

H-1 Alloy Cast Magnesium Anodes

Supplying Cost Effective Protection

Electrolytic conditions in the soil surrounding a buried structure often determine the type of anodes employed in a cathodic protection system. In low-resistivity soil (under 2000 ohm-cm), Corpro's H-1 line of magnesium anodes are the most economical choice. Corpro Certified H-1 anodes are cast to meet American Society for Testing Materials Standard B80, Alloy AZ63. This unique composition allows for even-current output and efficient protection. The anodes are supplied in three quality grades, all of which produce an open circuit potential of 1.53-1.55 volts.

Special procedures are also employed in the production of the Certified H-1 anodes to ensure long-life performance. Lead wires on all three grades of anodes are silver soldered and then potted with a sealant to prevent the intrusion of moisture.

CHEMICAL COMPOSITION

Content %			
Element	Grade A	Grade B	Grade C
Al	5.3 – 6.7	5.3 – 6.7	5.0 – 7.0
Mn	0.15 min	0.15 min	0.15 min
Zn	2.5 – 3.5	2.5 – 3.5	2.0 – 4.0
Si	0.10 max	0.30 max	0.30 max
Cu	0.02 max	0.05 max	0.10 max
Ni	0.002 max	0.003 max	0.003 max
Fe	0.003 max	0.003 max	0.003 max
Other	0.30 max	0.30 max	0.30 max
Magnesium	Remainder	Remainder	Remainder



Typical Applications

H-1 anodes are recommended for use in low-resistivity soils (typically below 2000 ohm-cm). Because the anodes have a lower driving voltage than high-potential anodes, they are ideally suited for structures where over protection is of concern. Their lower-current output also allows these anodes to operate longer than their high-potential counterparts in more conductive environments.



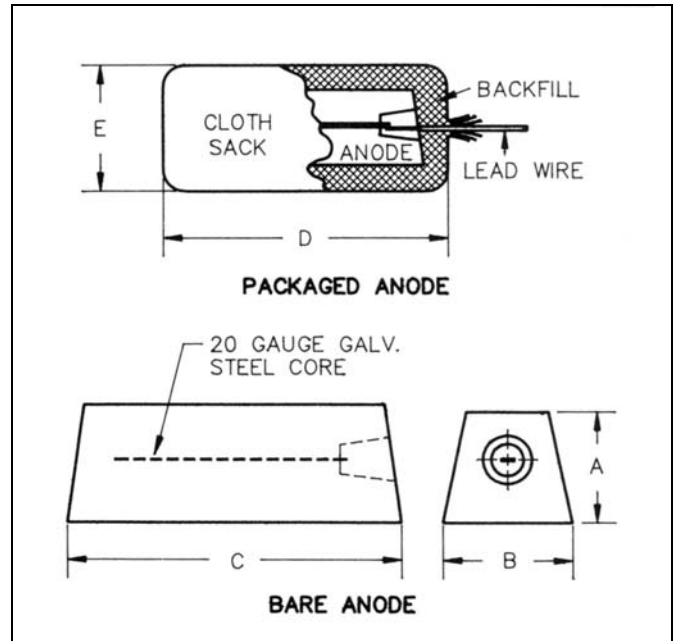
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Ordering Procedure

Certified H-1 anodes are available in three different quality grades: A, B, and C. To order the required anode for your structure, indicate that you need H-1 alloy anodes and specify the quantity desired, the anode type and grade, and whether they should be packaged or bare. All H-1 anodes are shipped standard in Grade C with 10 ft.-#12 solid TW lead wire unless otherwise specified. Standard backfill composition consists of 75% gypsum, 20% bentonite, and 5% sodium sulphate. An example is provided to help illustrate this process.

Ordering Procedure Example

ITEM	EXAMPLE
Quantity	200
Anode Material	H-1 Magnesium
Alloy Grade (Grade C = Standard)	Grade C
Anode Type	17S4
Packaging (Bare or Pkgd.)	Packaged
WIRE: Length (10 ft. = Standard)	10 ft.
Size (#12 solid = Standard)	#12
Insulation (TW = Standard)	TW



Standard Dimensions and Shipping Weights

ANODE TYPE	NOMINAL DIMENSIONS in. (mm)					NOMINAL WT.* lbs. (kg)	
	"A"	"B"	"C"	"D"	"E"	BARE	PKGD.
1 cup	2.9 (74)	-	3 (76)	6 (152)	6 (152)	1 (0.45)	3.5 (1.6)
3S3	3 (76)	3 (76)	4.5 (114)	6.5 (165)	6 (152)	3 (1.4)	9 (4.1)
5S3	3 (76)	3 (76)	7.5 (191)	13.5 (343)	6 (152)	5 (2.3)	14 (6.4)
9S3	3 (76)	3 (76)	13.5 (343)	17 (432)	6 (152)	9 (4.1)	24 (10.9)
17S4	4 (102)	4 (102)	17 (432)	19 (483)	6.5 (165)	17 (7.7)	42 (19.1)
32S5	5 (127)	5 (127)	21 (533)	30 (762)	8 (203)	32 (14.5)	70 (31.8)
50R8	8 (203)	-	15 (381)	18 (457)	10 (254)	50 (22.7)	110 (49.9)

*Anode weight tolerance is $\pm 10\%$