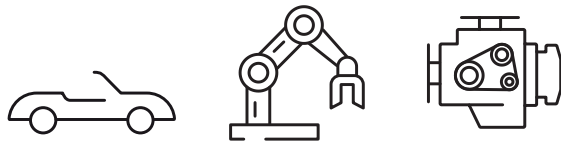


# 1.4113 IL, AISI 434, X6CrMo17-1

## Automotive & Automation, Data Sheet



Zapp is certified to ISO 9001 | IATF 16949



### Categorization

- Ferritic, corrosion resistant steel
- DIN EN 10088-3
- AISI 434
- X6CrMo17-1

### Typical Applications 1.4113 IL from Zapp

The alloy Ergste® 1.4113 IL is mainly used in solenoid valves for pneumatic and hydraulic applications with higher requirements regarding corrosion resistance like in medical equipment.

[Information about further automotive applications at Zapp.](#)

### Processing and Usage Properties

Ergste® 1.4113 IL, similar to X6CrMoS17-1, is a stainless steel with excellent soft magnetic properties. Its high molybdenum and its low sulphur content provide a very good corrosion resistance in water, steam and other moderate aggressive media. It provides also a higher resistance against pitting corrosion.

If welding is necessary, plasma- or laser welding should be preferred. The steel is suitable for cold forming operations within certain limits.

For improved properties in selective cases we recommend the following Ergste® grades:

#### Cold Heading

Ergste® 1.4003 IA  
Ergste® 1.4016 IM

#### Machinability

Ergste® 1.4113 IM  
Ergste® 1.4105 IM  
Ergste® 1.4105 IL  
Ergste® 1.4005 IA

#### Magnetic Properties

Ergste® 1.4005 IA  
Ergste® 1.4105 IL

### Typical Analysis\*

C	Si	Mn	S	Cr	Mo
0.03	0.6	0.60	0.015	18.00	1.1

\* weight percentage / approximate value

### Mechanical and Physical Properties

Tensile strength (soft annealed)	400- 600 [MPa]
----------------------------------	----------------

### Magnetic Properties of Round Bars

Coercitive strength	Hc < 240 [A/m]
Maximum relative permeability	$\mu_{rmax} > 1,300$
Saturation polarization	J <sub>s</sub> > 1.5 [T]

### Delivery Forms\*

Round bars	Annealed, ground
Profiles	Annealed, straightened

\* Crack tested according to DIN EN 10088-3, Table 1 Surface class 1-3, US-Testing: KSR (FBH) 0.7 mm or better

[Information about further stainless steel alloys at Zapp.](#)

[Further information: Please see our linecard for precision wire products.](#)

**Zapp Precision Metals GmbH**

PRECISION WIRE

Letmather Straße 69

58239 Schwerte

Phone +49 2304 79-7169

Fax +49 2304 79-67169

[precisionwire@zapp.com](mailto:precisionwire@zapp.com)

[www.zapp.com](http://www.zapp.com)

Further information regarding our products and locations are available in our image brochure and under [www.zapp.com](http://www.zapp.com)

The illustrations, drawings, dimensional and weight data and other information included in this data sheet are intended only for the purposes of describing our products and represent non-binding average values. They do not constitute quality data, nor can they be used as the basis for any guarantee of quality or durability. The applications presented serve only as illustrations and can be construed neither as quality data nor as a guarantee in relation to the suitability of the material. This cannot substitute for comprehensive consultation on the selection of our products and on their use in a specific application. The data sheet is not subject to change control.

Last revision: August 2022