

PRODUCT DATA SHEET / CONFIGURATION GUIDE

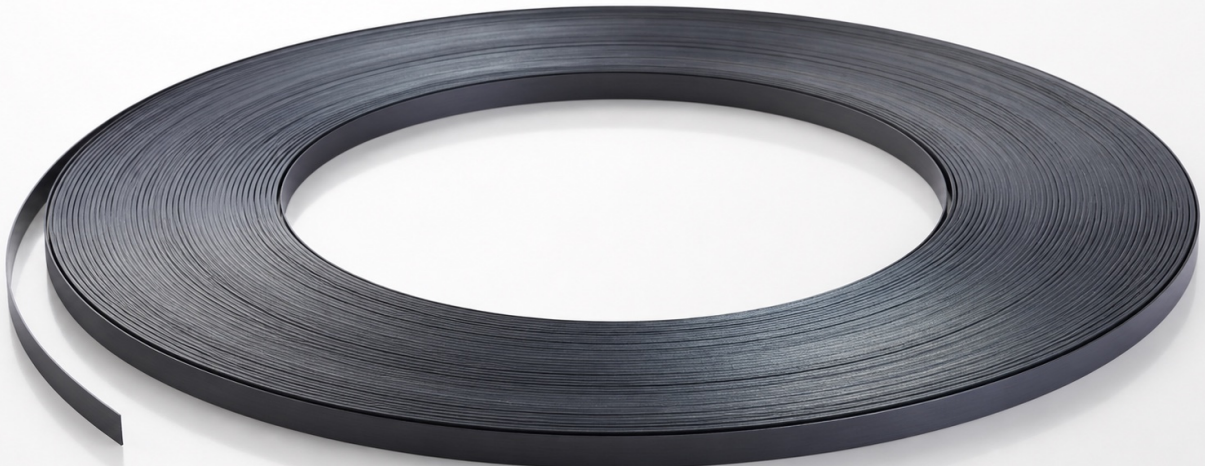
MMO Titanium Ribbon Anode

Project-configured MMO-coated titanium strip for distributed ICCP grids beneath above-ground storage-tank bottoms.

REVISION

Rev C

15 August 2026



REPRESENTATIVE PRODUCT VISUAL - FINAL DIMENSIONS ARE ORDER-SPECIFIC

01**Tank and construction boundary**

Tank diameter or plan, new-build or replacement-bottom status, bottom/foundation layers, liner and installation access.

02**Current and design life**

Required protection current, operating profile, available DC voltage, target life and governing project criteria.

03**Sand and electrolyte**

Resistivity, moisture, chlorides, temperature, placement details and any environmental or owner limits.

FIRST-PRINCIPLES PURPOSE

The buyer is not selecting a coil by dimensions alone. The buyer is deciding whether the active anode can discharge the required current for the intended life and integrate into a buried circuit that remains testable before it becomes inaccessible.

MMO titanium ribbon is the active current-discharge element. Grid geometry, connections, power feeds, electrolyte, installation QA and commissioning evidence govern performance. Bare titanium conductor bar may be used as an optional companion component, but it is not included unless identified in the accepted quotation and BOM.

PRODUCT PAGE cathprocp.com/mmo-titanium-ribbon-anode.html

THE COMPLETE DESIGN PATH

Select the active ribbon from duty, environment and verifiable evidence.

The catalytic surface can only perform when its qualified operating basis, the positive feed, the selected distribution topology, the electrolyte and the return path operate as one controlled circuit.



Conventional current: positive circuit -> selected distribution -> MMO ribbon -> electrolyte -> steel.

Electron return: protected steel -> negative drain circuit.

PRODUCT AND SYSTEM BOUNDARIES

01

Quoted product

The quoted product: active coated strip. Rating and life require declared active area, coating control, environment and operating basis.

02

Project interfaces

Distribution, connections and power feeds are project-specific and excluded unless explicitly ordered. No companion component is implied.

03

Required evidence

Confirm ribbon geometry, coating/rating basis and traceability first; add interface qualifications only for ordered scope.

CALCULATIONS THAT CONTROL THE PROPOSAL

Design question	First-principles relationship	Inputs required
Required protection current	Protected area x selected design current density, adjusted for coating condition and project criteria.	Tank plan, surface condition, protection criterion and margin philosophy.
Ribbon current density	Operating current / active MMO-coated area. Strip width alone does not establish a safe rating.	Active coated area, coating system, environment and operating current.
Charge and design life	Operating current x time, evaluated against qualified charge capacity and utilization assumptions.	Duty cycle, target life, coating/loading control and relevant qualification evidence.
Circuit voltage drop	Depends on the approved distribution topology, conductor cross-section, path length, feed locations and current distribution.	Layout, material sections, feed philosophy, current and voltage limit.
Distribution and spacing	Depends on tank geometry, separation, sand resistivity, ribbon spacing and continuity of every path.	Foundation section, electrolyte data, ribbon layout and commissioning criteria.

RIBBON DIMENSIONS OR COIL LENGTH ALONE DO NOT ESTABLISH OUTPUT, SPACING OR DESIGN LIFE.

PRODUCT FORM AND INTEGRATION EVIDENCE

MMO-coated titanium ribbon is the active product.

Confirm the ordered ribbon geometry, coating/rating basis, coil identity and order evidence first. Distribution, connections, power feeds and other system interfaces are specified and accepted independently when included in project scope.



REPRESENTATIVE PRODUCT VISUAL - COIL / REEL SCHEDULE IS ORDER-SPECIFIC



Representative product-surface concept. It is not microscopy and does not declare coating thickness, surface roughness or fixed ribbon dimensions.

Product: MMO-coated titanium ribbon.
Grade, section, coating/rating basis and reel length: order-specific.
No conductor bar or welded grid is implied.

APPLICATION FIT

Application	Fit	Decision boundary
New above-ground storage-tank bottom	Primary use case	Grid can be laid and tested before the bottom becomes inaccessible; complete tank and foundation design still governs.
Replacement bottom / double-bottom project	Conditional	Requires confirmed installation access, layer separation, current paths, liner and existing-metal interactions.
Concrete, pipeline, marine or deep groundbed	Different product review	These typically require mesh, packaged linear, supported marine or tubular/canister configurations - not this solid ribbon product by default.

INSTALLATION AND QA GATES BEFORE COVERING

01

Layout control

Confirm spacing, locations, clearances, elevation and isolation from steel.

02

Handling control

Protect coating and edges; prevent kinks, displacement and unapproved splices.

03

Connection control

For ordered interfaces, use the approved method/settings, qualification sample and inspection checks.

04

Electrical checks

Verify continuity, feed resistance, attenuation and isolation.

05

Power-feed integrity

When included, verify identity, joint resistance, seal, strain relief and routing.

06

Hold point and records

Record ribbon identity, layout, ordered interfaces, monitoring and baseline tests before covering.

ORDER-SPECIFIC TECHNICAL SCHEDULE

Define the ribbon duty and evidence before any value becomes contractual.

The quoted product is MMO titanium ribbon anode. Any conductor bar, welded grid, power feed, cable, accessory or field service is outside the default supply unless it appears in the accepted quotation and BOM.

Specification field	Information to define	Controlling evidence
Application and construction	Tank or structure, new/retrofit status, protected area, bottom/foundation layers, liner, access and jurisdiction.	RFQ, drawings and approved design basis
Electrical duty and life	Protection criterion, total current, duty cycle, available DC voltage, target life, margins and redundancy.	Accepted technical proposal and calculations
Electrolyte / sand	Resistivity, moisture, chloride, sulphate, pH, temperature, placement and contamination limits.	Project data and approved design basis
MMO titanium ribbon	Solid ribbon product form, titanium grade/standard, dimensions, tolerances, reel length, coated area and traceability.	Approved Data Sheet, MTC and BOM
Coating and rating basis	Declared coating system/control, active area, environmental basis, current rating, charge basis, qualification relationship and acceptance.	Accepted proposal and order-agreed coating evidence
Quantity, reels and packing	Required total length/quantity, reel segmentation, identification, handling limits, preservation, packing and destination.	Accepted quotation, packing specification and release records
Optional system interfaces	Only if ordered: conductor/distribution parts, crossovers, power feeds, cables, monitoring, accessories, drawings, tests or field support.	Explicit quotation line, approved BOM and interface schedule
Inspection and release	Dimensions, visual, continuity, resistance, isolation, coating evidence, MTC/CoC, witness points, packing and preservation.	Document register, ITP and release note

PROJECT EVIDENCE PACKAGE

01 Defined ribbon supply Approved Data Sheet, quantity/reel schedule, BOM, packing and clear interface boundary.	02 Material traceability Ordered titanium certificates linked to the identified ribbon substrate lots.	03 Coating evidence Order-agreed batch, active-area, rating and qualification evidence under declared conditions.
04 Optional interface evidence Connection, feed or accessory records only when those items are included in the order.	05 Project records Layout, installation or commissioning records only when included in the agreed responsibility.	06 Release and shipping ITP, inspection report, CoC, packing, handling and third-party records as ordered.

Qualification evidence applies only to the identified specimen, coating, environment and test basis. It is not a universal field-life guarantee or proof that every installed weld and power feed is acceptable.

STANDARDS BY SCOPE

No single standard certifies the complete ribbon grid and tank CP system.

Reference standards are selected as applicable to the project. The purchase documents must state the required edition, product form, grade, test method, acceptance criteria and evidence; applicability and edition are verified at order review.

Reference	What it governs	Correct application boundary
ASTM B265-25	Annealed titanium strip, sheet and plate	Substrate product form only; not MMO coating, ribbon rating, grid design or weld quality.
ISO 19097-2:2018	Accelerated life testing of MMO anodes for soil and natural-water CP	Qualification under declared conditions; not a universal field-life guarantee or grid-layout standard.
API RP 651, 5th ed. (2024)	Cathodic protection of above-ground storage-tank bottoms	Tank CP practice and project design basis; not standalone ribbon product acceptance.
AMPP/NACE SP0193, project-specified current edition	External CP of on-grade carbon-steel storage-tank bottoms	System application and operation; not MMO material or coating specification.
BS EN 16299:2013	External CP of above-ground tank bases in soil or foundations	Design through operation for the covered tank-base scope; not a ribbon rating table.
BS EN 10204:2004	Metallic-product inspection document types	Use only when the ordered certificate type, product and traceability relationship are stated.

CHOOSE THE RFQ PATH THAT MATCHES THE DECISION

A

Ribbon-only supply RFQ

State application, agreed strip form and dimensions, required total length and reel split, substrate/standard, coating or rating basis, document needs, quantity, destination, Incoterm and required date.

B

Tank-grid application review

Add tank plan and construction, protected area, liner/foundation layers, sand/electrolyte data, required current, DC voltage, target life, layout basis, optional interfaces, inspection and responsibility boundary.

NEXT STEP

Send either the ribbon schedule or the complete tank-grid design inputs.

CathPro will identify missing inputs and return the configuration questions, supply boundary, document scope and order-specific technical offer required for an auditable quotation.

[OPEN PRODUCT PAGE](#)sales@cathprocp.com

WhatsApp +86 159 7878 1890