



CORROSION CONTROL



⋮ ZincLayerAnode

“A SIMPLE CORROSION PREVENTION SOLUTION
FOR STEEL IN CONCRETE”

Overview

Zinc Layer Anode (ZLA) has been specifically designed to reduce the deterioration of steel reinforced concrete structures due to the affects of corrosion of the embedded reinforcing steel.

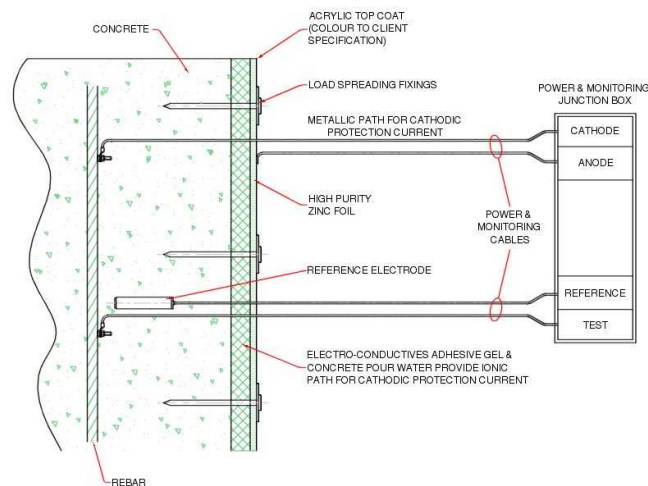
ZLA provides galvanic cathodic protection when the zinc foil is connected to the reinforcement and the ionic-conductive gel is in contact with the concrete surface.

ZLA can be used as a preventative system, installed in the early life of a structure or as a corrective system for older structures suffering from deterioration due to corrosion.

ZLA is suitable for all atmospherically exposed reinforced concrete structures which are suffering from, or are susceptible to corrosion caused by chloride ingress and/or carbonation.

General Product Description

ZLA consists of a 0.25mm thick high purity sheet of zinc foil, coated on one side with a 0.75mm thick low resistance Ionic-conductive gel. The gel side of the foil is covered with a temporary non adhesive plastic protection liner which provides protection to the gel prior to installation.



Benefits

- ZLA offers a more cost effective corrosion control solution for reinforced concrete structures compared with other current electro-chemical control methods.
- ZLA offers a more uniform level of protection when compared with current existing galvanic protection systems for reinforced concrete structures.
- ZLA is suitable for protection of high strength pre and post tensioned systems with no risk of hydrogen damage.
- ZLA is proven to prevent incipient anode formation following patch repairs.
- ZLA installation reduces structural interference and maintains existing structure integrity.
- ZLA is fixed to the concrete surface by means of mechanical fixings which provide better surface contact with no risk of disbonding of the foil from the concrete surface.
- ZLA is easy to install, is self regulating and requires no AC power for operation.
- ZLA systems are relatively maintenance free and can provide protection for years depending on the type and location of the structure.
- ZLA foil thickness can be increased to meet higher localised current demands or extended life requirements.

ZLA is available in roll form in the following dimensions:

Roll Width (m)	Roll length (m)	Roll weight (kg)	Foil thickness (mm)	Weight (Kg/m ²)
0.25	25	20	0.25	2.9

An overlap of 2.5 cm is recommended.



Method of Fixing

Fixing of the ZLA to the concrete surface is achieved by mechanical fixing at a frequency of approximately 0.5m – 1m intervals. The ionic conductive gel will provide some temporary adhesion to the concrete surface during installation.

Method of Monitoring

During the installation phase permanent monitoring devices can be installed in the concrete structure to enable monitoring in accordance with BS EN 12696:2000.

Top Coating ZLA

To provide an additional environmental barrier and an aesthetically pleasing finish ZLA can be sealed and painted with a suitable organic coating following the fixing procedure. This will provide an additional barrier protection to the concrete structure and ensure uniform consumption of the zinc at the zinc/gel/concrete interface.

Technical Data

Composition	Weight g/m ²	Thickness µm
Zinc Band	1750	250
Adhesive	1439	900 (+/- 200)
Paper	148	75 PET film
Total	3337	1225
Characteristics		
Zinc band	Unit	Value
Thickness	µm	250
Weight	g/m ²	1750
Purity	%	99,9
Ionic-Conductive Gel		
Thickness	µm	900 (+/- 200)
Weight	g/m ²	1439
Volume resistivity	Ohm.cm	< 10,000
Minimum application temperature	°C	0
Working temperature	°C	4 - 50
Minimum - Maximum short temperature	°C	-40 - 70
Paper	material	PET
Weight	g	148
Thickness	µm	75
Maximum Electrical Capacity		
80 % efficiency	Amp / Year/ m ²	0.13
50 % efficiency	Amp / Year/ m ²	0.08



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