

❖ Sacrificial Anodes

Magnesium Anode

■ General

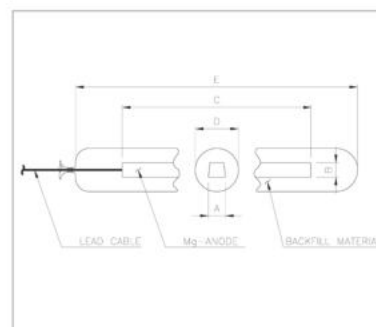
Magnesium anode is the most widely used metal in sacrificial anodes for underground structures and certain aqueous environments. Mg anode has the highest driving potential of sacrificial anodes. It is used for most direct U/G applications and in higher resistivity, aqueous electrolytes. They are available in a wide variety of forms and weights for many kinds of applications.

■ Product Properties

Open Circuit Potential Cu/CuSO ₄ [-mV]	Theoretical Current Capacity [A · hr/Kg]	Effective Current Capacity [A · hr/Kg]	Current Efficiency [%]	Consumption Rate [Kg/A·yr]	Specific Gravity
1,650	2,200	1,100	50	8	1.80

■ Dimension and Weight

Type	Dimension[mm]					Weight[Kg]	
	A	B	C	D	E	Bare	Package
1.47R	20		1,000	200	1,200	0.66	45.5
9D2	70	76	550	152	787	4.08	15.9
14D2	70	76	850	152	1,168	6.35	22.7
17D3	90	96	642	165	736	7.71	20.4
32D5	133	142	500	195	700	14.5	30.0
60R	175		635	285	900	27.2	77.7



■ Chemical Composition

Element	Backfill material
Al : 0.01% Max	Gypsum : 75% Bentonite : 20% Sodium Sulfate : 5%
Mn : 0.5~1.3%	
Cu : 0.02% Max	
Ni : 0.001% Max	
Fe : 0.03% Max	
Others : 0.3% Max	
Mg : Balance	

■ Guidelines for Installation

- When installing Mg anode underground, surrounding area of anode should be filled with fine soil without stones or gravels.
- If possible, anodes should maintain at least 30cm distance from the subject to be protected.

■ General

Al anode makes an attractive sacrificial anode material, especially in low resistivity applications such as seawater and produced brines. Al anode has lower driving potential than Mg anode and higher current capacity than Zn anode, and these are important traits for its use in long life saline system.

■ Product Properties

Open Circuit Potential Cu/CuSO ₄ [-mV]	Theoretical Current Capacity [A · hr/Kg]	Effective Current Capacity [A · hr/Kg]	Current Efficiency [%]	ConsumptionRate [Kg/A·yr]	Specific Gravity
1,100	2,890	2,600	90	3.37	2.7