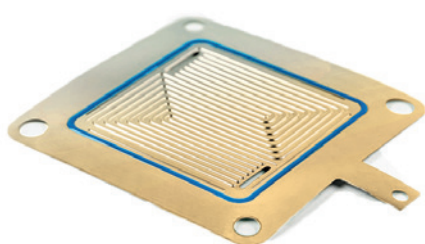


Decarbonization – Hythin™ Titanium Nitride



Thin film PVD coating for metallic bipolar plates in PEM electrolyzers

Hythin™ Titanium Nitride is a thin film PVD coating developed for durable and conductive surfaces in hydrogen production systems. The coating combines reliable electrical conductivity with robust surface protection for metallic bipolar plates used in PEM electrolyzers.

Hythin™ Titanium Nitride is designed for demanding electrolyzer environments where long component lifetime and stable conductive behavior are required. The coating supports reliable stack operation under continuous electrochemical loading conditions.

Performance

Hythin™ Titanium Nitride is optimized for PEM electrolyzer applications where surface durability and conductive stability directly influence operational lifetime. The TiN-based coating creates a hard and wear-resistant conductive surface for metallic stack components exposed to demanding process conditions.

The coating provides stable electrical contact while supporting mechanical robustness during long operating cycles. Its combination of conductive performance and surface hardness makes Hythin™ Titanium Nitride suitable for precision components requiring reliable long-term functionality in hydrogen production systems

Technical Data

Material	TiN
Technology	PVD (Sputtering)
Thickness range	200–3000 nm
Process temperature	< 250 °C
Color	Gold-like
Application reference	Durable and conductive coatings for PEM electrolyzer Components
Lifetime potential	25.000+ hours

The values given are approximations and may vary depending on the application, environmental factors and test protocols.