



Pu single pack zinc rich anticorrosion primer

DESCRIPTION

PU ZN Primer is a highly efficient single pack polyurethane anticorrosive solvent-based moisture-cured primer.

PU ZN Primer is a product which has a unique system with zinc and micaceous iron oxide (MIO). These components yield a reliable long-term coating with corrosion protection and barrier properties for prepared steel surfaces. This primer can be used on poorly prepared steel surfaces, prior to protective or waterproofing membranes.

The primer can be applied at high relative humidity, subzero temperatures and without restriction on dew point. Has no restriction on the maximum overcoating time.

Surfaces primed with PU ZN Primer have a high coefficient of friction (0.47 at +20 °C), which allows application of primer to contacting surfaces of bolted connections and does not require subsequent removal of the coating is assembled.

APPLICATIONS

The primer is recommended to be used as zinc-rich anticorrosive primer on blast-cleaned steel or other metal surfaces. PU ZN Primer is used as anticorrosion system in conjunction with other materials such as waterproofing membranes for metal roofing.

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

| | |
|-----------------------------|--|
| Chemical description | Moisture-cured, monocomponent polyurethane resin, in organic solvent. |
| Physical state | Liquid |
| Packaging | Metal container 11,5 kg (5L) |
| Non-volatile content (%) | 67% |
| Flash point | >21°C |
| Available colour | Dark grey |
| Density | 2.3 g/cm ³ (25°C) |
| VOC (g/L i %) | <260 g/L |
| VOC class as per 2004/42/EC | 32% by weight Product subclass: h 2 Consolidating primers, solvent based Phase II from 01/01/2010 on: 500 g/l |
| Storage and use before | The product must be stored in only original sealed containers at temperatures from 5°C to 30°C. Keep away from heat and ignition sources. Use before 12 months after manufacturing date. |

INFORMATION ON THE FINAL PRODUCT

| | |
|---------------------------------|--|
| Final state | Solid film |
| Colour | Dark grey |
| Adhesion strength ASTM D4541 | Metal: >4 |
| Thermal Resistance | Stable up to 145°C. |
| Chemical resistance | Surface contact 24 h, (5=best, 0=worst) Water: 5 Solvents: 4 |

SUPPORT REQUIREMENTS

The surface must be visually dry and clean. The surface must be inspected and cleaned according to ISO 8504.

Steel Surfaces. The primer can be applied on the surfaces with different surface preparation grades. Ideally recommended surface blasted to the grade at least Sa 2.5 according to the ISO 8501-1 or similar ones.

Surface Profile should correspond to Fine or Medium according to ISO 8503-1 (30-75 µm Ry5). All the abrasive particles and dust must be removed by compressed air or vacuum cleaned. The steel surface must be overcoated within 4 hours after cleaning procedures, to avoid rust appearance.

In case the blast cleaning is not acceptable, the surface can be prepared mechanically to provide a corresponding profile.

High pressure water jetting can also be used for surface preparation.

In case the prepared surface is visually dry, without condensation or ice, PU ZN Primer can be applied without any limitations on dew point and relative air humidity under temperatures from -18°C to 40°C for ambient air as well as substrate.

However, when relative humidity is below 40%, it is recommended to consult manufacturer for advice.

The surface must be visually dry, however PU ZN Primer cannot be applied in rain or snow, or if the applied material does not have enough time to become touch dry before it is subjected to rain or snow..

APPLICATION

PU ZN Primer is a single pack material and it must be thoroughly stirred to achieve completely homogeneous material. Before opening and stirring the temperature of material must be at least 3°C above dew point.

Before application the material must be thoroughly stirred using a mechanical stirrer. The constant stirring is not required. After stirring the surface of the material in the bucket must be covered with the approximately 100-200 ml of solvent in order to avoid humidity penetration and the bucket must be resealed after it (in case of slow speed of spraying or bad weather condition). (For more details please contact Krypton Chemical).

Viscosity of the primer will increase at lower temperatures. In order to maintain an application viscosity and prevent excessive thinning of the primer, temperature of primer should be maintained not lower than +15°C during application.

Spray application

The main way of application is airless spray. The air spray method is also acceptable.

Pressure at nozzle 17-20 MPa
Nozzle tip 0,0153-0,023"
Spray angle: 40-80°
Filter: To provide filter cleanliness. Filter Size – 60 mesh (250 µm)

Brush application

This method is recommended for stripe coating and small area repairs. The resulting wet and dry film thickness must be watched carefully.

Airless application recommendations:

Thinning:

The addition of thinner is usually not necessary. If necessary Rayston Solvent can be added up to 10% to the volume. Other solvents, eg reactive with isocyanate are not suitable.

FILM THICKNESS AND CONSUMPTION RATE

Dry film thickness, µm 80 – 150
Wet film thickness, µm: 119-224
Theoretical consumption rate, kg/m²: 0.3-0.5

CURING TIME

Curing time depends strongly on the ambient conditions. The higher the temperature and humidity are, the faster PU ZN Primer cures. The following table gives approximate values at 60% RH.

| Conditions | Dry to touch (h) |
|------------|------------------|
| -18°C | 20 |
| -10°C | 16 |
| 0°C | 8 |
| 10°C | 30 min |
| 23°C | 10 min |
| 40°C | 10 min |

Complete curing takes place in 5-10 days depending on temperature.

TOOL CLEANING

Use Rayston Solvent. In case it is not available the following solvents can be used only for cleaning: MEK, xylene, 1:1 solution of xylene and MEK.

REAPPLICATION

It is possible to apply a second coat or to resume job with the following coating according to the table below.

| Conditions | Interval (h) |
|------------|--------------|
| -18°C | 48 |
| -10°C | 20 |



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PU ZN PRIMER

RAYSTON
products



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| | |
|------|-----|
| 0°C | 12 |
| 10°C | 5 |
| 23°C | 2 |
| 40°C | 0.5 |

SAFETY

PU ZN Primer contains isocyanates and flammable solvents. Always follow the instructions provided in the material safety data sheet and take the precautions described there. As a general rule, a suitable ventilation must be ensured and any skin contact avoided. This product is intended to be used only for the uses and in the way here described. This product is to be used only by industrial or professional users. It is not suitable for DIY-type uses.

ENVIRONMENTAL PRECAUTIONS

Empty containers must be handled taking the same precautions as if they were full. Containers must be considered as hazardous waste, to be transferred to an authorized waste manager. If there is some residual product in the containers,

do not mix it with other substances without checking for possible dangerous reactions.

OTHER INFORMATION

The information contained in this DATA SHEET, as well as our advice, both written as verbal or provided through testing, are based on our experience, and they do not constitute any product guarantee for the installer, who must consider them as simple information.

We recommend to study deeply all information provided before proceeding to the use or application of any of our products, and strongly advise to conduct tests "on-site" in order to determine their convenience for a specific project.

Our recommendations do not exempt of the obligation of installers to deeply study the right application method for these systems before use, as well as to conduct as many preliminary tests as possible should any doubt arise. The application, use and processing of our products are beyond our control, and therefore under the exclusive responsibility of the installer. In consequence, the installer will be the only responsible of any damage derived from the partial or total in-observation of our indications, and in general, of the inappropriate use or application of these materials.

This data sheet supersedes previous versions.



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