Soil and Ribbon

Cast and Extruded Zinc Anodes

Effective Protection For Low-Resistivity Environments

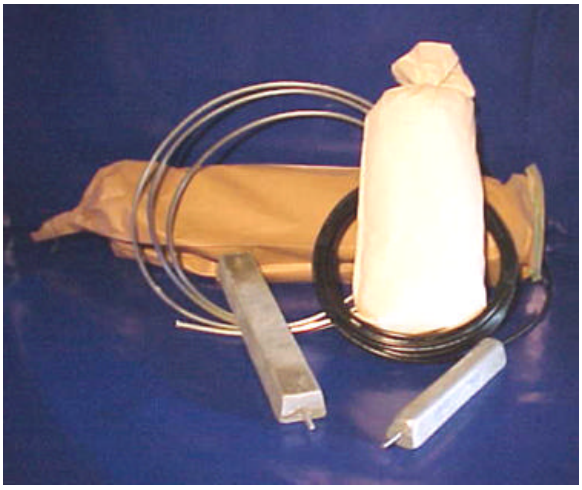
Zinc anodes have been used since the 19th century to protect steel structures from corrosion. Today, these anodes are still widely utilized, and have proven to be an effective choice for preventing corrosion in select soils and brackish waters. For these environments, Corrpro offers zinc anodes made to the ASTM B-418-01, Type II alloy standard. The anodes generate an open-circuit potential of 1.1 volts (with respect to a $Cu/CuSO_4$ reference cell). Made from 99.99% pure high-grade zinc, Corrpro zinc anodes offer a 90% current efficiency, and deliver a current capacity of 335 amp.-hrs./lb. This high-purity composition also assures the anodes are more resistant to pacifying films.

Corrpro zinc anodes are available in both cast and extruded forms. The cast anodes are produced in a variety of weights, and are designed for use in low-resistivity soil environments. These anodes are manufactured with lead wires, and are packaged in a backfill consisting of 75% gypsum, 20% bentonite, and 5% sodium sulfate. Corrpro zinc extruded anodes are produced in diamond-shaped ribbon coils. Their elongated shape allows for lower resistance to earth than conventional zinc anodes, and permits easy installation on a multitude of structures.

Both types of zinc anodes are manufactured according to strict quality control standards.

CHEMICAL COMPOSITION

Element	Content %	
	MIL-A-18001 (ASTM B-418 Type I)	ASTM B-418 Type II
Al	0.1-0.5	0.005 max
Cd	0.02-0.07	0.003 max
Fe	0.005 max	0.0014 max
Pb	0.006 max	0.003 max
Cu	0.005 max	0.002 max
Zinc	Remainder	Remainder



Each production run of the anodes is subjected to capacity, potential, and consumption analysis. The anodes are also made using galvanized steel cores to assure a strong bond between the anode and core.

Typical Applications

Zinc cast anodes are recommended for use in soils with resistivities below 1,000 ohm-cm. Because these anodes have a driving voltage that is lower than magnesium, they are most effective on well-coated steel structures, which require minimal current output. The packaged anodes are commonly used as grounding cells on electrical motors, panels, and conduits, and across insulators on pipelines to limit dangerously high voltages. The extruded ribbon anode can be used in buried applications, as well as in fresh, brackish, or saltwater environments. Neither type of zinc anode should be used in extremely alkaline (above 9.2 pH), acidic (below 5 pH), or high-temperature (above 140°F) electrolytes.

CORRPRO COMPANIES INC
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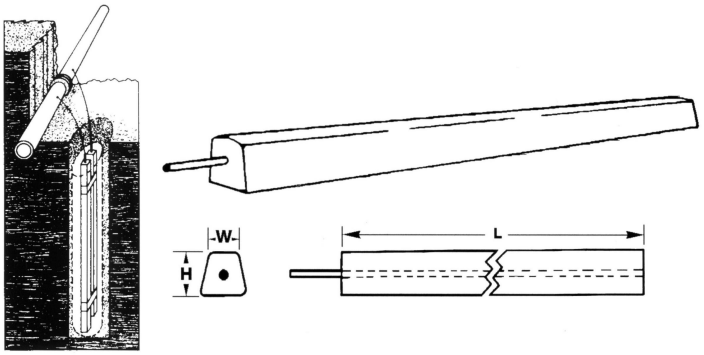
Ordering Procedure

Corrpro zinc anodes are available in a variety of weights and dimensions. To order the require anode for your structure, indicate that you need a zinc soil or ribbon anode, and specify the quantity or lineal feet desired, alloy composition, and the anode model. All soil anodes are shipped standard with 10 feet of #12 solid TW lead wire, unless otherwise specified. The ribbon anodes are available in both ASTM Type I and II alloys. The Type I alloy is designed for seawater environments, while the Type II should be used exclusively in soil applications. An example is provided to help illustrate this process.

Ordering Procedure Example

ITEM	EXAMPLE
Quantity	*200*
Anode Material	*Zinc Soil*
Alloy Composition	*Type II*
Anode Model	*HZ-12*
Packaging *(Bare or Packaged)*	*Packaged*
WIRE: *Length (10 ft. = Standard)*	*10 ft.*
Size *(#12 Solid = Standard)*	*#12*
Insulation *(TW = Standard)*	*TW*



Standard Dimensions and Shipping Weights

ANODE MODEL	NOMINAL DIMENSIONS in. (mm) "A"	"B"	"C"	"D"	"E"	NOMINAL WT. lbs. (kg) BARE	PKGD.
SOIL PACKAGED ANODES							
HZ-5	1.4 (35.5)	1.4 (35.5)	9 (228.6)	15 (381)	4 (100)	5 (2.3)	12 (5.5)
HZ-12	*1.4 (35.5)*	*1.4 (35.5)*	*24 (609.6)*	*30 (762)*	*4 (100)*	*12 (5.5)*	*27 (12.3)*
HZ-17	1.4 (35.5)	1.4 (35.5)	34 (850.0)	40 (1000)	4 (100)	17 (7.7)	37 (16.8)
HZ-24	1.4 (35.5)	1.4 (35.5)	48 (1200)	54 (1350)	4 (100)	24 (10.9)	51 (23.2)
HZ-30	2 (50.8)	2 (50.8)	30 (762)	36 (914.4)	5 (127)	30 (13.6)	70 (31.7)

ANODE MODEL	NOMINAL DIMENSIONS in. (mm) "A"	"B"	"C"	BARE WT. lbs./lineal ft. (kg/lineal m)
RIBBON EXTRUDED ANODES				
Super	1 (25.4)	1-1/4 (31.7)	100 (30.4)	2.4 (1.09)
Plus	5/8 (15.8)	7/8 (22.2)	200 (60.9)	1.2 (0.54)
Standard*	1/2 (12.7)	9/16 (14.2)	500 (152.4)	0.6 (0.27)
Small	11/32 (8.7)	15/32 (11.9)	1,000 (304.7)	0.25 (0.11)

**The standard anode model is also available in 1,000 and 3,600 ft. rolls.*

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