

**S+D METALS**

A BIBUS GROUP COMPANY



**ALLOYS FOR HYDROGEN  
APPLICATIONS**

## Hydrogen applications - bipolar plates

The functions of bipolar plates are removing heat, supplying mechanical strength to the stacks and distributing and separating oxygen and hydrogen. Stainless steel bipolar plates have desirable mechanical properties however are subject to corrosion and untreated stainless steels are not suitable for use in PEM fuel cells. Nickel and titanium metal bipolar plates have several benefits when used in fuel cells such as low gas permeability, good electrical and thermal conductivity, stability in low pH environments and corrosion resistance combined with good mechanical properties. They are also highly formable and well suited for mass production.

### Titanium Grade 1

<b>COIL</b>	Gauge:	0,3 mm - 3,0 mm
	Width:	1000 mm   1250 mm
	Availability:	ex stock

### Pure Nickel 201

<b>COIL</b>	Gauge:	0,2 mm - 2,0 mm
	Width:	500 mm   1000 mm   1220 mm
	Availability:	ex stock

### Titanium Grade 1+2

<b>FOIL</b>	Gauge:	75 µm to 0,3 mm (down to 50 µm on demand - depending on technical definition)
	Width:	max 450 mm
	Availability:	6 - 8 weeks after order receipt

Service: + precision slitting  
+ cut to length from coil | strip  
+ full control and  
full traceability of material  
+ full mill test certificate

### Titanium Grade 2

<b>PLATE</b>	Gauge:	4 - 60 mm
	Width:	1000 x 2000 mm   2000 x 6000 mm
	Availability:	ex stock

Service: + waterjet cut to size (DXF, CAD)  
+ standard, quality or fine cut  
+ full control and  
full traceability of material  
+ full mill test certificate