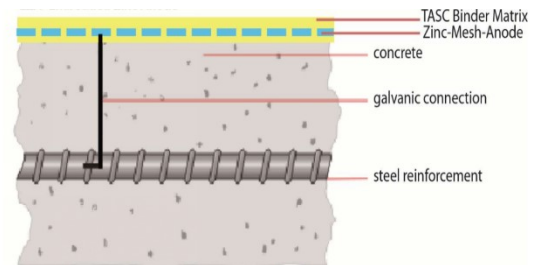


## Description

The EZ Anode system is a surface applied galvanic cathodic protection system. The EZ anode system consists of a shrinkage controlled Tecto-Alumo-Silicate-Cement (TASC) binder formulated as a zinc anode embedment, the zinc anode mesh is installed within the binder on site. The TASC binder is a 3-component non-cementitious glass-fiber reinforced binder in compliance with ASTM C1666 and EN 15422 for use as an embedding and activating matrix for zinc anodes. The binder is applied like a fine putty to uncoated concrete surfaces, the zinc mesh is then imbedded and finally a finishing layer of the binder is applied to encompass the zinc mesh. The binder forms a matrix with excellent adhesion to concrete surfaces, with a volumetric porosity of >35%, high ionic conductivity and high durability.



## Features and Benefits

- Simple and Easy application
- Maintenance free corrosion protection of steel in concrete
- Compatible with any type of concrete repair material.
- Does not require bridging mortar or low resistance repair mortars to function.
- High electrolytic conductivity, specific resistance at 75% RH < 90ohm.cm
- Especially suited for galvanic protection of prestressed concrete members.
- Anode system is assembled on site; configurable to any structure shape, size & form.
- Suited for pre-stressed concrete members assuring the avoidance of hydrogen embrittlement.
- Prevention of passivation of zinc anode surface
- Prevents auto-corrosion of zinc anode which results in extended anode life.
- High adhesion to concrete surfaces > 200 Psi
- Low Elastic Modulus < 7 GPa
- Compatible with acrylic, epoxy and PU based cover/seals coatings
- Available with different zinc mesh thickness/weight ratios from 0.2 to 1.6 lbs./ft<sup>2</sup> to provide adequate protection for various environmental exposures
- Life expectancy up to 20 years\*\*



## Fields of Application

Can be installed on almost any concrete member to provide corrosion protection for parking Decks, bridges, tunnels, marine port structures, decks, columns, soffits, beams, abutment walls, etc.

## Installation Method

- To be applied on a clean smooth concrete surface, 2 – 2.5 lbs/ft<sup>2</sup> of the EZ anode binder has to be applied to embed a 1/8" thick zinc mesh.
- Concrete substrate must be sound and of sufficient compressive strength (min 3500 PSI) with a minimum pull off strength of 200 PSI.
- The concrete substrate is to be saturated surface dry and free from all contaminates such as oil, grease, coatings and surface treatments.
- The pull-off strength of the concrete substrate should be > 145 PSI, preferentially > 200 PSI.
- Optimum adhesion of the EZ Anode binder will be obtained by cleaning and preparing the concrete surface with sandblasting, steel-ball blasting.

\*Patent US 7851022 and US8394193

\*\*As with all galvanic protection systems, service life and performance is dependent upon many factors including reinforcing steel density, concrete conductivity, chloride concentration, humidity and anode spacing.

## Application Instructions

### Mixing of components

Mix Component A (liquid dispersion) with Component B (Brown solution) in an 8 –10 gallon container thoroughly. Always add Component B to Component A while mixing – never add component B batch wise. Subsequently mix in Component C (marble sand 0,2 – 0,5 mm). Do not add water to adjust consistency/fluidity. The EZ Anode binder is highly thixotropic and will become fluid upon application with appropriate tools.

### Mixing Ratios in lbs.

Component A	Component B	Carolith (7 - 19 mils)	Sum in lbs
24.2 (one pail)	12.1	25	61.3
100	50	103	253

### Mixing tools

Mix using electric mixers (about 500 rpm or more) with helical paddles or other suitable equipment.

### Mixing Time

Prior to mixing, homogenize component A by mixing it in the pail, then pour it into a suitable container (e.g. 8–10 gallon for preparing a 65lbs mix), mix vigorously and add slowly by pouring component B while mixing, continue mixing for 1 minute and add gradually the Carolith filler while mixing.

### Application Method/Tools

- Do not add water to adjust consistency/fluidity. The EZ anode binder is highly thixotropic and will become fluid upon application with appropriate tools.
- Place mixed EZ anode binder onto the substrate and spread evenly to the required thickness uniformly with a rubber or metal trowel or spatula. A seamless finish can be achieved if a wet edge is maintained during application.
- Prevent premature drying by protecting from strong wind and do not expose to direct sun light.
- Freshly applied EZ anode binder must be protected from water.
- Under no circumstances add water to the mix.

### Cleaning advices

- Not hardened material may be washed off with water, shortly after hardening with hot water.
- Dried and hardened material may only be removed mechanically.

### Potlife

Approximately two (2) hours (70 °F).

Start Hardening 3.5 hours

Hardened after 4 hours

### Topcoat

For optimum performance the hardened binder is recommended to be coated with a suitable polymeric coating, e.g. epoxy resin, poly urethane, etc. with a low water vapor permeability to prevent drying out of the concrete substrate.

### Health and Safety Information

Safety and disposal instructions in the MSDS (material safety data sheets) and on the container labels should be observed and followed.

**Material Specification of Solidified EZ Anode System Binder**

Compressive Strength @ 28d/90d .....	750/2900 PSI
Flexural Strength @ 28d/90d .....	150/1000 PSI
Pull-off Strength @ 28d/90d .....	50/250 PSI
Elastic Modulus .....	less than 1000 PSI
Density @ 70°F & 74% RH .....	1.76g/cm <sup>3</sup>
Water fillable porosity .....	>30 Vol. %
Specific electrolyte resistance @ 75% RH .....	<90 ohm.m
Specific electrolyte resistance @ 45% RH .....	<900 ohm.m

**Application Conditions/Limitations**

Substrate Temperature .....	+45°F min./ +90°F max
Ambient Temperature .....	+45°F min./ +100°F max
Substrate Moisture Content .....	Can be applied on damp concrete, prewet dry concrete before application
Relative Air Humidity .....	30% minimum, preferably >75%

**MATERIAL DATA**Colour and Consistency

Component A	Component B	Component C (Filler)
Greyish thixotropic liquid dispersion	Brownish liquid	7 - 19 mils fine whitish marble sand

Packaging

Component A	Component B	Component C (Filler)
2.75 Gallon PP pails	1.5 gallon PP containers	Paper bags 25lbs or 50lbs

Storage and Shelf Life

Stored in the original packaging in dry conditions, protected from freezing, this product will keep for at least

Component A	Component B	Component C (Filler)
one (1) year	two (2) years	unlimited

**Material Specification of EZ Anode Mesh**Physical Properties

Electrical Conductivity .....	28% min.
Solid Zinc Density .....	0.26 lb/in <sup>3</sup>
Weight of Expanded Zinc Mesh (Variable Sizes) .....	0.5 lb/ft <sup>2</sup> to 1.6 lb/ft <sup>2</sup>
Average Open Area .....	53%

Nominal Geometries

Hex Pattern .....	0.5 in
Strand Width SWD .....	0.125 in
Strand Bond Width LWD .....	0.500 in
Short Opening .....	0.320 in
Long Opening .....	0.750 in

Legal Notes

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control. The purpose of this product data sheet is the description of the properties and applications of the EZ Anode System. The described properties and reported values may vary depending on the solicitude and processing on which we do not have any direct influence. Structural Technologies reserves the right to change the properties of its products. Users must always refer to the most recent issue of the Product Data Sheet. The product data sheet does not contain a complete manual of use and application. Our advice and consultancy is required for the use of the EZ Anode binder and the EZ Anode system. The information above is believed to be accurate and represents the best information currently available to us.

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