

colofer®

For roof / wall / drainage
More than just organic-coated steel strip



Josef Elmer, Key Account Manager

voestalpine Steel Division
www.voestalpine.com/colofer

voestalpine

ONE STEP AHEAD.



To find out more about colofer®,
visit us on our website at
www.voestalpine.com/colofer



More than just organic-coated steel strip

It's the internal properties that make a difference!
Taking a closer look at this product reveals what sets it apart from others.

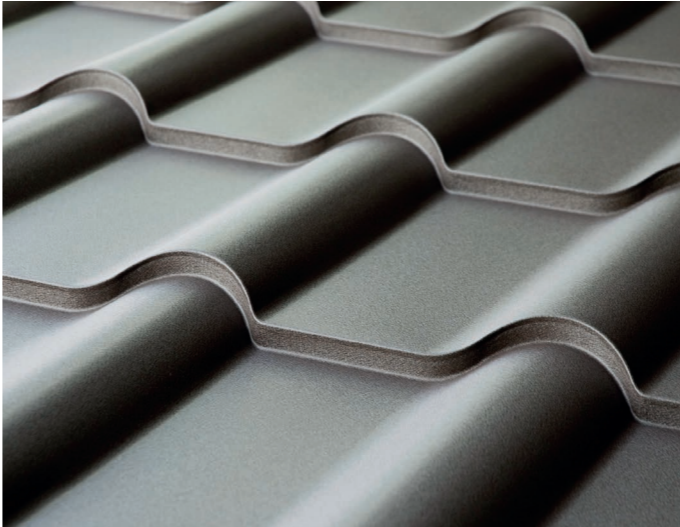
colofer® is much more than just organic-coated steel strip. colofer® is an inspiring product that creates added value for customers, which translates into superior quality and performance along the entire value chain.

At first glance it seems like there are other products that are similar, but upon closer examination, they are not. For example, colofer® has been produced in a completely chromium- and chromate-free process since 1998. However, this does not affect the length of our guarantee periods (up to 40 years) and the high levels of corrosion protection (RC 5). High-tech steel strips produced by voestalpine and paints from renowned European manufacturers in connection with our strong customer orientation make colofer® an all-round carefree package for processing companies and end users. Building on our vast experience and network of high-quality suppliers and research institutions, we can offer solutions that meet even the most demanding requirements.

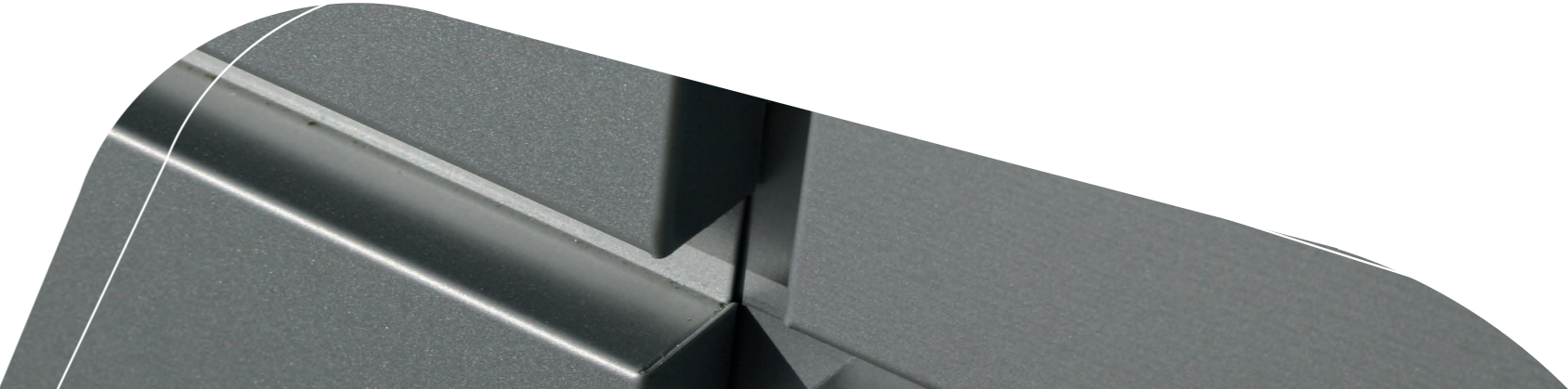
On the following pages you will find out more about colofer®, the organic-coated steel strip by voestalpine. Discover what added value colofer® can bring to your business.



See for yourself
what colofer® is capable of



colofer® offers versatile application possibilities. The only things that remain constant are the high quality of products and services, and our consistent commitment to remain one step ahead.

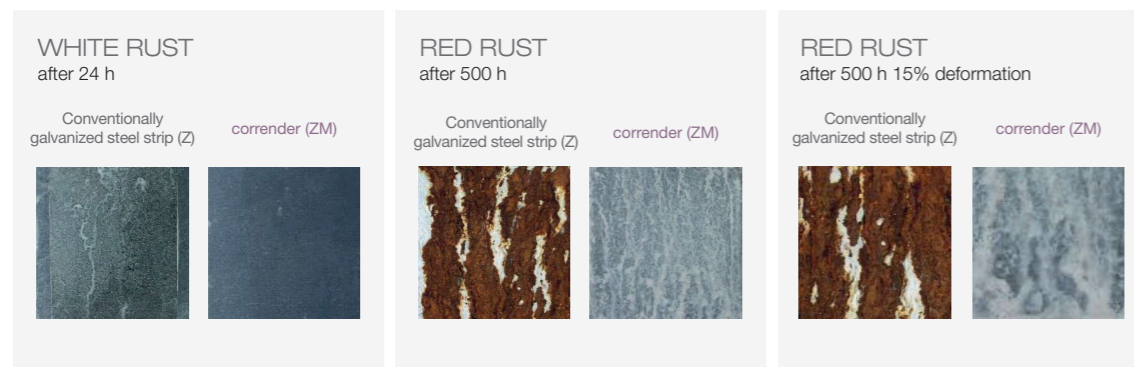


corrender

The high-performance substrate

Do you currently use conventionally galvanized steel strip as a substrate? We invite you to go a step further with us. corrender is a hot-dip galvanized steel-strip substrate with a zinc-magnesium coating (ZM) that significantly enhances the performance of colofer®.

Convincing results in the salt spray test

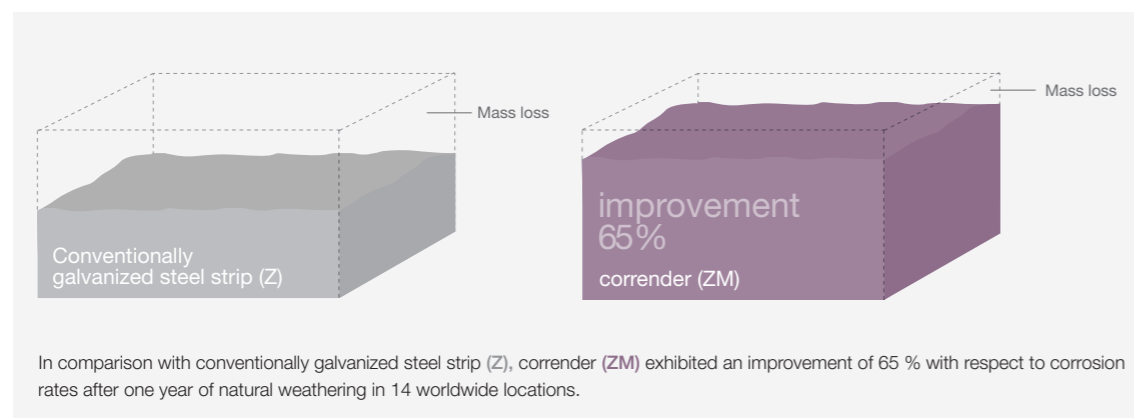


colofer® corrender offers increased corrosion protection

colofer® corrender demonstrates substantial advantages in the salt spray test as compared with colofer® based on conventionally galvanized steel strip. It convinces with less corrosive paint infiltration in edges and cracks in spite of the reduced metallic coating thickness.



Impressive results in worldwide aging tests

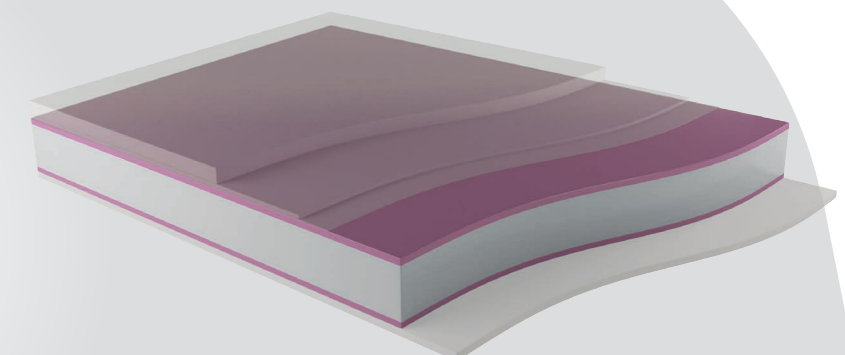


To find out more about corrender, visit us on our website at www.voestalpine.com/corrender

colofer® corrender

- Increased corrosion protection
- Improved coating adhesiveness
- Longer guarantee periods
- Environmental compatibility

- Zinc-magnesium coating
- Steel strip



Environmental conditions

Depending on the atmosphere, geographical location and altitude, a material is exposed to different degrees of stress. Accordingly, selecting the right colofer® product is very important.

Types of atmospheres (according to EN 10169)



Rural atmosphere (C2)

Atmosphere prevailing in rural areas and small towns that contains almost no corrosive substances such as sulfur dioxide and chlorides.



Industrial atmosphere (C3–C5)

Atmosphere polluted by corrosive emissions from local or regional industrial operations (mostly sulfur dioxide). Industrial atmospheres are divided into three categories according to SO₂ levels (low, medium and high content).



Urban atmosphere (C3)

Polluted atmosphere prevailing in densely populated areas without significant industrial activities. It contains moderate levels of corrosive substances such as sulfur dioxide and chlorides.



Marine atmosphere (C3–C5)

Atmosphere prevailing in coastal regions. Marine atmospheres are divided into the following three categories depending on salt content and distance to the coast: low salt content (10–20 km from the coast), medium salt content (3–10 km from the coast), high salt content (0–3 km from the coast).

Geographical locations



Locations north of the 37th parallel (recommended UV resistance class: RUV 3).



Locations south of the 37th parallel (recommended UV resistance class: RUV 4).

Altitudes



Locations up to an altitude of 900 meters (recommended UV resistance class: RUV 3).



Locations up to an altitude of 2,100 meters (recommended UV resistance class: RUV 4).

Selecting the right colofer® product for your application

The table below provides an overview of recommended colofer® products with respect to environmental conditions.

| Atmospheres and corrosivity category | Corrosion resistance category | colofer® classic | colofer® uv | colofer® matt | colofer® robust | colofer® robust rain | colofer® plus | colofer® vario |
|--------------------------------------|-------------------------------|------------------|-------------|---------------|-----------------|----------------------|---------------|----------------|
| C2 | RC2 | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |
| C3 | RC3 | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |
| C4 | RC4 | ☒ | ☒ | ☒ | ☒ | ☑ | ☑ | ☑ |
| C5-M C5-I | RC5 | ☒ | ☒ | ☒ | ☒ | ☒ | ☑ | ☒ |
| Geographical location | | UV resistance | | | | | | |
| Locations north of the 37th parallel | RUV3 | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |
| Locations south of the 37th parallel | RUV4 | ☒ | ☑ | ☑* | ☑* | ☑ | ☑ | ☑ |
| Altitude | | UV resistance | | | | | | |
| Up to 900 m | RUV3 | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |
| Above 900 m | RUV4 | ☒ | ☑ | ☑* | ☑* | ☑ | ☑ | ☑ |

☑ recommended

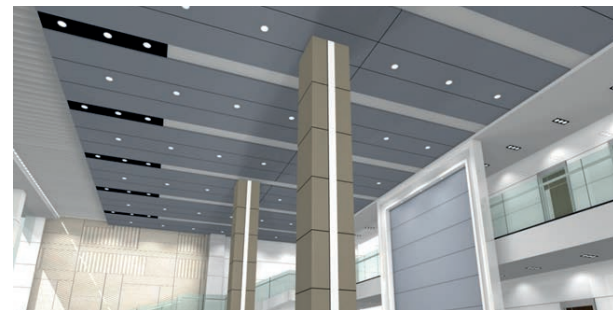
☒ not recommended

* only applies to selected standard colors



Our colofer® technical support has access to a large pool of experts which will be happy to assist you in all matters

Product overview



colofer® indoor 15 µm

More than just quality

Elegance and functionality in indoor applications. The high-quality two-layer system consisting of primer and polyester paint in combination with corrender has significant advantages in comparison with conventional products for indoor applications.

- For indoor applications
- Two-layer system: primer and polyester paint
- Protective film upon request



colofer® classic 25 µm

More than just standard

The classic choice for outdoor applications features a high level of UV resistance (RUV 3) and an automatic guarantee period of up to 20 years. As a substrate, corrender provides additional corrosion protection.

- For outdoor applications
- Automatic guarantee
- High level of UV resistance (RUV 3)



colofer® robust 25 µm

More than just extremely resistant to scratching

True to its name, this product is extremely resistant to scratching thanks to its special surface. In addition, colofer® robust is characterized by a high level of UV resistance (RUV 4) and we offer guarantees up to an altitude of 2,100 meters.

- Very high level of resistance to scratching
- High level of UV resistance (RUV 4)
- Guarantees up to an altitude of 2,100 meters



* only applies to selected standard colors



colofer® robust rain 35 µm

More than just extremely resistant

Like water off a duck's back. Specially developed for drainage systems, this product has excellent forming properties and is extremely resistant to scratching and corrosion (RC 4).

- High level of scratch resistance
- High level of UV resistance (RUV 4)
- High level of corrosion resistance (RC 4)
- Guarantees up to an altitude of 2,100 meters



colofer® uv 25 µm

More than just brilliant colors after many years

Appearances are not deceiving. Thanks to its high-quality PVDF coating, this product features exceptional UV resistance (RUV 4). We offer an automatic guarantee up to an altitude of 2,100 meters.

- Outstanding color retention (RUV 4)
- High degree of temperature resistance
- Automatic guarantee up to an altitude of 2,100 meters



colofer® matt 35 µm

More than just aesthetics for roofing applications

Aesthetics meet function. Three different matt surface types, the highest degree of UV resistance (RUV 4) and automatic guarantee up to an altitude of 2,100 meters.

- 3 impressive matt surface types
- High level of UV resistance (RUV 4)
- Excellent formability



* only applies to selected standard colors



colofer® plus 50 µm

More than just maximum protection

A champion at all levels. Excellent corrosion protection (RC 5), highest reference values for scratch resistance (40 N) and UV resistance (RUV 4). Up to 40-year guarantee period and additional guarantees in the event of unusual stress.

- Very high level of corrosion resistance (RC 5)
- High level of UV resistance (RUV 4)
- Highest reference value for scratch resistance (40 N)
- Variety of different surface textures
- Up to 40-year guarantee period and additional guarantees



Reverse-side coating and protective film

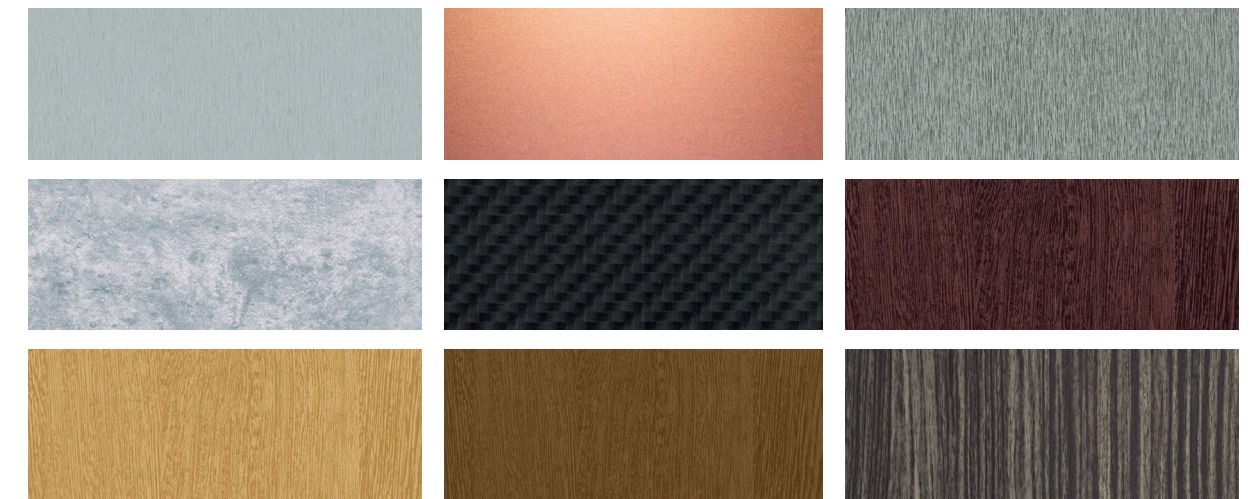
colofer® reverse

- Standard option 10 µm
- Alternative option 15 µm
- Tailored to specific applications

Protective film*

- Hot laminated
- Film thickness of 120 µm

* protective film not available for all products



A small taste of the wide range of colofer® vario products.

colofer® vario

More than just versatile elegance

Our versatile all-rounder for indoor and outdoor applications combines creativity and functionality like no other product. A large variety of appearances and effects provide the basis for solutions that inspire.

- Numerous appearances and effects
- Impressive aesthetics
- Excellent functionality
- Comprehensive guarantee

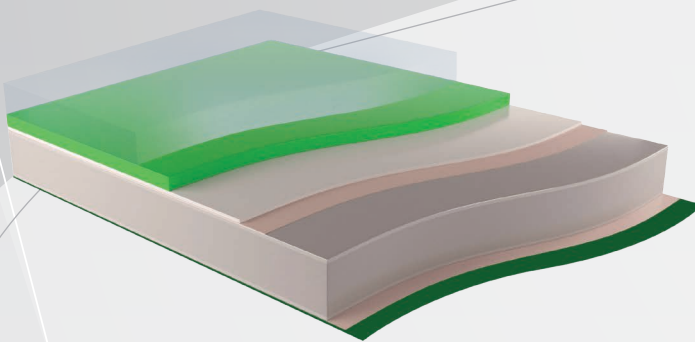


Overview of product properties

| | colofer® indoor | colofer® classic | colofer® uv | colofer® matt | colofer® robust | colofer® robust rain | colofer® plus | colofer® vario | colofer® reverse |
|--------------------------------|-----------------|------------------|------------------|-----------------|-----------------|----------------------|-----------------|----------------|------------------|
| Layer thickness | 15 | 25 | 25 | 35 | 25 | 35 | 50 | ☰ | 10/15 |
| Corrosion resistance | CPI 3 | RC 3 | RC 3 | RC 3 | RC 3 | RC 4 | RC 5 | ☰ | CPI 2 |
| UV resistance | | RUV 3 | RUV 4 | RUV 4 * | RUV 4 * | RUV 4 | RUV 4 | ☰ | / |
| Scratch resistance | ≥ 15 N | ≥ 20N | ≥ 20 N | ≥ 15 N | ≥ 30 N | ≥ 35 N | ≥ 40 N | ☰ | / |
| Adhesion after bending | ≤ 1,5T | ≤ 1T | ≤ 1T | ≤ 1T | ≤ 1T | ≤ 1T | ≤ 1T | ☰ | ≤ 2T |
| Crack formation during bending | ≤ 4T | ≤ 3T | ≤ 3T | ≤ 2T | ≤ 3T | ≤ 2T | ≤ 1,5T | ☰ | |
| Temperature resistance | - 20 to + 80 °C | - 20 to + 80 °C | - 20 to + 110 °C | - 20 to + 80 °C | - 20 to + 80 °C | - 20 to + 80 °C | - 20 to + 80 °C | ☰ | |
| Gloss level | Approx. 30 | 15–60 | 15–40 | Approx. 2 | Approx. 20 | Approx. 20 | 30–50 | ☰ | Approx. 40 |

☰ upon request

* only applies to selected standard colors



- Protective film**
 Protective film of 120 µm available upon request
- Cover coat**
 Thickness of layer depends on colofer® product
- Primer**
 Chromate-free primer since 1998
- Pre-treatment**
 Chromate-free pre-treatment since 1998
- Protective metallic coating**
ZM coatings: 70, 90, 120 g/m²
Z coatings: 100–275 g/m²
 Others upon request
- Substrate**
 All conventional steel grades
Thicknesses: 0.45–2.50 mm
Widths: 900–1,730 mm
 Others upon request
- colofer® reverse**
 Comes standard with a 10 µm bottom-side coating.
 Also available with a top-side coating on the bottom side upon request.

More than just a normal guarantee – the colofer® guarantee

colofer® has been an **ECO-Pioneer** since 1998 and we have acquired more in-depth manufacturing knowledge and product expertise in the field of chromium- and chromate-free coating technologies than any other steelmaker. Building on our vast experience, we can offer our customers very long guarantee periods (up to 40 years), even under the harshest conditions (RC 5).

We offer the following guarantee periods:



The colofer® guarantee consists of the following three elements: appearance guarantee, guarantee against rust perforation, adhesion guarantee.

Automatic guarantee

Our customers benefit from extensive guarantees – uncomplicated, transparent and without registration.



Special guarantee

We also offer guarantees for applications in particularly demanding environments such as altitudes above 2,100 meters, coastal regions (C5-M) and industrial environments (C5-I). Upon registration, we grant special guarantees on selected products for applications in such critical environments and additional services that are not covered by the automatic guarantee.

Note: You will find more detailed information on colofer® guarantees in the colofer® guarantee provisions at www.voestalpine.com/colofer

| Areas of application | | colofer® classic | colofer® uv | colofer® matt | colofer® robust | colofer® robust rain | colofer® plus | colofer® vario | |
|--------------------------------------|-------------------------------|------------------|-------------|---------------|-----------------|----------------------|---------------|----------------|---|
| | | 20 | 20 | 20 | 20 | ⊗ | 40 | ☰ | |
| | | 18 | 18 | 18 | 18 | ⊗ | 35 | ☰ | |
| | | ⊗ | ⊗ | ⊗ | 15 | 18 | ⊗ | ⊗ | |
| | | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | | | |
| Atmospheres and corrosivity category | Corrosion resistance category | | | | | | | | |
| | C2 | | 20 | 20 | 20 | 20 | 18 | 40 | ☰ |
| | C3 | | 15 | 15 | 15 | 15 | 12 | 25 | ☰ |
| | C4 | | ⊗ | ⊗ | ⊗ | ⊗ | 10 | 15 | ☰ |
| | C5-M C5-I | | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | ⊗ | |

Guarantee periods depending on altitude

| Altitude | UV resistance | colofer® classic | colofer® uv | colofer® matt | colofer® robust | colofer® robust rain | colofer® plus | colofer® vario |
|----------|---------------|------------------|-------------|---------------|-----------------|----------------------|---------------|----------------|
| | Up to 900 m | | 100 % | 100 % | 100 % | 100 % | 100 % | 100 % |
| | 900–1,300 m | | ⊗ | 90 % | 90 % | 90 % | 90 % | 90 % |
| | 1,300–1,700 m | | ⊗ | 70 % | 70 % | 70 % | 70 % | 70 % |
| | 1,700–2,100 m | | ⊗ | 50 % | 50 % | 50 % | 50 % | 50 % |
| | Above 2,100 m | | ⊗ | ☰ | ☰ | ☰ | ☰ | |

☰ upon request

* only applies to selected standard colors

guarantee periods rounded to whole years



More than just environmentally compatible The ECO-Pioneer

colofer® is a true pioneer when it comes to protecting the environment and employee health and safety. Already in 1998, voestalpine developed an environmentally compatible method for the production of colofer® by completely eliminating chromium and chromate from the process without compromising the excellent product performance and the length of guarantee periods.

voestalpine operates the cleanest and most environmentally compatible steelmaking plant in Europe and more than lives up to its reputation as an environmental pioneer.

Why is the letter **f** in the colofer® logo green?

Most environmentally compatible steelmaking plant

Active environmental protection is firmly anchored in our company philosophy. At least on a European scale, the voestalpine Group is the benchmark with regard to environmental parameters such as emissions and resource efficiency. voestalpine continually strives to improve energy efficiency in production processes and to keep up with technological developments, in order to achieve the corresponding CO₂ reduction effect.

Environmentally compatible coil coating line

Each year, the colofer® coil coating line is among the best with respect to environmental parameters such as CO₂ emissions, water treatment and energy consumption in the annual benchmarking analysis carried out by the European Coil Coating Association (roughly 90% of all companies in the industry and more than 50 coil coating lines are included in this survey).

Top performance

You don't have to choose between environmental protection and product performance – colofer® excels in both areas. Applications in RC 5 environments (coastal regions, industrial atmospheres) and guarantee periods of up to 40 years prove our point. We have progressed far along the learning curve, and building on our vast experience, we are already working today on solutions for the requirements of tomorrow.





More than just quality High quality made in Austria

High-tech steel strips produced by voestalpine and paints from renowned European manufacturers are the basis for the consistently high level of quality that is characteristic of colofer®. Thanks to our integrated steel mill at the Linz location, we always have full control of all value-adding process steps involved. colofer® is produced in a single facility using high-precision measuring methods. As a result, our customers benefit from consistently high quality and from products that strictly comply with the agreed specifications.

What's the secret behind the excellent quality of colofer®?

Best pre-material

High-tech steel strips produced by voestalpine and paints from renowned European manufacturers are the basis for the consistently high level of quality that is characteristic of colofer®. Thanks to our integrated steel mill at the Linz location, we always have full control of all value-adding process steps involved, from iron ore to paint finish.

Consistent top quality

All product properties (e.g., color, gloss, hardness, flexibility) are substantially influenced by the production process. Our modern equipment and high-precision measurement methods ensure the best quality from the first to last meter. colofer® is produced in a single facility at the Linz location. As a result, our customers benefit from consistently high quality and from products that strictly comply with the agreed specifications.

Tested quality and continuous further development

colofer® is exposed in the field at different locations worldwide and undergoes extensive testing procedures at regular intervals. The more extreme the conditions, the more it shows that our aspiration to provide the best quality pays off. On top of this, our scientists continuously work on the further development of our products.



Made in Austria





More than just products colofer® Service

We consider services to be part of the product itself, which is why we also strive for perfection in our services. Learn more about our colofer® services.

What does colofer® Service entail?



colofer® technical support

Do you have any questions regarding the proper adjustment of your production lines? Do you want assistance in selecting the right product? Do you need quick support in the event of problems? Our large pool of technical experts will be happy to assist you in all matters.



colofer® colorservice

Whether it be RAL, NCS, Pantone color matching systems or corporate identity guidelines, we offer a virtually unlimited color selection. We will be happy to reproduce any color on the basis of customer samples. Thanks to our high-precision measurement methods and detailed process knowledge, we can guarantee an exact match in colors.



colofer® coilsplitting

Do you want to have more than one color per coil? No problem! With this service you can specify up to three colors per coil.



colofer® ROL

With colofer® reduced order lead time, you can check the current orders on hand. Furthermore, you can specify the exact sheet thickness and color until 4 weeks prior to delivery. This gives you more flexibility in the planning of your project.



colofer® inside

Do you need help in the marketing of colofer® or certain colofer® products? Are you interested in a training? We would be happy to assist you.



voestalpine Steel & Service Center

We offer high-precision slit strips and cut sheets. Thanks to our network of Steel Service Centers in Europe, with locations in Linz (Austria, headquarters), Tychy (Poland), Giurgiu (Romania), Cittadella, Vicenza and Conegliano (Italy), we can provide our services close to the customer.

If you're reading this, your successful future has already begun.

Together with us, you are always one step ahead because we offer more than optimized products made of high-quality material.

- If you are looking for customized solutions, we will be pleased to work with you on the creation of new products and services.
- If you are looking for new ideas on materials, technologies and services, we want to help you find them.
- If you are looking for a fair and reliable partner, you are at the right place. We know that we can only be successful together with our customers when they benefit as much as we do from our partnership.
- Our customers take advantage of the most widely used technology: Two thirds of the steel produced worldwide is made using the LD process, and we're rather proud of that.

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