ECOANODE

TECHNICAL DATA SHEET

MIXED METAL OXIDE (MMO) COATED TITANIUM MESH RIBBON ANODE

MMO coated titanium mesh ribbon anode is a flexible anode composed of a titanium mesh ribbon substrate coated with an MMO catalyst. Its unique mesh structure significantly increases the effective surface area while maintaining flexibility, enhancing current output efficiency and distribution uniformity. This anode can be installed by welding, tying, or embedding, making it suitable for complex working conditions such as storage tank bottom protection, concrete structure rehabilitation, and seawater systems. It combines the long-service life characteristics of MMO anodes with the mechanical adaptability of the mesh substrate, offering an efficient solution in the field of corrosion protection.

CHEMICAL COMPOSITION

Element	Grade I	Grade II
Iron (Fe)	0.20% max.	0.30% max.
Carbon (C)	0.08% max.	0.08% max.
Nitrogen (N)	0.03% max.	0.03% max.
Hydrogen (H)	0.015% max.	0.015% max.
Oxygen (O)	0.18% max.	0.25% max.
Single Impurity (Each)	0.10% max.	0.10% max.
Other Impurities (Total)	0.40% max.	0.40% max.
Titanium (Ti)	Remainder	Remainder



SURFACE COATING CHEMICAL COMPOSITION

Technical Measurement	Ir–Ta Mixed Metal Oxide Catalyst	Ir–Ru Mixed Metal Oxide Catalyst
Coating Element	IrO_2, Ta_2O_5	IrO_2, RuO_2
Coating Thickness	2~3 μm	4~5 μm
Coating Uniformity	85% min.	85% min.
Working Environment	Fine sand, Coke Breeze, Freshwater	Mud, Concrete, Seawater

ELECTROCHEMICAL PROPERTIES

Model	Linear Resistance	Current Output for 50 yrs	Current Output for 100 yrs
EA-MESH-10	0.5 Ω/m (0.15 Ω/ft.)	3 mA/m (0.91 mA/ft.)	2.8 mA/m (0.9 mA/ft)
EA-MESH-13	0.39 Ω/m (0.12 Ω/ft.)	3.8 mA/m (1.16 mA/ft.)	3.5 mA/m (1.1 mA/ft.)
EA-MESH-15	0.375 Ω/m (0.11 Ω/ft.)	4.1 mA/m (1.25 mA/ft.)	3.9 mA/m (1.2 mA/ft.)
EA-MESH-19	0.25 Ω/m (0.08 Ω/ft.)	5.7 mA/m (1.74 mA/ft.)	5.3 mA/m (1.6 mA/ft)
EA-MESH-20	0.25 Ω/m (0.08 Ω/ft.)	5.7 mA/m (1.74 mA/ft.)	5.3 mA/m (1.6 mA/ft.)
EA-MESH-25	0.19 Ω/m (0.06 Ω/ft.)	7 mA/m (2.13 mA/ft.)	5.8 mA/m (1.8 mA/ft.)

ECOANODE SOLUTIONS SDN. BHD

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SPECIFICATIONS

Model	Width	Expanded Thickness	Mesh Diamond	Surface Area	Coil Length	Weight
EA-MESH-10	10 mm (0.4”)	0.6 mm (0.02")	2.5 x 4.6 x 0.6 mm (0.1" x 0.18" x 0.024")	0.025 m^2/m (0.008 $ft^2/ft.$)	76 m (250 ft.)	14 g/m (0.009 lbs/ft)
EA-MESH-13	10 mm (0.4”)	0.6 mm (0.02")	2.5 x 4.6 x 0.6 mm (0.1" x 0.18" x 0.024")	0.032 m^2/m (0.01 $ft^2/ft.$)	76 m (250 ft.)	19 g/m (0.012 lbs/ft)
EA-MESH-15	10 mm (0.4”)	0.6 mm (0.02")	2.5 x 4.6 x 0.6 mm (0.1" x 0.18" x 0.024")	0.036 m^2/m (0.118 $ft^2/ft.$))	76 m (250 ft.)	28.5 g/m (0.019 lbs/ft)
EA-MESH-19	10 mm (0.4”)	0.6 mm (0.02")	2.5 x 4.6 x 0.6 mm (0.1" x 0.18" x 0.024")	0.048 m^2/m (0.158 $ft^2/ft.$)	76 m (250 ft.)	38 g/m (0.025 lbs/ft)
EA-MESH-20	10 mm (0.4”)	0.6 mm (0.02")	2.5 x 4.6 x 0.6 mm (0.1" x 0.18" x 0.024")	0.048 m^2/m (0.158 $ft^2/ft.$)	76 m (250 ft.)	38 g/m (0.025 lbs/ft)
EA-MESH-25	10 mm (0.4”)	0.6 mm (0.02")	2.5 x 4.6 x 0.6 mm (0.1" x 0.18" x 0.024")	0.062 m^2/m (0.203 $ft^2/ft.$)	76 m (250 ft.)	45 g/m (0.03 lbs/ft)

APPLICATIONS

- Reinforced concrete structures in marine or coastal environments exposed to chloride-induced corrosion.
- Bottom areas of storage tanks where moisture or saltwater accumulation accelerates steel reinforcement corrosion.
- Concrete bridge decks, piers, and piles located in tidal, splash, or wet–dry cyclic zones.
- Existing reinforced concrete structures requiring rehabilitation and long-term corrosion protection.
- Seawater cooling and circulation systems where reinforced concrete is in continuous contact with seawater.

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