

ZLA[®] - system

ZLA - system for corrosion control
of steel in concrete

Installation Guidelines

The product is indicated as ZLA[®] or Zinc Layer Anode and is an european registered trademark of CorrPRE.

ZLA is a product used in the protection of reinforced concrete constructions against rebar-corrosion.

ZLA is a sacrificial galvanic anode specifically designed for giving electrochemical protection, known as cathodic protection, for the prevention of corrosion of the concrete steel reinforcement.

The current required for cathodic protection is provided by the galvanic link of the steel reinforcement and the zinc-layer being part of the ZLA. No external power source or what so ever is necessary.

Installation procedures

For installation procedures Please see technical document :

"ZLA - Installation Guidelines".



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Protection and waterproofing systems.

A product's **service life** is its expected life time, or the acceptable period of use in service. Service life does not only depend on the estimated service life which can be calculated by the anode's consumption rates but also involves external or environmental factors. These environmental factors may have serious impact on the service life of ZLA if not taken into account.

In the next part some recommended products are presented which -if properly applied- will extend ZLA's service life. It is important however to strictly follow the manufacturers application procedures :

- Surface preparation and cleaning
- Sealing exposed ends, joints and external sheets
- Protection and waterproofing coatings / systems

Cleaning

Before applying any of the following products it is important to clean the zinc sheet as well as concrete surface from dust, dirt and grease. To degrease the zinc sheet surface use a clean, soft, absorbent, lint-free cloths. Clean the substrate with a solvent saturated cloth followed by a drying wipe with a separate clean cloth.

Often pieces of adhesive remain on the surface of the zinc sheet during cutting. These adhesive remainings should be removed completely with the use of water prior to any surface treatment.

Please consult the technical datasheets of each product prior to application.

Interior and exterior application

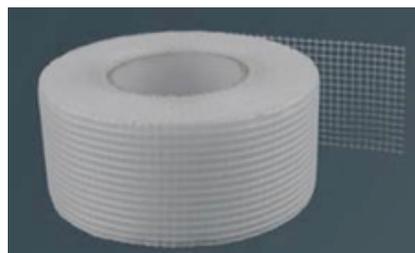
Basically there are different ways to protect ZLA from humidity or other environmental issues. The level of protection can be divided in to the following levels :

1. Interior application with no exposure to humidity or condensation : **No protection is needed.**

2. Interior application with no exposure to humidity or condensation, but cosmetic protection is required, recommended is : Protective flexible coating / water-proofing (**CorrPRE CorroSeal 1C**) and if required a topcoat.
3. Interior and exterior application but possible exposure to humidity or condensation, running water, and for esthetic reasons, but without negative waterpressure through the concrete slab (see 5. in case waterpressure might be an issue), recommended is : Protective flexible coating / water-proofing (**CorrPRE CorroSeal 1C, 2C or Flex**) and if required a topcoat.
4. When concrete repair is required prior to ZLA installation, the use of CP approved mortars (**CorrPRE CorroFix**) is recommended (see EN/ISO12696).

To avoid cracking of the protective layers in the joints, sheet overlapping and exposed sheet-end cracking, we recommend to embed locally :

- A. A fiberglass texture in the first layer, to act as a reinforcement (see the Fibreglass Mesh Data Sheet).
- B. Or a fibreglass tape with coarse (8 x 8) mesh of appr. 10cm width in the first layer of fresh coating / water-proofing, to act as a reinforcement along the joints.



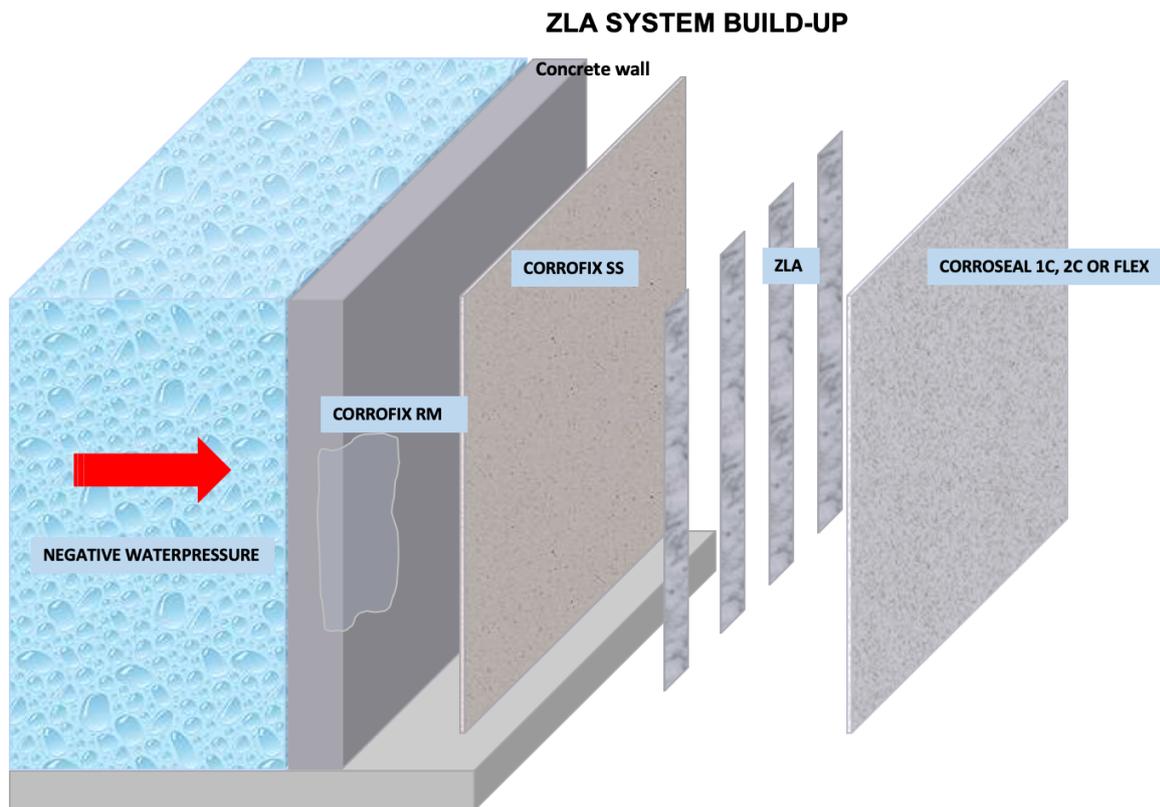
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After the mesh has been laid, finish off the surface with a flat trowel and apply a second layer of coating/waterproofing when the first one has set.

5. In case of negative or positive water-pressure and/or porous concrete the concrete surface area can be sealed with **CorroFix SS (Surface Sealer)** prior to ZLA application. **CorroFix SS** is a low resistance mineral based

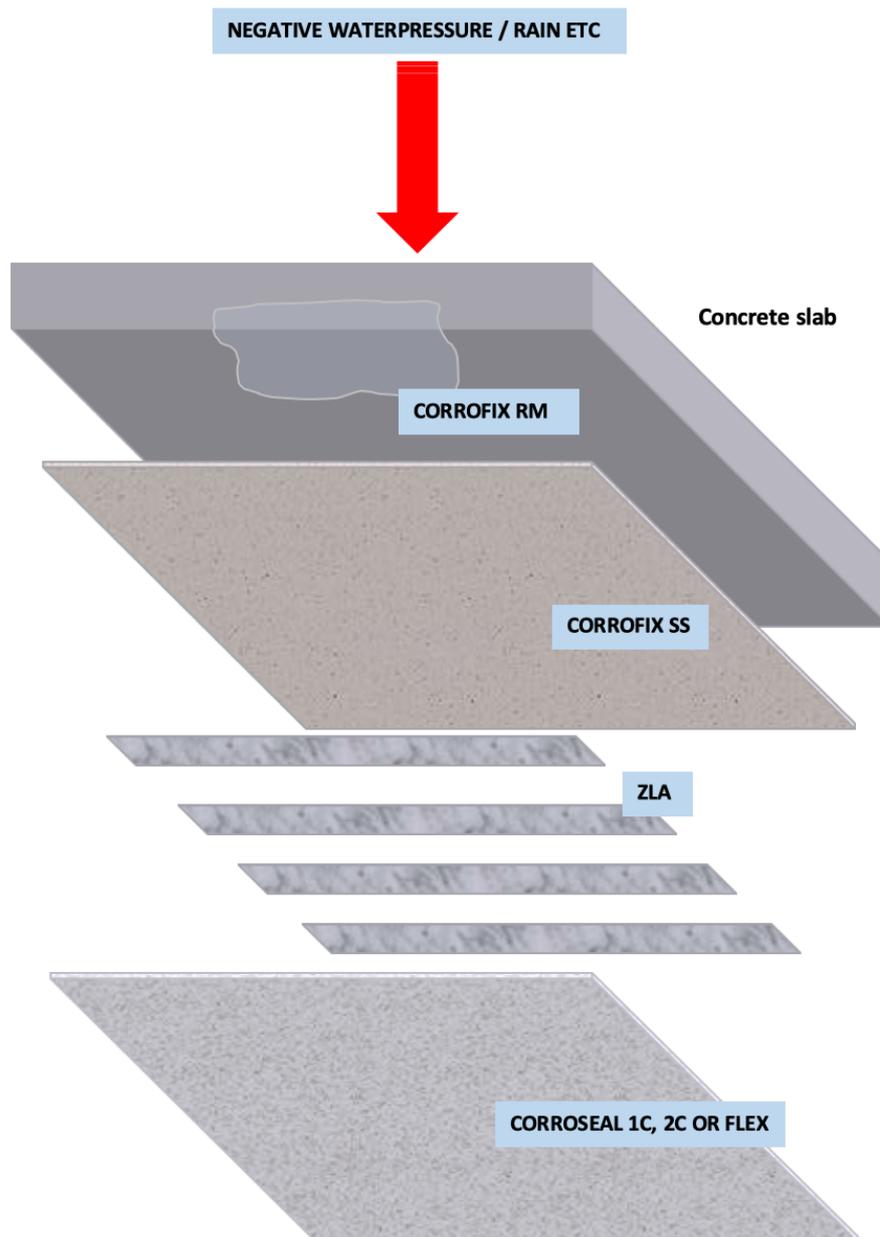
concrete sealer approved for any CP system and **particularly enlarges the throwing power of galvanic anodes** due to its low resistivity.

The sketches below show how to build up a durable waterproofing system when the ZLA - system is exposed to positive or negative water pressure.



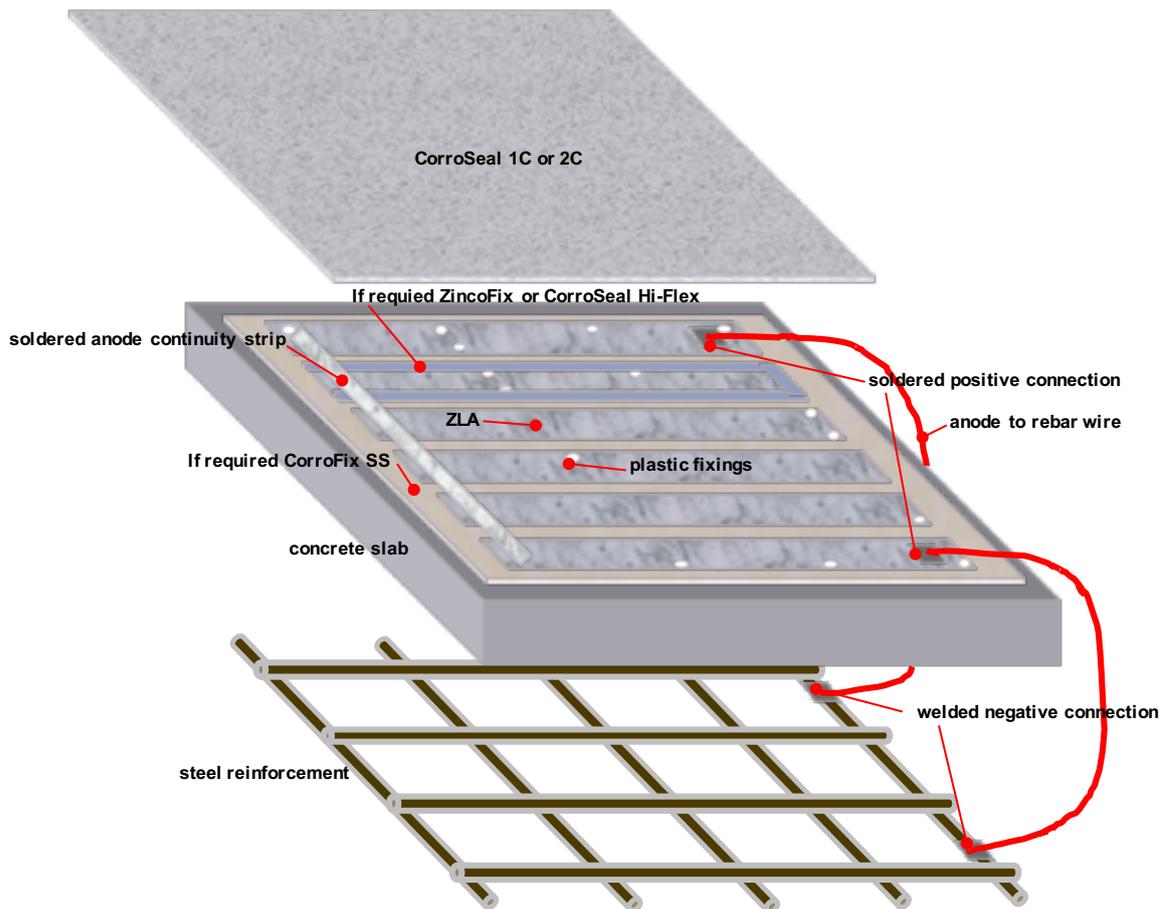
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ZLA SYSTEM BUILD-UP / BALCONIES ETC.



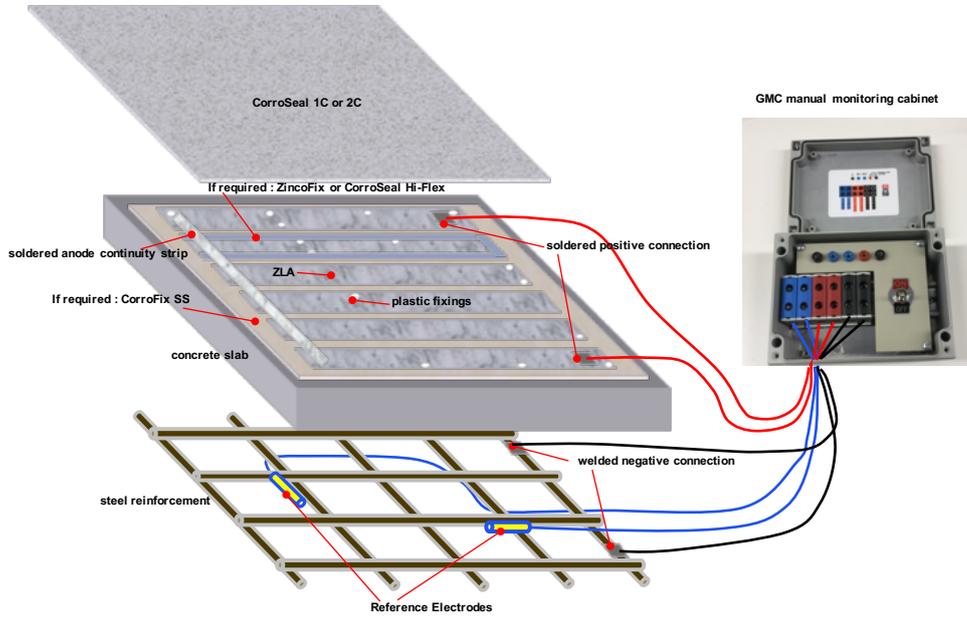
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Schematic lay-out of a ZLA - SYSTEM on a concrete slab

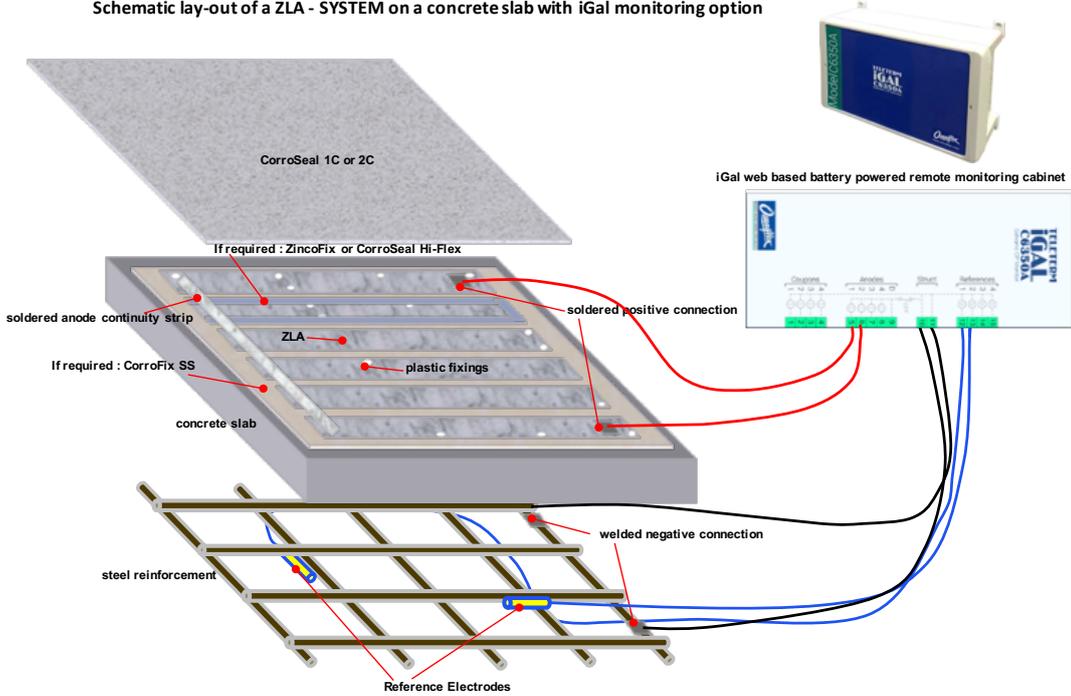


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Schematic lay-out of a ZLA - SYSTEM on a concrete slab with in-situ monitoring option



Schematic lay-out of a ZLA - SYSTEM on a concrete slab with iGal monitoring option



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For a complete ZLA - system the following parts are required and can be ordered directly from CorrPRE :

prod. nr	Product		Size	Pallet / Box
100	ZLA 250um		25cm x 20m (standard)	12 rolls (60 m ²)
101	ZLA 450um		25cm x 20m (450 um)	12 rolls (60 m ²)
110	Zincoflex		60mm x 10m	roll
10	Plastic fixings		35mm x 6mm	100 pcs / bag
20	Anode continuity strips		5m x 50mm	1 roll
30	Positive connections		100 x 125mm + wire connection	5 pcs
35	Negative connections		M6 x 15mm (weldable)	1 pc
40	Fiber glass mesh		50 x 1m	1 roll
41	Fiber glass mesh		90m x 10cm	1 roll
1000	CSE Ref. Electrode		12 x 80mm	2 pcs
60	Zinc solder GAS Iron		complete kit (incl. gas) - industrial quality	1 kit
61	Zinc solder set		zinc solder + flux 25ml + brush	1 set
850	CorroFix RM (Repair Mortar)		25 kg unit	1 bucket
860	CorroFix SS (Surface Sealer)		30kg bag	1 bag
900	CorroSeal 1C (ZLA Sealer)		20kg bag (1 component)	1 bag
1900	GMC manual monitoring cabinet			per unit
4995	iGal remote monitoring cabinet		SIM card and web layout incl.	per unit
4997	GRP cabinet for iGal		271 x 171 90 mm	1 pc.

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01

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All technical data stated in this Technical Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control. The information, and, in particular, the recommendations relating to the application and end-use of CorrPRE's products, are given in good faith based on CorrPRE's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with CorrPRE's recommendations.