



# Hot-dip Galvanized Steel Strip

CORRENDER  
COATED

corrender coated – innovative coating systems  
for the highest degree of corrosion resistance

**voestalpine**

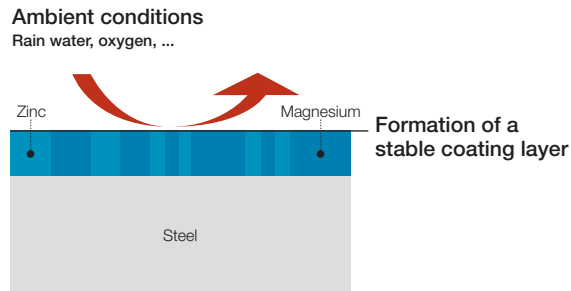
EINEN SCHRITT VORAUSS.

## corrender coated

Steel strip with zinc-magnesium coating

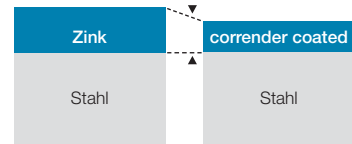
- Significantly improved product properties  
as opposed to conventionally galvanized steel strip
- Unchanged excellent processing properties
- Wide variety of applications
- Serial production at voestalpine since 2007

Hot-dip galvanized steel strip corrender coated offers the highest degree of corrosion resistance and excellent processing properties.

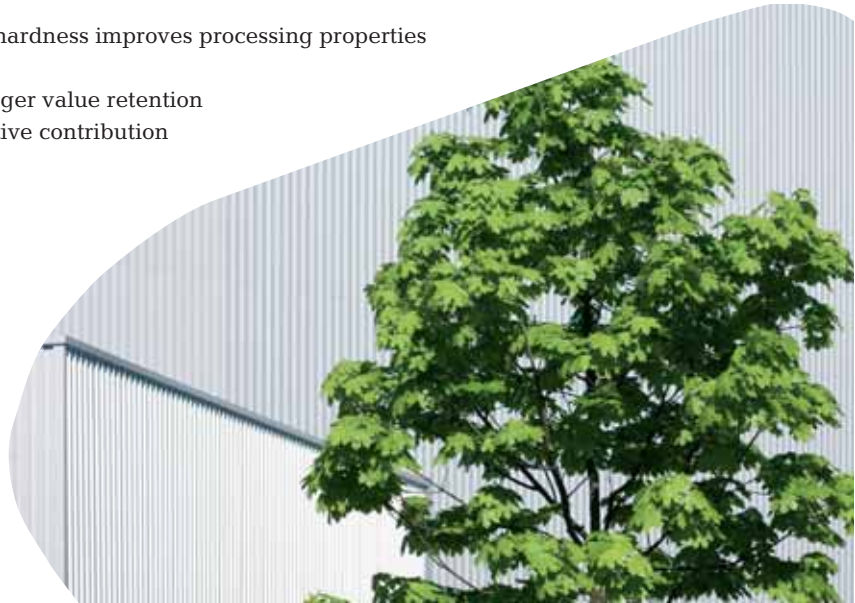


# Significantly improved corrosion protection

- Improved corrosion protection with no change in coating thickness
- Adaptation of zinc coating thickness/corrosion protection to product application
- Reduction of the zinc coating layer with at least the same corrosion protection
- Potential cost savings as opposed to zinc coatings – especially with thicker coatings



- High degree of coating hardness improves processing properties
- Saved resources and longer value retention in end products – a positive contribution to the environment



# Product Properties

## Comparison of corrosion properties

|   | Z – Zinc | ZM – corrender coated | ZA – Galfan <sup>1)</sup> | AZ – Galvalume <sup>2)</sup> |
|---|----------|-----------------------|---------------------------|------------------------------|
| Start of white rust                           |          |                       |                           |                              |
| Kinetics of white rust                        |          |                       |                           |                              |
| Red rust resistance (salt spray test)         |          |                       |                           |                              |
| Red rust resistance (cyclical corrosion test) |          |                       |                           |                              |

## Excellent processing properties

|                                | Z – Zinc | ZM – corrender coated | ZA – Galfan <sup>1)</sup> | AZ – Galvalume <sup>2)</sup> |
|--------------------------------|----------|-----------------------|---------------------------|------------------------------|
| Powder paintability            |          |                       |                           |                              |
| Cathodic corrosion protection  |          |                       |                           |                              |
| Spot weldability               |          |                       |                           |                              |
| Coating strength <sup>3)</sup> | HV 70    | HV 140-170            | HV 80-100                 | HV 100-110                   |

|               |                 |                                |                 |                        |
|---------------|-----------------|--------------------------------|-----------------|------------------------|
| <b>Legend</b> | As good as zinc | Significantly better than zinc | Worse than zinc | Surface not passivated |
|---------------|-----------------|--------------------------------|-----------------|------------------------|

1) Zinc-aluminum alloy with 5% magnesium

2) Zinc-aluminum alloy with 55% aluminum, 1.6% silicon

3) Note: A cold-rolled steel surface has a hardness of HV 100-180 (depending on the hardness of the base material).

# Applications

Wide variety of applications

## Construction industry

- Applications for housing suppliers and garage doors
- Open and closed steel sections for plant construction or structures
- Photovoltaic plants

## Automotive and automotive supply industry

- Potential savings in secondary corrosion protection measures
- Utilization of improved processing properties such as low levels of zinc abrasion, long tool service life

## Household appliance industry

- For uncoated parts with higher demands on corrosion protection
- Dishwashers and washing machines







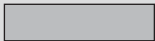

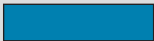
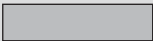

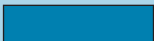





# Application Example

Longer trellis post life with corrender coated



Trellis posts made by voestalpine Krems

Low levels of white rust formation and the electrolytic protective effect are two important advantages for trellis posts. The high level of resistance against insecticide sprays (copper sulfate) is also an advantage.

| Coating       | Z – Zinc  | ZM – corrender coated  | ZA – Galfan <sup>1)</sup>   | Powder coated  |
|---------------|---|--|---|--|
| Service life  |   |  |   |  |
| Short         |             |              |                   |   |
| Medium        |            |             |                  |  |
| Long          |            |             |                  |  |
| <b>Legend</b> |  Very good |  Sufficient |  Not sufficient |  |

1) Zinc-aluminum alloy with 5% with magnesium

Assumption: Zinc coating of 275 g/m<sup>2</sup> on both sides. Results from the salt spray test.

# Technically More Advanced. Successful together.

**voestalpine – the partner you can trust.**

High-quality materials are the basis for our products. We strive to be the best partner for our customers and want to provide them with the best-possible solution.

We focus our expertise on two aspects:

The personal aspect, with dedicated and highly competent employees

The technical aspect, with high-quality methods, products and services

The companies in the voestalpine Steel Division and our employees are here to serve our customers as effectively and efficiently as possible and pledge the following:

- Understanding for our customers' business
- Dedication to professionalism
- Reliability
- Partnerships based on trust
- Responsibility for satisfactory project completion

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