polyurethane resins with an aliphatic finish 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 consider 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
- Base coat (pedestrian traffic): Pavistone 1K HV
- Base coat (vehicular traffic): Pavistone 2K UV or Pavistone 2K
- Finish: Floortop 1K

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/mm² .
- The concrete substrate must be compact and have sufficient compressive strength (minimum 25 N/mm²).



- 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. + 10°C and max. + 30°C) to prevent accelerated reactions. In addition, the dew point or condensation point must also be monitored (always apply when the temperature is 3°C 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 3°C above the dew point, and the ambient humidity must not exceed 85%.

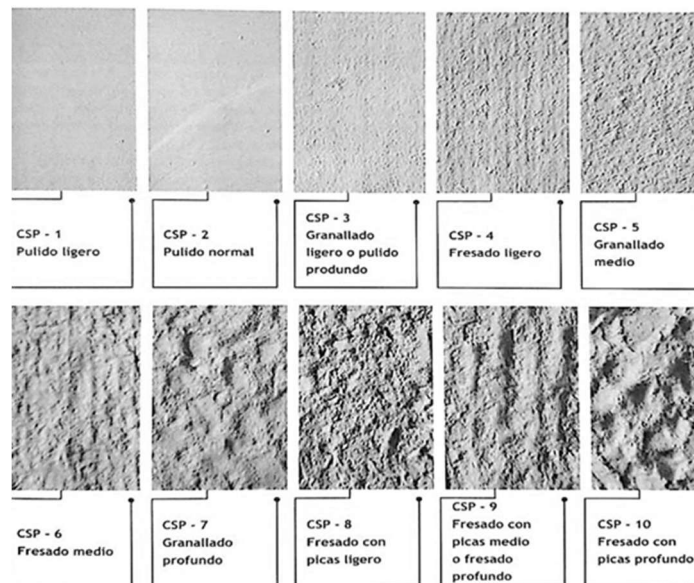
3 Substrate preparation:

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 residue remains, as may affect the adhesion of the membrane to the substrate.

The degree of roughness of the concrete must be CSP3-CSP6 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 100 epoxy 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 two pre-measured 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 0.5–0.6 kg/m² of Epoxy Primer 100 in a single coat. To apply, spread the material evenly, avoiding accumulations, and work within the product's pot life (see FT) using a rubber trowel or roller. While the product is still fresh, sprinkle aggregates with a grain size of 0.3–0.8 mm at a ratio of 1–2 kg/m².

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, EPOXY PRIMER 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 Epoxy Primer 100



5.2 Base coat (pedestrian traffic): Pavistone 1K HV

PAVISTONE 1K HV is an aliphatic polyurethane resin for creating an aggregate agglomeration system for pavements that produces a smooth, hard, low-maintenance floor with a porous or semi-porous finish, depending on the type of aggregates used.

The mixture should be made with 6% by weight of the previously measured 2-6 mm stone to obtain an approximate thickness of 10 mm. Mix 0.92 kg/m² of resin and 17 kg/m² of crushed marble. The product must be homogenised before use. Once homogenised, Pavistone 1k HV must be added to the aggregates, previously placed in a suitable mechanical mixer. Mix the aggregates and resin for 2 minutes, then pour into a wheelbarrow to take it immediately to the place of application. It is important to impregnate each batch completely and for the same amount of time to avoid differences in tone.

Next, the material/aggregate must be distributed evenly over the surface to the desired depth, using a smooth trowel (without teeth). Smooth the surface with a trowel/spatula, compacting according to the desired finish.

5.3 Base coat (vehicular traffic): Pavistone 2K UV or Pavistone 2K

PAVISTONE 2K is a transparent, two-component aromatic polyurethane resin suitable for adding decorative stone. Designed as a binder for smooth, modern, resistant, low-maintenance, porous or semi-porous pavements, depending on the type of aggregate. The finish is hard and resistant.

The mixture will be 5% by weight of the stone previously dosed in different sizes (0.1-0.3mm) / (0.3-0.6mm) in a 50/50 ratio of crushed marble. To obtain an approximate thickness of 20 mm (once compacted), mix 1.7 kg/m² of resin and 34 kg/m² of crushed marble. The product must be homogenised before use. Once homogenised, Pavistone 2K must be added to the aggregates, previously placed in a suitable mechanical mixer. Mix the aggregates and resin for 3 minutes, then pour into a wheelbarrow to take it immediately to the application site (see pot life in FT). It is important to impregnate each batch completely and for the same amount of time to avoid differences in tone.

Next, the material/aggregate must be distributed evenly over the surface to the desired depth, using a smooth trowel (without teeth). Smooth the surface with a trowel/spatula, compacting according to the desired finish.

5.4 Finish: Floortop 1K

Many floors require a finish that provides high surface resistance to scratching, abrasion and premature wear.

FLOORTOP 1K is a high-performance, single-component aliphatic polyurethane-based resin that cures with ambient humidity, resulting in hard, tough and flexible coatings with high resistance to abrasion, scratching, outdoor conditions and UV radiation. It also has very high resistance to chemical agents. Specially designed as a protective top coat for flooring. This coating does not yellow when exposed to UV rays. The application rate is 0.1–0.15 kg/m².

The temperature of the material and the environment will affect the mixing and application process. Condition the product and the area to be applied between 10-30°C, preferably 15°C and 22°C.

Floortop 1K can be applied with a roller, brush or airless spray gun. Spread the material evenly, avoiding accumulations, and work within the product's pot life (see FT).

Note: Ensure that all the above steps are satisfactory, such as temperature, moisture content of the substrate, environment, etc. Apply Floortop 1K if the moisture content of the substrate is less than 4%. Maintain good ventilation of the area during application and drying in enclosed spaces.

To achieve a non-slip finish, sprinkle wet aggregates with a particle size of 0.1 - 0.3 mm.

6. Certificates

Floortop 1K Certificates

Type of test:

- CE mark
- UNE-EN 13813: 2003
- Slip resistance of unpolished floor tiles, UNE-ENV 12633:2003
- Adhesion resistance, UNE-EN13892-8: 2003
- Impact resistance, UNE-EN ISO 6272-1: 2012
- Wear resistance BCA, UNE-EN 13892-4: 2003

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 PU 40 DECO EXT** 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. It has an aliphatic top coat.

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

The information contained in this document, as well as the advice given by Krypton Chemical, SL professionals, whether written, oral, or through testing, is provided in good faith based on our experience and the results obtained through tests carried out by independent laboratories. It does not serve as a guarantee for the user, who should consider it as merely indicative and strictly informative. We recommend that you study this information thoroughly before choosing, using, or applying any of these products. It is advisable to carry out tests on site to determine the suitability of a treatment in that location. Our recommendations do not exempt the user from the obligation to have in-depth knowledge of the correct method of application of these systems before proceeding with their use, as well as to carry out as many tests as necessary in case of doubt about their suitability for any work, installation, or repair, taking into account the specific circumstances in which the product will be used.

The obligations of Krypton are those established by Law 38/1999 on Building Regulations in Article 15 in its capacity as a product supplier. Under no circumstances shall it be assumed that Krypton is assuming the responsibilities and obligations corresponding to the project manager, the construction manager, and the builder as established therein.

The obligations of Krypton shall be solely those that can be claimed from a product supplier. Under no circumstances, through this or any other document, does Krypton assume the responsibilities and obligations corresponding to the construction manager, the construction supervisor, or the builder.

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