

CIKOHard Top PU

Smart Chemical Solutions



Polyurethane based protective top coating for exposed exterior applications

Description

CIKOHard Top PU is a two component aliphatic, acrylic polyurethane based coating recommended for exterior applications. It provides excellent resistance to ultraviolet rays.

It possesses high tensile strength and excellent balance between elongation and hardness, resulting in long term impact and wear resistance as topcoat in atmospheric off shore environments.

Properties

- Two component polyurethane based system.
- Resistance to UV rays.
- Provides tough topcoat on wide range of substrates.
- Exhibits good impact and abrasion resistance.
- Exhibits high chemical resistance to wide range of acids, alkalis, hydroxides etc..
- Exhibits balanced tensile strength, elongation and hardness.

Application area

CIKOHard Top PU suitable to use both in industrial, commercial and Marine segments as,

- Topcoat for CIKO coatings systems.
- Durable coating for interior and exterior applications.
- As a topcoat for UV resistance on epoxy based systems, zinc epoxy and polyurethane coatings.
- Coating for transformer pits, cable trenches, exposed ramp and floor areas.
- Top coat for steel tanks and steel surfaces.

Physical properties

Form	Two component system Part-A : Liquid Part-B : Liquid
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Solids %	63±3%
Mixing ratio	Pre-weighed packs
Density @ 25 °C	1.15±0.02 g/mL
Finish	Glossy
Pot life @ 25 °C	>2 hours
Surface dry	at 5°C : 6 h
	at 10°C : 2 h
	at 25°C : 1.5 h
	at 40°C : 1 h
Minimum allowable duration between coats	at 5°C : 12 h
	at 10°C : 8 h
	at 25°C : 6 h
	at 40°C : 4 h
Full Cure @ 25 °C	7days
Maximum recommended thickness in single application	160 µ WFT (100 µ DFT)
Minimum Recommended thickness in single application	80 µ WFT (50 µ DFT)
Abrasion resistance (Taber abrasion CS10 wheel , 1000 cycles load 1kg)	< 45mg
Pull off bond Strength	Concrete > 2 Mpa
	Steel > 5 Mpa
Heat Resistance of coating	No de-bonding, blistering, sagging or slipping

Coverage

CIKOHard Top PU will provide coverage of 6.0 - 6.5m² per litre at 100 microns dry film thickness per coat.

Note: The coverage depends on the floor condition and finish. Consult our technical service department for assistance.

Application instructions

Surface preparation of concrete

The concrete should be free from dust and loose particles. Any oil spillage areas shall be cleaned by acid

etching and cleaned with plenty of clean water or grit blasted. All contamination should be treated well.

Undulation and surface irregularities shall be mechanically grinded and repaired using CIKO epoxy putty which is a 2 component thixotropic epoxy based repair and resurfacing mortar. Prior to the application of CIKO hard Top PU, the surface should be dry to moisture content below 4%.

Surface preparation of Steel

Steel surfaces shall be grit or sand blasted to reach a bright finish free of rust and corrosion meeting the requirements of Swedish standards SA 2^{1/2}.

Priming

Immediately prime the clean and dust free surface with CIKO epoxy based primers or any other compatible primer confirmed by CIKO. Consult CIKO technical service department for further clarifications.

As a top coat over primed and coated Steel surfaces.

The base (epoxy, zinc epoxy) surface must be roughened using sand paper and should be properly cleaned before application of CIKO hard Top PU so that the surface is fully free from dust and loose particles.

As a top coat over epoxy or polyurethane coat:

The base surface must be roughened using sand paper and should be properly vacuumed before application of CIKO hard Top PU so that the surface is fully free from dust and loose particles.

Note: The roughening of substrate is recommended only if the base screed is aged more than 7 days. Otherwise CIKO hard Top PU can be applied directly on the base after ensuring proper surface preparation and cleaning.

Mixing

The base component [Part-A] of CIKO hard Top PU should be mixed thoroughly using a heavy duty slow speed drill-paddle assembly and ensure a homogeneous mix. The hardener component [Part-B] should be poured into the base component [Part-A] and mixed well for 2 to 3 minutes until a homogenous mix is obtained.

Application method

Properly mixed material should be applied using brush, roller, air spray and airless spray machines over the dry and clean base (epoxy or polyurethane) surface, maintaining the required thickness. The coated surface should be left for 12 – 24 hours curing, depending on the prevailing ambient conditions. Apply subsequent coats once the basecoat gets properly dried. A minimum of two coats is recommended.

Spray Method:

Pressure pot equipped with dual regulators, 3/8" I.D, minimum material hose, 0.043"ID. Fluid tip and appropriate air cap .

Brush Method:

Use a medium, natural bristle brush and avoid excessive re-brushing.

Roller Method:

Use a 1/2" nap roller with solvent resistant core and avoid excessive re-rolling

Precautions

Prior application of, ensure that

- Substrate is free of moisture < 4%
- Ambient temperature is between 10 – 45°C.
- Substrate temperature is between 10 – 35°C and at least 3 °C above dew point temperature.
- Relative humidity is below 75%.
- Base material is compatible with CIKO hard top PU.
- Over coating gap time limit has not been exceeded.

Packaging

CIKO hard Top PU is available in 4.0 litre and 15 litre kits that consists of Part-A & B.

Shelf Life

CIKO hard Top PU has a shelf life of 12 months if stored in accordance with CIKO instructions.

Storage

CIKO hard Top PU should be stored under enclosed shaded area at temperatures between 5 – 25°C.

Health & safety

CIKO hard Top PU should not come in contact with eyes or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. 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.

TDS/PC20 Rev.:0 Issue:C

Note: The information presented herein based on the best of our knowledge and expertise for which every effort is made to ensure its reliability. Although all the products are subjected to rigid quality tests and are guaranteed against defective materials and manufacture, no specific guarantee can be extended because results depend not only on quality but also on other factors beyond our control



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Refer Material Safety Data Sheet for further details.

Technical Support

For any 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*

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