CCS INDUSTRIAL EPOXY PR100

DESCRIPTION

CCS Industrial Epoxy PR100 is a two-part 100% solids phenalkamine epoxy system with the ability to bond effectively to damp, green and oily concrete. It is a very low viscosity, fast curing and especially formulated for protecting metal and concrete surfaces against corrosion and chemicals. It has exceptional water resistance properties and therefore is an ideal primer under various coatings including polyurea.

FEATURES & BENEFITS

- Resin to Hardener mix ratio 1:0.8 by volume (1ltr resin to 800ml hardener)
- Exceptional water resistance
- Long pot-life, fast 2.5 hour thin-film dry time
- Low mixed viscosity of 240CPs - readily penetrates concrete
- Zero VOC's – safe to use in confined spaces
- Bonds strongly with a wide variety of topcoats
- Bonds strongly to wet, green and oily concrete
- Adheres to difficult substrates such as inorganic zinc primer & cleaned galvanised steel
- Superior corrosion protection for steel
- Excellent chemical resistance
- Chemically crosslinks at temperatures as low as 0°C
- Clear, blush-free finish, even at low temperatures and high humidity
- No induction time required
- Can be rolled, painted or sprayed
- Excellent flexibility
- Approved for use with Potable Water - AS/NZS4020

COLOUR

CCS Industrial Epoxy PR100 is supplied as a Light Grey colour as standard.

PACKAGING

CCS Industrial Epoxy PR100 is available as an 9lt kit. Comprised of Part A – 5lt & Part B – 4lt.

THEORETICAL COVERAGE RATES

First coat on steel 5-8m^2 per litre
First coat on concrete 3-5m^2 per litre
Second coat steel or concrete 5-8m^2 per litre

APPLICATIONS

- Primer coat for damp, green and oily concrete
- Primer coat for protecting steel from corrosion and chemicals
- Compound for patch and crack repairs and surface rendering when mixed with sands
- Anti-corrosive primer or final protective coating for steel and concrete tanks, reservoirs and pipelines
- Use where fast return to surface is required – 2.5 hour thin-film drying time with excellent hardness
- Ideal to use in low or high temperatures and high relative humidity

APPLICATION METHOD

Apply CCS Industrial Epoxy PR100 with a good quality roller, paint brush, squeegee, gauge rake, trowel or spraying equipment.

PREPARATION

Concrete

Prepare, profile and clean concrete using industry standard techniques. All surfaces should be structurally sound and all previous coatings, adhesives, efflorescence or laitance should be removed by mechanical grinding, abrasive blast cleaning, high pressure water blasting, mechanical scrubbing or other suitable means. Concrete surfaces that have been in contact with form ply or moulds may have been exposed to release agents containing waxes, silicones or hydrocarbons. It is imperative that these are removed thoroughly as they can prevent CCS Industrial Epoxy PR100 from bonding to the concrete properly. Holes, non-structural cracks and other surface irregularities should be repaired using a compound of CCS Industrial Epoxy PR100 and sands.

Steel

Blast, profile and clean using industry standard techniques to remove all rust, corrosion, mill scale, oil and any existing coatings. Light to medium blast cleaning (Sa 1 – AS1627.9, Sa 2 – 1627.9) is adequate in most cases where foreign matter needs to be removed. For permanent immersion remove all soluable salts from the surface. Apply CCS Industrial Epoxy PR100 to specified thickness and uniform smooth finish.

Other Substrates

Prepare surface using industry standard techniques to ensure strong adhesion.

Recoat

Usually between 2 hours (or when coat has gelled) and 72 hours. If recoating after 72 hours surface must be mechanically sanded using 80 grit disc so proper bonding occurs. Ensure surface is dust free.

PATCHING & SURFACE RENDERING

The addition of sands to CCS Industrial Epoxy PR100 will provide a suitable patching and render mortar compound. Various mortar compounds can be achieved by adding more or less sand as required to consistencies shown in the table below.

Note

Always prime concrete surface first without any sand mixed into CCS Industrial Epoxy PR100 to ensure maximum adhesion of CCS Industrial Epoxy PR100 mortar compound. Allow priming coat to touch dry prior to applying the epoxy mortar compound. The addition of fine silica sand (<250µ) with a coarser sand will provide a high build mortar compound for vertical patching or patching of situations where slumping may be an issue. All patched areas should be coated with Industrial Epoxy PR100 prior to applying a top coat. Contact our office for more information on epoxy mortar compounds

CCS Industrial Epoxy PR100 (L)	Sand (kg)	Yield Industrial Epoxy PR100 + Sand (L)	Mixed Consistency	Pot Life (20°C) (hrs)
1	1 - 2	2	Very Fluid	1:40
1	2 - 4	3	Fluid	1:45
1	4 - 6	4	Pourable	2:00
1	6 - 7	5	Stiff Paste	2:00
1	7-9	6	Trowelled	2:00
1	9-15	7	Dry Trowelled	2:30

FIRST COAT

1 Using a mechanical mixer stir Part A (epoxy base) in its original container for at least 30 seconds before use.

2 Add Part B (hardener) to Part A (epoxy base) and mechanically mix for 1 minute. Whilst mixing make sure to scrape product downwards from the insides of the container. Avoid entrapping air into the mix during the mixing process. The ratio of Part A (epoxy base) to Part B (hardener) is 1:0.8.

Do not vary the ratio of Part A and Part B under any circumstances.

3 Only mix as much as is likely to be used within the pot life of the product (the pot life is approximately 30 minutes at 25˚C). To extend pot life place mixed product in an ice bath or place Part B Hardener in a refrigerator for a period to cool it down before use.

4 Once Part A and Part B are mixed and ready to apply, vigorously work first coat into the surface ensuring that all pores and holes are filled.

SECOND COAT

Mix Industrial Epoxy PR100 in the same method as the above first coat instructions.

Note: It is imperative that you use a clean bucket and clean mixer before commencing mixing and application of the second coat.

APPLICATION GUIDELINES

- Treat unintentional stress cracks in concrete by "chasing" them with a V shaped diamond grinder then fill gap with CCS Industrial Epoxy PR100 mortar compound.
- Expansion joints should have sharp edges chamfered,
- Remove all high spots and protrusions.
- If concrete is very porous apply CCS Industrial Epoxy PR100 in the afternoon when the concrete is cooling down to avoid bubbles forming in the system due to "outgassing" of the concrete. If bubbles form, ensure they are flattened and re-coat them with CCS Industrial Epoxy PR100.
- Although CCS Industrial Epoxy PR100 is highly resistant to amine blush, be aware of surface temperatures dropping to within 3º of the dew point.
- Always mechanically stir Part A (epoxy base) thoroughly.
- Always mix appropriate ratio quantities of CCS Industrial Epoxy PR100 following "First Coat" instructions carefully.
- Wait until the CCS Industrial Epoxy PR100 has gelled before applying additional coats
- If the CCS Industrial Epoxy PR100 is more than 72 hours old the surface should be mechanically sanded using an 80 grit disc before recoating to ensure proper coat to coat adhesion.
- Up to 10% of CCS Solvent can be added if required.

CURING TIME

Allow the surface to cure for at least 24 hours before subjecting it to pedestrian traffic, 3 days before allowing vehicular traffic and 5-7 days before subjecting it to chemicals for severe abrasion.

LIMITATIONS

- Colour change and surface chalking will occur if product is exposed to UV light.
- If the concrete slab has outgassing from rising temperatures or high moisture content apply a thin coat first and work it well into the surface ensuring to fill all pores and holes.
- Second coat can be applied between 2 hours and 4 weeks however the surface must be clean and dust-free. If applying after 72 hours the surface must be mechanically sanded with 80 grit sanding disc to ensure the second coat will bond to the first coat.
- Mixing too much product at once will diminish the pot-life. When applying to larger areas, pour the mixed product directly onto the concrete surface and roll or spread using a squeegee or gauge rake.
- Up to 10% of CCS Solvent can be added if required.

TYPICAL WET PROPERTIES

Property	Part A	Part B
Appearance	Beige Liquid	Amber Liquid
Viscosity @ 25°C (CPS)	896	480
Mixed (A+B) Viscosity (CPs)	500	
Specific Gravity @ 25°C	1.17	1.00
Solids Content (wt%)	100	100
Mixed (A+B) Solids Content (wt%)	100%	
Mix ratio – Parts by volume	1	0.8

TYPICAL CURED PROPERTIES

Property	Test Method	Results
Pot Life (minutes)	100g @ 25°C	23
Thin Film Dry Time (touch/hard/through)	(hrs) @ 25°C	2.5/3.5/4.5
Hardness - Shore D	ASTM D 2240-1	60
Elongation @ 25°C	ASTM D 412 06ae2	1-2%
Abrasion Resistance	ASTM c501-84, H18 wheel @ 1,000rpm with 1,000g weight	98
Tensile Strength	ASTM D412-92	16.0 MPa
Tear Strength	ASTM D412-92	98 N.mm
Flash Point	Pensky Martens	>180°C
Theoretical Coverage	1L (A+B mixed)	$4m^2$ - $8m^2$
Thinning CCS Industrial Epoxy PR100	Add Xylene to maximum of	10%
Re-coat Schedule	Must be dust-free	2hrs – 4wks See limitations

CLEAN UP

Wash all equipment in CCS Solvent after use.

STORAGE

Store between 10°C and 30°C away from direct sunlight. Shelf life is 12 months in original unopened container. Partly used containers must be sealed tight when not in use.

For further information consult the Material Safety Data Sheet and read the product label carefully before use. Material Safety Data Sheets are available by phoning 1800 077 744.

User Responsibility-Product Selection and Compatibility

CCS warrant that their manufactured product is free from defects as well as being suitable for the purpose for which it is intended as long as it has been used and applied in accordance with the most current Technical Data Sheet from CCS.

In practice, differences in materials, substrates and actual site conditions require an assessment of product suitability for the intended purpose.

The user is responsible for checking the suitability of products for their intended purpose.

Further, combinations of products that form a total system are often required to service particular applications. Due to the multitude of products available to service an application, only products from the CCS system of products must be used in combination with this product to ensure it will be suitable for the purpose for which it is intended.

The product must also not be mixed or used in combination with any other product which is not a product supplied by CCS

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