

Civilox®-PW300

Single coat very high built 100% solids epoxy lining

PRODUCT

DESCRIPTION A two component, very high build 100% solids epoxy, designed for concrete and steel linings for water immersion service. Civilox-PW300 has outstanding water and anti-corrosion resistance. Civilox-PW300 will cure at low temperature.

INTENDED

USES

- Lining for concrete tanks including potable water storage
- Lining for steel tanks including potable water storage
- Very high build anti-corrosive coating for steel structures
- Very high build anti-corrosive coating for salt water immersed steel structures

FEATURES

- Very high build with up to 600 Microns DFT possible in a single coat
- Tolerant to substrate moisture
- Fast cure at ambient temperature
- Full cure down to 0°C
- Outstanding fresh and salt-water resistance
- 100% solids (non-flammable)
- Convenient 2:1 by volume mix ratio
- Direct to steel coating
- Does not contain Benzyl Alcohol

PRODUCT DATA

Volume Solids	100%
Theoretical Coverage	3.33m ² / L @ 300 Microns DFT
Finish	Pigmented
Colour	White and Custom Colours
Gloss	Gloss / Semi-Gloss
Mixing Ratio	2:1 by volume
Potlife	30 min @ 25°C
Typical Thickness	300 to 600 Microns DFT (300 to 600 Microns WFT)
Cleaner	LM1 Thinner
Flash Point	>101°C
VOC	0 Grams/Litre
Specific Gravity	1.34

CURE & RECOAT

Substrate Temp	Tacked	Hard Dry (Note 1)	Minimum Recoat Time	Maximum Self Recoat Time (Note 2)
5°C	20 Hrs	36 Hrs	36 Hrs	2 Weeks
10°C	15 Hrs	27 Hrs	27 Hrs	2 Weeks
15°C	10 Hrs	18 Hrs	18 Hrs	2 Weeks
25°C	5 Hrs	9 Hrs	9 Hrs	2 Weeks
40°C	2 Hrs	4 Hrs	4 Hrs	1 Week

Note 1: Full cure 7 - 14 days. Pull-off adhesion testing is best conducted after at least 3 Days cure

Note 2: Where the Civilox-PW300 is exposed to direct sun and UV, the maximum recoat time will be considerably reduced.

ENGINEERING DATA

Property	Result
Dry Heat Resistance - Intermittent	100°C

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POTLIFE

Mixed Product Temperature	Gel Time (Note 1)
10°C	75 min
15°C	60 min
25°C	30 min
40°C	10 min

Note 1: Potlife is dependent on product temperature as well as mix size. When using larger mix sizes, the potlife will be shorter. Keep products cool.

LIMITATIONS

- Expect colour change and surface chalking over time for exposed Civilox-PW300
- May bubble or crater when applied directly to concrete that is outgassing from rising temperatures or high moisture content. To minimise this, apply a thinned coat first and work it well into the surface, making sure all pores and holes are filled
- Product requires up to 14 days to develop full physical properties and adhesion. Pull-off or other adhesion testing might not produce accurate results during this period

SURFACE PREP

Concrete

The concrete should be at least 28 days old. Ensure that the moisture content of the concrete is less than 7% before applying any coatings. A moisture test as outlined in ASTM D4263 'Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method' can be used to confirm the moisture content.

1. Remove all oil, grease and release agents in the concrete. Ensure that any laitance or other invisible contaminants have been removed. Be especially careful with concrete surfaces that have been in contact with form ply or moulds that may contain release agents. These release agents commonly contain heavy hydrocarbon waxes or silicones that can adversely affect the adhesion. Contaminant may also be present below the surface as it may have penetrated the concrete. This can be the case in food processing facilities for example. Depending on the depth of the contaminant this may require solvent and / or hot water high pressure cleaning. Prepare the concrete surface to a clean, dry finish through ensuring that the water and air used in the decontamination of the concrete is clean
2. Fill bug holes with PU sealant, Civilox-LV100 mixed with Patchfill or other approved filler material
3. Restore exposed aggregate surfaces back to the original profile by rendering with a mixture of Civilox-LV100 and Renderfill (a proprietary blend of clean, dry sand)
4. Remove high spots and protrusions, radius sharp edges and corners. Cove internal 90 degree angles with 45 degree, 20mm flat chamfer
5. Prepare the concrete surface in accordance with SSPC-SP13 / NACE 6. Smooth, shiny concrete must be roughened to a profile like 80 grit sandpaper or CWP2 - 5 or as documented in the coating system specification. Surface preparation methods employed can be vapour abrasive blasting, dry abrasive blasting, hydro blasting, mechanical scabbling or diamond grinding. Acid etching is not an acceptable surface preparation method

Steel

1. Remove all rust, mill scale, oil and any previously applied coatings back to bare clean steel using abrasive blast. Welds should have slag and spatter fully removed
2. Abrasive blast to Sa2½ (ISO 8501-1:2007) or SSPC-SP10. A sharp, angular surface profile of about 75 - 100 microns is recommended
3. For permanent immersion remove any soluble salts on the steel surfaces. The concentration of soluble salts must be less than 5 micrograms/cm²

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APPLICATION

Mixing

Always stir Civilox-PW300 Part A (coloured pigmented) and Part B in their original containers well before use.

Mechanically mix (by volume) 2 Parts of Civilox-PW300 Part A with 1 Part of Civilox-PW300 Part B hardener (2:1). Do not vary from this ratio. Do not attempt to part mix and make up the entire mix. Avoid entrapping air during mixing.

Equipment

Plural Component airless (Preferred)	Use plural spray equipment such as Graco XM or Graco XP
Airless 60:1 Pump (Suitable)	Tip Range 21 - 26 Thou (0.53-0.66 mm). Output fluid pressure at spray tip not less than 3000 Psi (210kg/m ²)
Roller and Brush	Suitable for small areas
Temperature of Material at gun:	Ambient

Environment

Relative humidity:	The relative humidity must be less than 85%
Dew point:	The substrate temperature must be at least 3°C higher than the dew point temperature
Substrate Temperature:	The substrate temperature must be a minimum of 5°C

Thinning

Thinning of Civilox-PW300 is not considered necessary or desirable but on concrete where deep penetration is required, LM1 Thinner may be added to a maximum of 20% of mixed Part A and Part B. The final coat should always be un-thinned. Please observe the ventilation requirements and flammability hazard created by using thinner in Civilox-PW300

Clean-Up

LM1 Thinner may be used for general clean-up of equipment and hoses. For soaking of contaminated metal parts use SWELL. Keep all gun Part A side components in soak containers on the left side of the work bench and all Part B side components on the right side of the work bench. The use of plastic soak containers with clip on lids and removable baskets makes the job easier.

Replace the SWELL regularly as soon as it starts turning cloudy and dirty.

Concrete

Apply one coat of Civilox-LV100 to seal the concrete. For best results apply Civilox-LV100 in the evening when the concrete is cooling down and not outgassing. The topcoat can be applied as soon as the Civilox-LV100 is tacked or the following morning when the Civilox-LV100 is cured. Depending on the quality and porosity of the concrete another coat of Civilox-LV100 may be required to minimise pin-holing in the subsequent application of Civilox-LV100. Avoid the ponding of the Civilox-LV100 and roll out areas where there is too much sealer sitting on the concrete surface.

Then apply the Civilox-PW300 with a suitable paint roller or spray using Airless 60:1 single leg equipment or plural spray equipment such as Graco XM or XP

COMPATIBILITY

Primers	Civilox-LV100 Civilox-LV110
Topcoats	Civilox-PW300 Opalon-S30

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TYPICAL SYSTEM

Substrate	Environment	Substrate Prep	Coat	System	DFT
Concrete	Tank Internal	Abrasive Blast	1 st Coat	Civilox-LV100	200µ
			2 nd Coat	Civilox-PW300	400µ
Steel	Tank Internal	Abrasive Blast to SA2.5	One Coat	Civilox-PW300	400µ
Steel	Structural Steel	Abrasive Blast to SA2.5	One Coat	Civilox-PW300	500µ
Steel	Structural Steel External	Abrasive Blast to SA2.5	1 st Coat	Civilox-PW300	500µ
			2 nd Coat	Opalon-S30	75µ

STORAGE & HANDLING

Store in dry, shaded conditions away from sources of heat and ignition and in properly sealed containers. Protect from heat and frost. A shelf life of 18 months minimum is typical if stored under ambient conditions at 25°C

PACK SIZE

30L Kits

20L of Civilox-PW300 Part A in a 20L Container
10L of Civilox-PW300 Part B in a 10L Container

15L Kits

10L of Civilox-PW300 Part A in a 10L Container
5L of Civilox-PW300 Part B in a 5L Container

HEALTH & SAFETY

Civilox-PW300 is for professional use only.
This product should not be used without consulting the Safety Datasheet (SDS) as published on the Liquimix website first. Observe all health and safety as well as environmental legislation.

DISCLAIMER

The information contained herein is offered without charge and is for use by technically qualified personnel at their own risk. All statements, technical information and recommendations contained herein are based on tests and data which we believe to be reliable, but the accuracy or completeness thereof is not guaranteed, and no warranty of any kind is made with respect thereto.

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