

# Extruded Ribbon Mag Anode

Magnesium anodes have the highest protection capability of any galvanic material. While these anodes are most commonly used in the cast form, certain structures can be more efficiently protected through the use of extruded magnesium configurations. Extruded magnesium anodes have high surface and length ratios in relation to cross sectional size. This allows these anodes to deliver a higher current per weight than standard cast magnesium anodes. By supplying more current, extruded anodes can deliver effective protection to structures buried in high resistivity soils.

Ribbon anodes are manufactured in 3/8" x 3/4" flexible coils which can be easily shaped for use on a multitude of protection applications. The ribbon anodes are manufactured in a high potential alloy (Galvoline) providing 1.6-1.7 volts driving potential. Ribbon anodes are manufactured with a solid steel core in the center of the anode. This core distributes current uniformly

through the anode to prevent excessive discharge near the connection end.

## Typical Applications

Extruded magnesium anodes are most suitable for structures buried or submerged in high resistivity electrolytes. The rod shaped anodes, with their small diameters, are often used in commercial and industrial water heaters and storage tanks, or driven into the ground to protect gas service risers.

## Composition

GALVOLINE ribbon anode is manufactured with the high current output composition. In most environments, the oxidation potential is 1.6 to 1.7 volts for (with respect to a copper-copper sulfate reference electrode). odes increases.

Current capacities for GALVOLINE anodes range from 450 to 550 ampere hours per pound, depending primarily on the operating rate (anode current density).

## Chemical Composition

Material	Mg %	Al %	Mn %	Zn %	Si % Max	Cu % Max	Ni % Max	Fe % Max	Other Imp. % Max	
									Each	Total
Galvoline Anode	Bal.	0.010 max	0.50-1.3	-	-	0.02	0.001	0.03	0.05	0.3

Magnesium Ribbon Anode	
Size	3/8" x 3/4" +/-0.015" rectangle, 1/8" radius corners
Core Wire Diameter	0.135"
Centrality Core Wire	<1/16"
Approx. Weight	0.243 lb./ft
Packaging Availability	1,000ft rolls or cut to length
Potential	-1.7V Cu/CuSO4
Capacity	500 Amp hrs/lb min
Typical current in seawater	0.73 amps/ft
Typical current in soil (5,000	3 milliamps/ft
Typical current in water	0.9 milliamps/ft