



APPLICATION  
RECOMMENDATIONS.  
**Rayston Proof PUA H Basic System**

by Krypton Chemical

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## 1. General conditions

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### 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.

### EXECUTION OF THE APPLICATION:

#### ENVIRONMENTAL CONDITIONS

Before starting the work described in this specification, check that the environmental conditions, the site, and the substrate are suitable for the application.

The final responsibility for any decision regarding the application of the system on site shall lie with the site manager, project 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. Therefore, the technical instructions recommended by the manufacturer must be followed.

#### APPLICATION

It is recommended that the products described in this report be applied or installed 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 terms of Occupational Risk Prevention, and the appropriate measures must be taken to ensure that personnel not involved in the work are not affected by the application.

## 2. Proposed solution

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This document is intended to assist you and the applicator during the application of the **RAYSTON PROOF PUA H Basic** system. High-performance liquid waterproofing aromatic resin system, applied by hot spray machine on a metal surface (Aluzinc).

To this end, the preliminary actions to be carried out on the wall 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

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The system must follow these steps:

- Krypton Proline PU AL Primer.
- Sprayed membrane: Impermax Polyurea H Flex.

[Enlate FT](#)

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

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### 1 Substrate requirements

The substrate must be completely clean, dry, and free of contaminants (salts, grease, oils, etc.).

### 2 Environmental conditions during application

It is important to monitor ambient temperatures and humidity throughout the application cycle to prevent accelerated reactions.

The substrate must be as dry as possible.

Recommended ambient temperature conditions: Min. +10°C, Max. +30°C.

Always apply (each layer of the treatment) to a substrate whose temperature is 3°C above the dew point (to prevent condensation of ambient humidity on the substrate).

### 3 Substrate preparation:

In any case, it is very important to ensure that the system is properly anchored to the entire surface. To do this, the roof must be thoroughly washed and degreased with hot pressurized water (with a neutral detergent) or high-pressure washing that can provide:

- Sufficient cleanliness in the existing treatment to ensure good adhesion of the system to be applied.
- Help to remove impurities and residues from the top film and stains in those areas where this could lead to adhesion failures and poor compatibility.

#### Non-ferrous metal substrate (galvanized steel, stainless steel, aluminum, and aluzinc):

Repair of specific areas: Replacement of rusted or degraded screws, sealing of screws, joints between metal plates without relative movement between them, and small cracks with a Rayston Flex-type polyurethane putty.

Overlapping metal sheets with significant relative movement between them should be treated with adhesive duct tape (polyethylene). Polyureas applied on top do not adhere well to polyolefins, which allows these sheets to move freely under the membrane, preventing possible cracks in the membrane in the long term.

If there are any areas with rust/surface dirt, these will be removed by mechanical brushing. They will then be treated with 0.25 kg/m<sup>2</sup> of PU AL Primer, which is required to provide corrosion protection for the roof.

These products are moisture-cured single-component polyurethanes that provide excellent adhesion to the substrate, fully adhering to the support and anti-corrosive primers, giving the system protection against corrosion. Being single-component, they are easy to apply with minimal surface preparation, requiring only high-pressure washing to remove dirt and brushing or sanding, making them ideal for repair projects. They will be applied using an airless machine or roller.

Cleaning the metal surface at these points of incipient corrosion will keep it rust-free for many years. The surface to be treated must be free of poorly adhered parts (peeling paint, for example) or loose particles. The substrate must be completely dry. Always apply to a surface with a temperature 3°C above the dew point.

### 4 Treatment of details and specific areas:

Take special care and attention when applying and finishing in areas that are difficult to access and apply to, such as skylights or other specific points.

## 5. Steps and application of the system

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### 5.1 primer

Apply one or two coats of 80 microns ( $0.25 \text{ kg/m}^2$ ) of **PU AL Primer**, a single-component moisture-cured polyurethane primer with aluminum and micaceous iron oxide (MIO) pigments.

Application:

- At temperatures below freezing up to  $-18^{\circ}\text{C}$ .
- At high relative humidity up to 99%.
- No dew point restrictions.
- No restrictions on maximum recoating time.
- Minimal surface preparation to St2 grade (ISO 8501-1).
- As a sealing coat for non-metallic and galvanized surfaces.

Provides:

- High adhesion, anti-corrosive properties, and barrier effect due to aluminum and micaceous iron oxide (MIO) pigments.

Application tools PU AL Primer:



## 5.2 Main membrane

**Impermax Polyurea H Flex** is a two-component, fast-curing polyurea-based system for the application of elastic membranes with high chemical and mechanical resistance. To achieve good protection on metal, a layer of polyurea resin should be applied at a rate of  $f^2 \text{ kg/m}^2$ .

Impermax H Flex polyurea is applied using a spray machine. The parameters of the dosing machine (temperatures, pressures, etc.) are specified in the resin's technical data sheet.

Note: Impermax Polyurea H Flex is very stable outdoors and to UV rays, but its color is not. Performance (except for color) remains unchanged when exposed to the outdoors for a long period of time, even if no top coat is applied, because the chemical and mechanical resistance of the resin does not deteriorate when exposed to sunlight and UV radiation.

## 6. Certificates

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### IMPERMAX POLYUREA H FLEX Certificates

ETE (European Technical Assessment) number 16/149 issued by the Torroja Institute, the leading laboratory for construction materials in Spain.

- Broof(t2) external fire performance certificate. The Broof(t2) external fire performance certificate is much more demanding than the minimum requirement of Broof(t1).
- Reaction to fire, B2 according to German standard DIN-4102-1998.
- Hail resistance certificate according to European standard EN-13583:2.012.
- Crack bridging capacity, static, tested according to standard EN-1062-7, at  $-10^{\circ}\text{C}$ . (Class A5, the highest possible, according to standard EN-1504-2).
- Resistance to accelerated aging by heat, according to EOTA TR11 standard.

## 7. maintenance

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It is advisable to maintain the installations 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

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The **RAYSTON PROOF PUA H Basic** system proposed by Krypton Chemical has been used in a large number of construction and roof 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 great resistance over time. In addition, it is a system that easily and effectively resolves all the unique issues that may be encountered in an installation of this type.

This system, applied on site by a company approved by Krypton Chemical, 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 the professionals at Krypton Chemical, SL, whether in writing, orally, or through testing, is provided in good faith based on our experience and the results obtained through tests carried out by independent laboratories. However, it does not serve as a guarantee for the applicator, who should take it as a mere reference and strictly for informational purposes. We recommend that you study this information in depth before choosing, using, and 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 applicator 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 job, installation, or repair, taking into account the specific circumstances in which the product will be used.

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

The obligations enforceable against Krypton shall only be 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 project manager, or the builder.

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