

CIKOproof PPUA



Two Component High Quality Pure Polyurea waterproof and protective coating

Description

CIKOproof PPUA is two-components high quality and fast curing polyurea with virtually non-existent VOC's, the product is 100% solids cured to provide a superior membrane exhibiting a high tensile strength, extended elongation and high chemical resistance. CIKOproof PPUA can be applied as waterproofing and protection coating.

Properties & Advantages

- Eco Friendly.
- Fast curing (15 - 30 seconds).
- Easy to apply.
- High tensile strength and elongation.
- Suitable for drinking water.
- Excellent impact, abrasion and puncture resistance.
- Enhances the durability of reinforced concrete.
- Excellent resistance to thermal shock.
- Excellent chemical resistance to solvents, oil and acid.
- Excellent bond strength
- Colour stable when top coated with aliphatic acrylic polyurethanes

Applicable Standards and Certification

CIKOproof PPUA is a certified product suitable to be in contact with drinking and potable water as it complies with minimum performance requirements of BS6920-1 having a superior resistance to wide range of chemicals.

Application Area & Uses

CIKOproof PPUA provide a waterproof and protective coating for concrete, steel and wood structures in a wide range of environmental conditions. It can be used in areas where chemical and oil resistance are required.

Typical applications include but not limited to:

- Water & Sewage tanks
- Sewage water treatment facilities
- Decks & stadium Stands
- Service roofs
- Tunnels
- Hot water storage and chemical tanks
- Steel vessels
- Multipurpose protection coating on steel and concrete.
- Waterproof coating on concrete and wood surfaces.

Chemical Resistance

CIKOproof PPUA is resistant to a wide range of chemicals when tested as per ASTM D3912/D543.

Test Solution	Test Conditions	Observation & Test Result
Sulphuric acid (10%)	23± 2°C (7 days)	No Characteristic Observed (Resistant)
Sodium Hydroxide (30%)		
Sodium Hydroxide (50%)		
Sodium Chloride (30%)		
Diesel		
Salt Water		

Coverage & Recommended thicknesses

CIKOproof PPUA provides a coverage of 1 m²/L @ 1mm thickness. It is recommended to apply the product at a minimum thickness of 1 mm and maximum 3 mm in minimum 2 coats depending on project and service requirements.

Coverage rates given are theoretical. Due to wastage and the variety or/and nature of substrates, practical coverage figures may be reduced, this will vary with site and application conditions.

Physical properties

Appearance	Liquid
Colour	Clear/Neutral (custom colours are available upon request)
Solid content	99-100%
Tack Free Time	Approx. 15 seconds
Recoat Time	18-24 hours
Specific Gravity	Part A: 1.12 ± 0.1 Part B: 1.02 ± 0.1
Tensile Strength ASTM D 412	≥20 N/mm ²
Tensile Elongation (ASTM D 412)	≥400 %
Viscosity	Part A: 600 ± 100 Part B: 500 ± 100
Shore A Hardness ASTM D2240	95 ± 5
Shore D Hardness ASTM D2240	55 ± 5
Thermal Stability	0 °C to 50 °C
Tear Strength (ASTM D 624)	≥60 N/mm ²
Abrasion Resistance (1Kg, 1000cycles, CS-17)	≤40mg
Impact Resistance (Thickness 1mm)	≥1.5 Kg.m

Application Instructions

Surface preparation of Concrete substrates

Concrete should be allowed to cure minimum 28 days and to have a moisture content below 4%.

The concrete surface should be free from dust and loose particles or weak thin layers. All contamination such as oil, grease and extraneous spillages must be cleaned using the suitable cleaning agent.

Concrete shall be diamond disk grinded, grit/shot blasted or treated with equivalent and suitable mechanical means to achieve a concrete surface profile between CSP 3 and CSP 5 as per ICRI Technical Guideline.

All cracks, deteriorated areas, joints shall be well treated and addressed using the appropriate epoxy-based repair and injection materials from CIKO wide range of products prior to the application of the primer.

Surface preparation of Metal

The steel shall be grit or sand blasted to achieve a surface free of all visible oil, grease, dirt, dust, mill scale, rust and paint or coatings to meet the requirements of SA 2^{1/2} according to Swedish standard. Clean the surface well post treatment.

Priming of concrete & Wood surface

On highly porous substrates it is advisable to apply a single coat of epoxy-based primer among CIKOpoxy Prim range of products.

Priming of Metal surface

Prime the surface of the treated metal using 2 components epoxy-based primer such as CIKOpoxy Prim 14 or a suitable zinc rich or zinc phosphate multicomponent epoxy-based steel primers.

Application method

Spray Equipment

Spraying machine must be maintained all the time of spraying at 60°C- 75°C with a pressure of 1,500 psi and capable of providing a mixing ratio of 1:1.

The client/ main contractor must be satisfied that the applicator has suitable equipment and expertise and will follow the procedures detailed in this datasheet and in the CIKO's Polyurea Method Statement.

Packaging

CIKOproof PPUA is available in 200 litres steel drums Consisting of Part-A & Part-B.

Shelf life

CIKOproof PPUA has a shelf life of 12 months if stored in accordance with CIKO recommended storage conditions (unopened containers).

Storage

CIKOproof PPUA should be stored under enclosed shaded area away from direct sunlight at temperatures between 5°C – 35°C.

Precautions & Recommendations

- Not to use over standing water.
- Component B to be stirred for 1 hr before spraying and during spraying
- The ambient temperature during application must be between 10 – 45°C.
- The substrate temperature is between 10 – 35°C and at least 3°C above dew point temperature.
- Re-spray coat to be within 24 hours otherwise primed is required again before spraying.
- Under direct sunlight exposure, it is advisable to apply an additional thin coat of CIKOcoat UV333 to maintain colour stability if required.
- Atmospheric Relative humidity below 75%
- CIKOproof PPUA may be supplied in a special formulation containing specific additives to maintain a strong resistance and stability to UV rays.

Health & safety

CIKOproof PPUA should not come in contact with eyes or be swallowed. Applicator should wear appropriate clothes, gloves, and goggles. Use of barrier cream is recommended to provide additional skin protection. If comes in contact with eyes, flush

with plenty of fresh water and seek medical advice. Refer Material Safety Data Sheet for further details.

Technical Support

For further technical support, do not hesitate to contact CIKO team at any time as CIKO offers on and off-site services to end users, specifier and contractors.

More from CIKO Middle East

A wide range of construction chemical products are manufactured by CIKO Middle East which includes:

- Concrete admixtures and additives
- Waterproofing and damp-proof coatings
- Surface treatments
- Flooring and toppings
- Grouts and anchors
- Tile adhesives and grout
- Concrete repair materials
- Adhesives and bonding agent
- Protective coating
- Joint Sealants and Moulding compounds
- Ancillaries

Legal Notice and Warranty

CIKO warrants this product to be free from manufacturing defects and to meet the technical properties stated in the current Technical Data Sheet, if used as directed within its shelf life. Satisfactory results depend not only on quality of product but also on many factors beyond our control. CIKO makes no other warranty or guarantee, express or implied, including warranties of merchantability or fitness for a particular purpose with respect to its product. The sole and exclusive remedy of purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is the replacement of product or refund of the purchase price, at the sole option of CIKO. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by purchaser. CIKO will not be responsible for any special incidental, consequential including lost profits or punitive damages of any kind. Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on CIKO's present knowledge and experience. However, CIKO assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. CIKO reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified expert.

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All CIKO products are manufactured under a strict management system conforming to and in compliance with requirements of international standards of Quality, Environmental, occupational Health and Safety ISO 9001, ISO14001 and ISO45001.



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