ECOANODE

TECHNICAL DATA SHEET

# MMO/TITANIUM WIRE FLEXIBLE LINEAR ANODE

ECOANODE's MMO/Titanium wire flexible linear anode fundamentally differs from traditional sacrificial anodes by requiring a connection to an external DC power source. Once energized, the mixed metal oxide (MMO) coating on the titanium wire acts as a highly efficient and stable catalytic surface, facilitating an oxidation reaction that continuously delivers a uniform and precisely controlled protective current to the targeted metal structure, thereby effectively inhibiting electrochemical corrosion.

A key advantage of this design is its inherent flexibility, which allows the anode to be snaked along and closely conform to complex geometries. This makes it ideal for protecting structures with irregular contours, such as curved pipelines, the intricate bottoms of large storage tanks, and other surfaces where rigid anodes are impractical. Furthermore, the MMO coating is renowned for its exceptional performance characteristics, including an extremely low consumption rate, stable current output efficiency across various environments, and strong resistance to degradation from acids, alkalis, and chloride ion erosion.

## BACKFILL FILLING CHEMICAL COMPOSITION

| Technical Measurement | Testing Standard | Performance |
|---|---|---|
| Fixed Carbon Content | ASTM D3172 | 98.5% min. |
| Ash Content | ASTM D3172 | 1.0% max. |
| Sulphur | | 0.5% max. |
| Volatiles (Nil) | 950 °C | 0.5% max. |
| Moisture | | 0.5% max. |



## ACID-RESISTANT BRAID FABRIC JACKET CHEMICAL COMPOSITION

| Technical Measurement | Testing Standard | Performance |
|---|---|---|
| Bursting Strength | ISO 3303 | 500 N |
| Abrasion Resistance | ASTM D-4157 | 100 Cycles to Failure |
| Fluid Resistance | 6-month Immersion | Pass |
| Chlorine Resistance | 6-month Immersion | Pass |
| UV Resistance | ASTM G-53: 8 hrs @ 60°C (140°F), 4 hrs condensation @ 50°C (122°F) | 55% Tear Strength Loss |
| Bend Radius (Min.) | — | 500 mm (20") |

## SPECIFICATIONS

| Model | MMO Wire Diameter | Cable Conductor | Sock Diameter | Reel Length | Current Output | Lifetime |
|---|---|---|---|---|---|---|
| EA-MMO-FLA100 | Φ1.5 mm (Φ0.06") | #6 AWG (HMWPE) | Φ38 mm (Φ1.5") | 152/305/457 m (500/1000/1500 ft.) | 327 mA/m (100mA/ft.) | 25 yrs. |
| EA-MMO–FLA300 | Φ3.0 mm (Φ0.12") | #6 AWG (HMWPE) | Φ38 mm (Φ1.5") | 152/305/457 m (500/1000/1500 ft.) | 983 mA/m (300mA/ft.) | 25 yrs. |


## ECOANODE SOLUTIONS SDN. BHD

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## APPLICATIONS

- In-plant piping systems requiring continuous impressed current cathodic protection.
- Buried oil and gas pipelines exposed to corrosive soil environments.
- Bottom areas of above-ground storage tanks for long-term corrosion prevention.
- Petrochemical containers and other underground steel structures subject to moisture or chemical exposure.


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