



Electrogalvanised  
steel strip

**voestalpine**

ONE STEP AHEAD.

# Electrogalvanised steel strip by voestalpine

Excellent surface quality.

High uniformity with regard to surface characteristics.

Excellent forming behaviour.

Electrogalvanised steel strip produced by voestalpine Stahl GmbH is characterised by outstanding features regarding surface appearance and quality as well as by an excellent forming behaviour.

On a wide range of steel grades, from ultra-mild to high-strength steels, the suitable material is available for practically every profile requirement.

Because of its characterisation, electrogalvanised steel strip is mainly used for outer parts as well as for parts with high demands on formability. Furthermore the material is especially suitable for applications where a thin zinc layer (e. g. 2.5 µm) or a zinc coating on one side is sufficient for corrosion protection.

## **Main applications**

### **Automotive industry**

- outer panels
- inner parts of the car body

### **Household appliance industry**

- especially for dry application,  
e. g. microwave ovens

### **Electronics industry**

- housings for stereo sound systems
- computer casings
- frames for electric appliances



## The advantages

### **Excellent surface quality**

High uniformity with regard to surface appearance and reactivity.

### **Excellent forming behaviour**

In contrast to uncoated steel strip, there are no limitations regarding the available steel grades, even with respect to high-strength steels and their mechanical properties.

The ultra-fine crystalline zinc layers, which adhere extremely well to the base material, are characterised by high abrasion resistance, even in the event of very high forming requirements.

To additionally improve formability, special surface re-treatments such as phosphating, oiling or oiling with so-called prelubes, are available.

### **Excellent welding and bonding characteristics**

The extremely pure zinc layer as well as the small zinc layer thickness (10 µm max.) allow long electrode lives. More favourable welding current (lower values) than for uncoated steel strip. The fine-crystalline surface structure ensures optimum bonding with the adhesive.

### **Optimum paintability**

- The roughness structure is comparable with uncoated steel strip.
- Homogeneous surface reactivity due to high uniformity of the zinc layer composition.
- Excellent suitability for phosphating.
- Extremely good paint adherence.
- After painting, high uniformity with regard to surface appearance.
- The phosphated surface is ideally suited for direct painting.

### **Best corrosion protection**

High degree of corrosion protection both on component surfaces, lap joints, flanges and on cut edges as well as zinc layer defects (scratches, stone chips, etc.).

# Steel grades

## Guaranteed mechanical properties

Steel grade	0.2 % Yield strength $R_{p0.2}$ [MPa]	Tensile strength $R_m$ [MPa]	Fracture elongation $A_{80}$ [%] (min.)	Vertical anisotropy $r_{90}$ (min.)	Hardening exponent $n_{10-20}$ (UE) (min.)	Bake- hardening value $BH_2$ [MPa] (min.)	Sample direction
<b>Mild steels</b>							
DC01+ZE	140 - 280	270 - 410	28	–	–		transv.
DC03+ZE	140 - 240	270 - 370	34	1.3	–		transv.
DC04+ZE	140 - 210	270 - 350	38	1.6	0.18		transv.
DC05+ZE	140 - 180	270 - 330	40	1.9	0.20		transv.
DC06+ZE	120 - 170	270 - 330	41	2.1	0.22		transv.
DC07+ZE	120 - 150	250 - 310	44	2.5	0.23		transv.
<b>Micro-alloyed steels</b>							
H260LA+ZE	260 - 330	350 - 430	26				transv.
H300LA+ZE	300 - 380	380 - 480	23				transv.
H340LA+ZE	340 - 420	410 - 510	21				transv.
H380LA+ZE	380 - 480	440 - 560	19				transv.
H420LA+ZE	420 - 520	470 - 590	17				transv.
<b>Phosphorus-alloyed steels</b>							
H220P+ZE	220 - 270	320 - 400	32	1.5	0.16		transv.
H260P+ZE	260 - 320	360 - 440	29	–	–		transv.
H300P+ZE	300 - 360	400 - 480	26	–	–		transv.
<b>Bake-hardening steels</b>							
H180B+ZE	180 - 230	300 - 360	34	1.6	0.17	35	transv.
H220B+ZE	220 - 270	320 - 400	32	1.5	0.16	35	transv.
H260B+ZE	260 - 320	360 - 440	29	–	–	35	transv.
H300B+ZE	300 - 360	400 - 480	26	–	–	35	transv.
<b>High-strength IF steels</b>							
H180Y+ZE	180 - 230	340 - 400	36	1.7	0.19		transv.
H220Y+ZE	220 - 270	350 - 420	34	1.6	0.18		transv.
H260Y+ZE	260 - 320	380 - 440	32	1.4	0.17		transv.
H300Y+ZE	300 - 360	390 - 470	27	1.3	0.15		transv.
<b>Isotropic steels</b>							
H220G1+ZE	220 - 270	300 - 380	34		0.18		transv.
H260G1+ZE	260 - 310	320 - 400	32		0.17		transv.
<b>Dual-phase steels</b>							
HCT450X+ZE	260 - 340	≥ 450	27		0.16	30	transv.
HCT500X+ZE	300 - 380	≥ 500	23		0.15	30	transv.
HCT600X+ZE	340 - 420	≥ 600	20		0.14	30	transv.
HCT780X+ZE	450 - 560	≥ 780	14		–	30	transv.
HCT980X+ZE	600 - 750	≥ 980	10		–	30	transv.
<b>Complex-phase steels</b>							
HCT780C	600 - 750	≥ 780	9			40	transv.
HCT980C	800 - 950	≥ 980	5			40	transv.
<b>Trip steels</b>							
HCT690T	450 - 550	≥ 690	24		0.19	40	transv.
HCT780T	500 - 620	≥ 780	22		0.18	40	transv.

Note:

- The guaranteed mechanical properties may be limited by the product thickness.

- For detailed data, see the Technical Terms of Delivery.

### Types of coatings and groups of layers

Layer group, one side	Layer group, both sides	Layer thickness per side
ZE 25/0	ZE 25/25	approx. 2.5 µm
ZE 50/0	ZE 50/50	approx. 5 µm
ZE 75/0	ZE 75/75	approx. 7.5 µm
ZE 100/0	ZE 100/100	approx. 10 µm

Different coatings (different layer on each side) and special layers on request.

### Type of surface

Electrogalvanised steel strip is available in surface quality A and B.

### Surface re-treatment

Electrogalvanised steel strip is available in the following conditions:

- oiled
- phosphated
- phosphated and oiled

### Available shapes and dimensions

Thickness in [mm]	Width in [mm]	Max. outer diameter in [mm]	Approx. inner diameter <sup>2)</sup> ca. in [mm]
0.50 - 1.80	600 - 1,600	2,000	600
1.81 - 2.00	600 - 1,300/1,400 <sup>1)</sup>	2,000	600

<sup>1)</sup> dependent on steel grade

<sup>2)</sup> approx. 500 mm on request

In addition, organic coatings can be applied on electrogalvanised steel strips in our coil coating line. Slit strips and cut sheets are offered by our affiliated company voestalpine Stahl Service Center.



**voestalpine Stahl GmbH**

voestalpine-Straße 3  
4020 Linz, Austria  
T. +43/732/65 85-8007  
F. +43/732/69 80-3148  
marketing@voestalpine.com  
www.voestalpine.com/stahl

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