Zinc layer anode

Zinc sacrificial anodes for corrosion control of steel in concrete

Technical Data Sheet

Product typical application
The product is indicated as Zinc Layer Anode (ZLA).

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.

The ZLA has been therefore designed to function as an additional anode replacing all the anodic locations of the reinforced concrete construction. It is applied upon the concrete surface. The zinc-layer is electrically linked with the steel reinforcement. In this way the electric-circuit is completed because electric current flows through the adhesive layer and concrete by means of ionic conductance (both materials are so-called electrolytes). Since zinc has a natural potential which is more electronegative than the steel reinforcement, the zinc becomes the anode after installation and forms a new corrosion cell in which the reinforcement is forced to be the cathode.
In this way the corrosion process within the concrete is transferred to the zinc-layer avoiding futural spalling and cracking of the concrete.

Product description
Zinc Layer Anode is a zinc foil coated with an ionically conductive adhesive. The adhesive is covered with a liner to help protect it from contamination. Before application, the protective liner is removed from the adhesive, and the Zinc Layer Anode is adhered to the clean, bare concrete

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surface. The ionically conductive adhesive enables the anode to be securely adhered to the surface of the concrete structure.

Roll Width	:	25cm
Roll Length	:	20m (250 & 450 micron zinc sheet)
Shelf Life	:	Six month from date of receipt by customer when stored in original packaging at 22ºC and 50% R.H.

Performance characteristics
Depolarization of Reinforcing Steel according to the international standard EN/ISO12696 "Cathodic protection of steel in concrete".

Installation Instructions
Refer to "Installation Instructions" for details on installation methods.

Technical Data

Composition	**Weight g/m²**	**Thickness Micron**
Zinc Sheet 250	**1750**	**250**
		99,99% purity
Ionically conductive adhesive	900	900 (+/- 100)
Top Liner	148	PET film
Total	2798	
Zinc Sheet 450	**3150**	**450**
		99,99% purity
Ionically conductive adhesive	900	900 (+/- 100)
Top Liner	148	PET film
Total	4198	
Adhesive on Concrete		
10 hours after application		> 0,125 MPa
48 hours after application		> 0,125 MPa
Electrical conductivity	Volume resistivity	< 10 kOhm.cm
Minimum T for application		4 ºC
Operation temperature ºC		-4 +50 ºC
	REMARK :	Corrosion stops below -4ºC
	Adhesion to Concrete	**Adhesion to Zinc**
After 72 Hours at 20ºC	> 0,125 MPa	> 0,125 MPa
After 72 Hours at 50ºC	> 0,125 MPa	> 0,125 MPa