

ProNode™

ZINC RIBBON ANODE

PRODUCT DESCRIPTION

Advance Technology zinc ribbon anode is manufactured from high-purity zinc using proprietary production technology. It conforms to ASTM B418 and U.S. MIL-A-18001K requirements and is suitable for use on pipelines in low-resistivity soil environments, including PCCP (Prestressed Concrete Cylinder Pipe), as well as storage-tank cathodic protection applications.

PRODUCT PERFORMANCE

Low-Temperature Flexibility

- Maintains flexibility and mechanical strength in cold environments down to -30 °C, with a minimum bending diameter of 100 cm.

AC Mitigation Capability

- Provides a cost-effective solution for pipeline AC mitigation and grounding applications.

Unattended Operation

- Suitable for remote or unattended applications where impressed-current systems are not feasible.



PRODUCT FEATURES

Manufacturing Process

- Proprietary processing improves flexibility and reduces susceptibility to low-temperature brittleness compared with conventional extruded zinc ribbon anodes.

Application Versatility

- Suitable for cold-region pipelines, permafrost areas, and AC mitigation systems.

Reference	Title
ASTM B418	STANDARD SPECIFICATION FOR CAST AND WROUGHT GALVANIC ZINC ANODES
DNV RP B401	CATHODIC PROTECTION DESIGN
EN 12496	GALVANIC ANODES FOR CATHODIC PROTECTION IN SEAWATER AND SALINE MUD
NACE RP0196	GALVANIC ANODE CATHODIC PROTECTION OF INTERNAL SUBMERGED SURFACES OF STEEL WATER STORAGE TANKS
NACE SP0100	CATHODIC PROTECTION OF PRESTRESSED CONCRETE CYLINDER PIPELINES
NACE SP0408	CATHODIC PROTECTION OF REINFORCING STEEL IN BURIED OR SUBMERGED CONCRETE STRUCTURES
EN 16222	CATHODIC PROTECTION OF SHIP HULLS

PRODUCT PARAMETERS

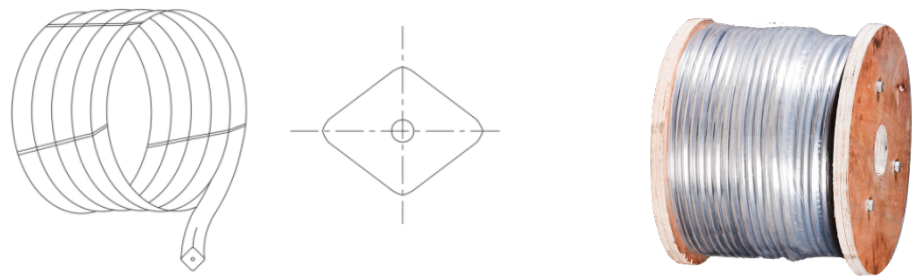
ASTM B-418 type I

Chemical Composition							
Al %	Cd %	Mg %	Fe %	Pb %	Cu %	Others %	Zn
0.10-0.50	0.025-0.070	—	≤0.0050	≤0.0060	≤0.0050	≤0.10	Remainder
Electrochemical Properties							
Open Circuit Voltage (-V)	Closed Circuit Voltage (-V)		Current Capacity (A.h/kg)		Current Efficiency		
≥1.05	≥1.00		≥780		≥95		

ASTM B-418 type II

Chemical Composition							
Al %	Cd %	Mg %	Fe %	Pb %	Cu %	Others %	Zn
≤0.0050	≤0.0030	—	≤0.0014	≤0.0030	≤0.0020	—	Remainder
Electrochemical Properties							
Open Circuit Voltage (-V)	Closed Circuit Voltage (-V)		Current Capacity (A.h/kg)		Current Efficiency		
≥1.10	≥1.05		≥740		≥95		

MODELS AND SPECIFICATIONS



Model	AT-ZR-01	AT-ZR-02	AT-ZR-03	AT-ZR-04
Cross Section mm (in)	25.40×31.75 (1×5/4)	15.88×22.22 (5/8×7/8)	12.7×14.28 (1/2×9/16)	8.73×10.32 (11/32×13/32)
Weight kg/m (lb/ft)	3.57 (2.4)	1.785 (1.2)	0.893 (0.6)	0.372 (0.25)
Steel Core Dia. mm (in)	4.70 (0.185)	3.43 (0.135)	3.30 (0.130)	2.92 (0.115)
Standard Roll Length m (ft)	30.5 (100)	61 (200)	152 (500)	305 (1000)
Standard Roll Inner Dia. mm (in)	700 (27.5)	600 (23.5)	305 (12)	305 (12)

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For further information, please contact Advance Technology.



Canada

290 North Queen St
Suite 208,
Etobicoke, Ontario
Canada, M9C 5L2

Phone: + 1 416 433 3186

advance-technology.com
consult@advance-tech.ca