

— AEM WATER ELECTROLYSIS

HXP-an

Made to order

AEM electrolysis anode (NiFe-LDH)

A nanoporous NiFe-LDH anode with high OER activity and no iridium.



KEY RATINGS

200×300 mm

Stack-grade

3 mm

Nominal thickness

10,000 cycles

Accelerated durability

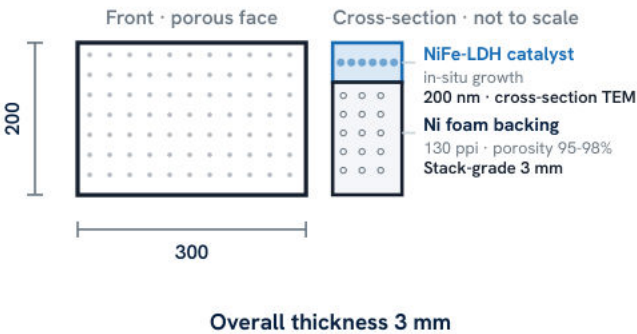
Product boundary · Standard supply

Electrode sheets in the specified size, thickness and quantity. MEA assembly and the counter electrode are separate.

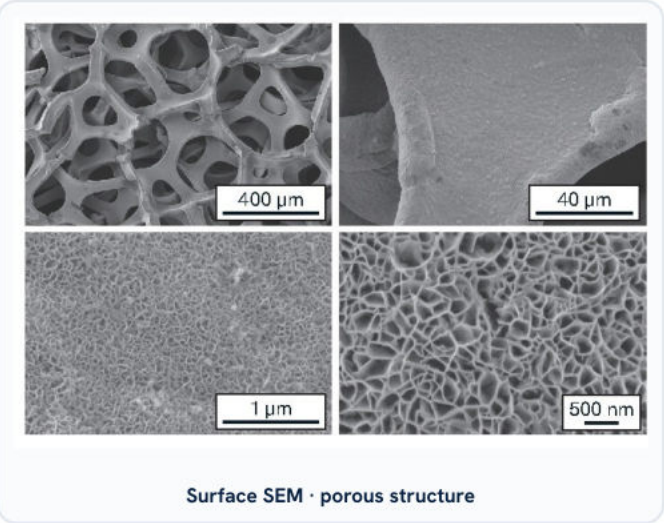
— HXP-an · ENGINEERING SPECIFICATIONS

Design specifications · operating range

Dimensional drawing



Surface SEM



Materials

MATERIAL

Composition	NiFe-LDH @ Ni foam
Pore density	130 ppi
Porosity	95-98%

Characterisation

CHARACTERIZATION

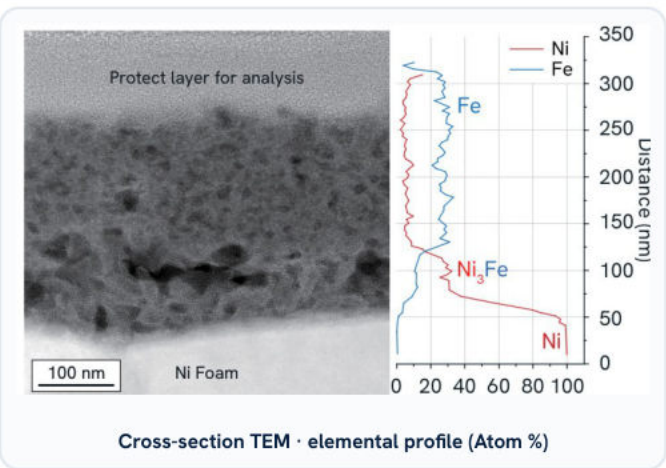
Specific surface area (BET)	25× that of Ni foam
Cross-section ²	NiFe-LDH catalyst layer on Ni foam

Performance

PERFORMANCE

Tafel slope ¹	98.7 mV/dec
Accelerated durability ³	10,000 cycles

Cross-section



Notes

- 1) Tafel slope and curves: three-electrode, 0.3 M KOH, room temperature.
- 2) Cross-section TEM: catalyst layer about 200 nm on the Ni foam.
- 3) AST: 1.0 $\leftrightarrow$ 0.05 A/cm² · 5 s · 10,000 cycles.

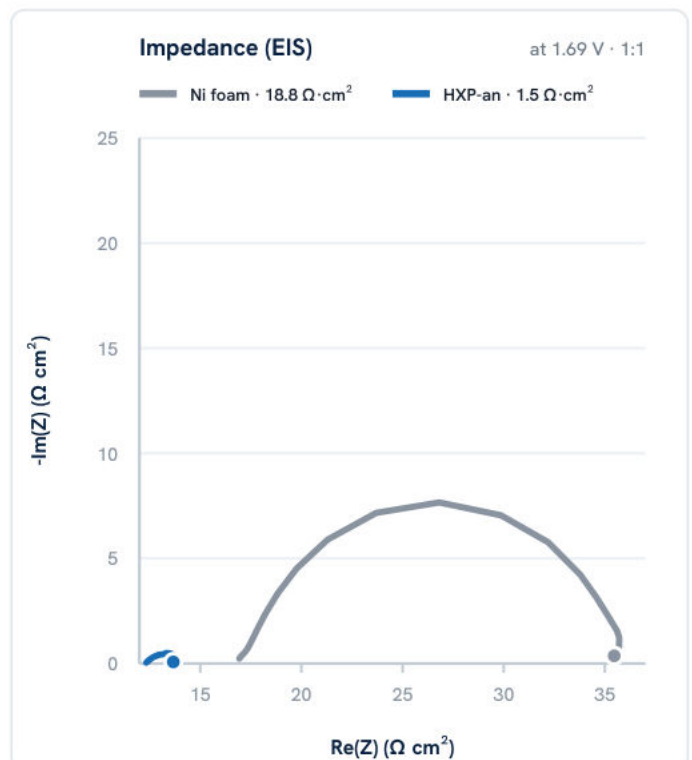
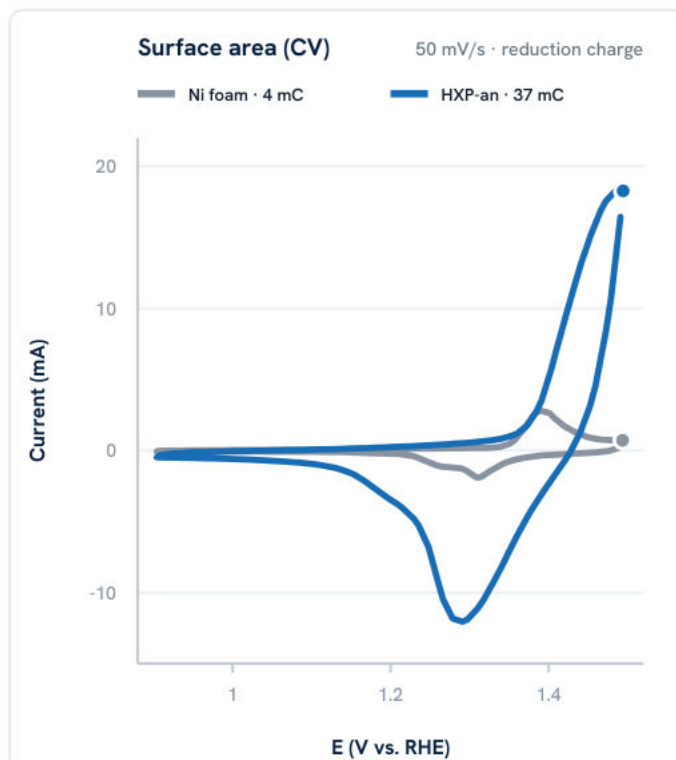
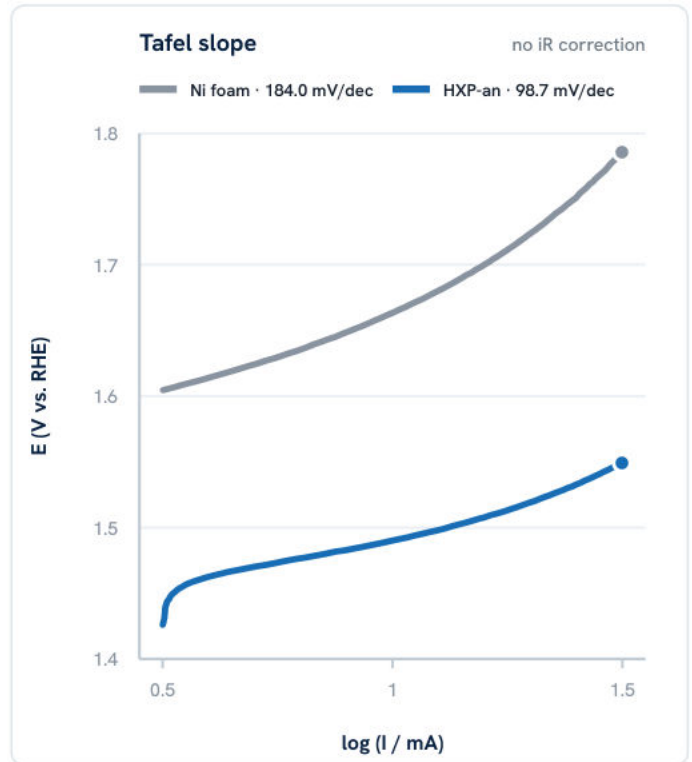
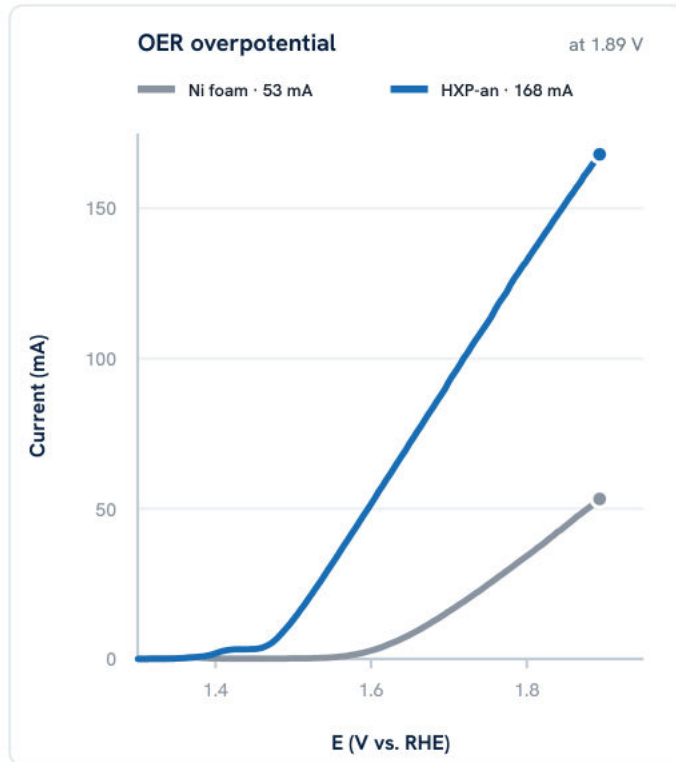
HXP-an · MICROSTRUCTURE & PERFORMANCE

Performance and durability

Both samples use a Ni foam substrate and differ only in catalyst.
All four charts show measured values as recorded.

Half-cell · versus Ni foam

0.3 M KOH · room temperature



— HXP-an · EXTENDED SPECIFICATIONS

Extended specifications

Formats & customisation

Stack-grade	200 × 300 mm · nominal thickness 3 mm
Lab evaluation	100 × 100 mm · nominal thickness 300 µm
Custom production	Custom size/thickness · subject to availability
Selection basis	Cell design · active area · compression · test objective

Quality specification

Stack-grade	200 × 300 mm · 3.0 ± 0.2 mm
Lab evaluation	100 × 100 mm · 300 ± 20 µm
Coating uniformity	100% visual check · no bare areas or delamination

Quality specification (continued)

Visual criteria	No folds, tears, contamination or delamination
Inspection	Dimensions, thickness + 100% visual check
Lot CoA	Not standard · test scope/format agreed before order

Ordering · logistics

Lead time (standard)	Ships in 2 weeks
Lead time (custom)	Up to 2 months
MOQ	1 sheet · no minimum order value
Packaging	Multiple sheets packed together
Storage	Dry indoor storage · away from heat and chemicals
HS code	7508.90.2010

Notes

· Stack-grade and laboratory-evaluation formats differ in purpose, size and thickness.

Design review checklist

01	02	03
Required size, thickness, quantity	Cell active area and compression conditions	Test electrolyte, temperature, current

Product boundary Iridium-free oxygen-evolution electrode with a NiFe-LDH catalyst layer on Ni foam
Final contract specifications are defined in the quotation, approved drawings and order configuration.