

# Ergste® 2.4819 Data Sheet

## Precision Strip



Zapp is certified to ISO 9001

### Grade Ergste® 2.4819

Nickel based alloy C 276 – UNS N10276

### Description

The Ni based alloy is well known for its corrosion resistance in a wide range of aggressive media. The high molybdenum content avoids pitting corrosion under various conditions. The low carbon content minimizes the carbide precipitation in heat-affected zones. This maintains a resistance to intergranular attack in welded joints! It has very good resistance to sulfuric and hydrochloric acid! The alloy exhibits excellent corrosion resistance to sea water under service conditions!

### Typical applications

- Chemical processing
- Heat exchangers
- Reaction vessels
- Evaporators
- Transfer piping

### Chemical composition

Tab. 1

Ni	Mo	Cr	Fe	W	Co	Mn	C	V	P	S	Si
Balance	15.0 – 17.0	14.5 – 16.5	4.0 – 7.0	3.0 – 4.5	2.5 max.	1.0 max.	0.01 max.	0.35 max.	0.04 max.	0.03 max.	0.08 max.

### Physical properties

Tab. 2

Temperature °C	Coefficient of Expansion µm/m°C	Electrical Resistivity µΩcm	Young's Modulus GPa
25	-	122.9	205
100	12.2	123.7	203
200	12.4	124.5	198
300	12.9	125.7	192
400	13.2	126.0	186
500	13.5	127.7	180
600	13.6	129.9	178
700	14.1	129.7	167
800	14.8	128.2	159
900	-	127.4	150
1000	-	127.1	141

### Physical properties at room temperature

Tensile strength MPa	Yield strength (0.2%) offset MPa	Elongation %	Hardness Rb
745	350	65	90

### Corrosion rates in acid solutions

Solution	Temperature	Corrosion rate mm/a	Time h
10 % H <sub>2</sub> SO <sub>4</sub>	Boiling	0,51	168
20 % H <sub>2</sub> SO <sub>4</sub>	80	0.08	168
40 % H <sub>2</sub> SO <sub>4</sub>	80	0.13	168
80 % H <sub>2</sub> SO <sub>4</sub>	80	0,10	168
0.2 % HCl	Boiling	0.02	192
1.0 % HCl	Boiling	0.17	192
1.0 % HCl	90	0.09	192
1.0 % HCl	70	0.02	192
5.0 % HCl	70	0.34	192

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