



IRIDIUM OXIDE COATED TITANIUM ANODE PLATE FOR HYDROGEN PRODUCTION PEM ELECTROLYZER

PRODUCT DATA SHEET

Iridium Oxide Coated Titanium Fiber Felt for Hydrogen Fuel Cells

YUXI's iridium-coated titanium felt is a high-performance porous material designed for electrolysis, hydrogen production, and fuel cells. It features a titanium felt substrate with a uniform iridium oxides coating, offering excellent corrosion resistance, high electrical conductivity, and superior catalytic activity. This material is widely used in proton exchange membrane (PEM) electrolyzers, fuel cells, and oxygen evolution reaction (OER) applications, ensuring high efficiency and long-term durability.

QUALITY SUBSTRATE MATERIAL

Our electrodes are manufactured from high-tensile titanium, which meets commercially Grade I/II standards.

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



LONG SERVICE COATING

Using state-of-the-art technology, the titanium base is taken to a high temperature ($\geq 1200^{\circ}\text{C}$) in a vacuum sintering furnace ensuring total adhesion of the coating. Thus, the coating consumption rate is extremely low and uniform, measured in milligrams per ampere-year.

Technical Measurement	Performance
Coating Element	Iridium Oxide (IrO_2)
Coating Thickness	1~2 mg/cm^2
Coating Uniformity	85% min.

WORKING ENVIRONMENT

Technical Measurement	Performance
Current Density	500~800 A/m^2
Operating Voltage	$\leq 24\text{V}$
pH Range	1~14
Temperature	$< 85^{\circ}\text{C}$
Fluoride Ion Content	$< 50 \text{ mg}/\text{L}$





Industrial Corrosion Control Solutions Provider

Established in 2003, YUXI has over a 20-year heritage of innovation in corrosion control science and technology. We're a spirited team of ambitious thinkers and pioneer sheeps with a common goal in mind: protect our clients' assets from corrosion with cost-saving measures.

We have the most comprehensive catalog of cathodic protection materials including anodes, transformer rectifiers, backfills, coatings, etc. Our anodes and supplies are manufactured to strict quality standards through an ISO 9001 quality management system and are guaranteed to offer excellent performance in the industry.



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www.yuxi-anode.com

5/F, Building No.4,
1819 Yongmao East Road,
Ningbo 315201, China

E-mail: info@yuxi-anode.com

Tel: +86 (574) 83882233

Fax: +86 (574) 83882238