

ProNode™

MAGNESIUM RIBBON ANODES

PRODUCT DESCRIPTION

The magnesium ribbon anode is flexible and compact, making it particularly suitable for installations in confined or restricted spaces. It can be coiled around the protected structure and is commonly used for cathodic protection of long-distance pipelines, pipeline crossings, cased pipeline sections, internal protection of large water-containing tanks, and grounding applications for the mitigation of strong electrical interference.

PRODUCT PERFORMANCE

Current Output Performance

- The high surface-area-to-mass ratio enables higher current output than conventional cast magnesium anodes of the same weight, typically by 3-7 times under comparable conditions.

Electrochemical Performance

- Compliant with ASTM B843 M1C requirements, with a high open-circuit potential of -1.70 V to - 1.75 V (vs. SCE), providing a strong driving force and efficient current discharge.



PRODUCT FEATURES

Structural Design

- Extruded magnesium ribbon with a continuous galvanized steel core provides reliable electrical continuity, uniform current distribution, and efficient current discharge.

Material & Standards Compliance

- Manufactured from high-potential M1C magnesium alloy in accordance with ASTM B843 requirements.

Installation & Maintenance

- Operates galvanically after installation and electrical connection, without the need for an external power supply. Routine CP monitoring should be performed in accordance with project requirements.

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Reference	Title
ASTM B843	STANDARD SPECIFICATION FOR MAGNESIUM ALLOY ANODES FOR CATHODIC PROTECTION
ASTM G97	STANDARD TEST METHOD FOR LABORATORY EVALUATION OF MAGNESIUM SACRIFICIAL ANODE TEST SPECIMENS FOR UNDERGROUND APPLICATIONS
EN 12496	GALVANIC ANODES FOR CATHODIC PROTECTION IN SEAWATER AND SALINE MUD
EN 13636	CATHODIC PROTECTION OF BURIED METALLIC TANKS AND RELATED PIPING

PRODUCT PARAMETERS

Chemical Composition

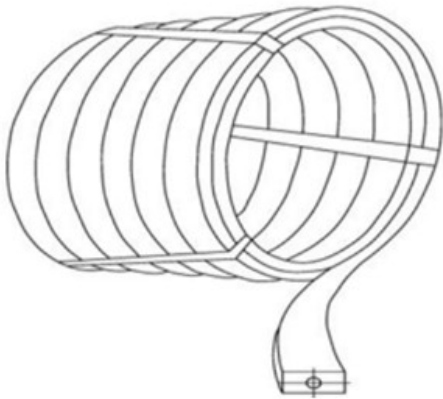
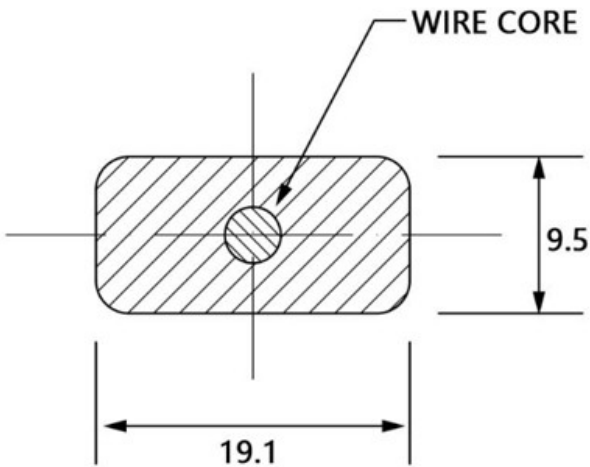
Al	Mn	Cu	Si	Ni	Fe	Single Impurity (Each)	Other Impurities (Total)	Mg
≤0.01%	0.50-1.30%	≤0.02%	≤0.05%	≤0.001%	≤0.03%	≤0.05%	≤0.30%	Remainder

Electrochemical Properties

Open Circuit Voltage (-V)	Closed Circuit Voltage (-V)	Current Capacity (A.h/kg)	Current Efficiency
1.70-1.75	1.58-1.62	1100	50% min.

SPECIFICATIONS

Model	Cross Section	Dia. of Steel Core	Single Weight	Standard Roll Length	Standard Roll Weight
ATMG-R36	19.1mm*9.5mm	3.4mm	0.36 kg/m	305m	110kg



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