



ORGANIC-COATED STEEL STRIP colofer®

Technical terms of delivery
1 February 2025

These general terms apply to all organic-coated steel strip supplied by companies in the voestalpine Steel Division. Please use the following link to find a list of the companies affiliated with the Steel Division:

www.voestalpine.com/stahl/en/Companies

The names of companies in the voestalpine Steel Division are referred to simply as **voestalpine** in this document.

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INTRODUCTION

voestalpine operates one of Europe's modern steelmaking facilities in Linz. Each of the modern lines required for the production of high-quality steel strip is located next to related facilities and is highly integrated into the works.

Our goal is to innovate and go beyond standard steels, to continually offer high-quality products. Modern manufacturing technologies, continuous quality control systems as well as intense research and development all result in excellent product qualities.

These technical terms of delivery provide information on the ordering and processing of **organic coated (colofer®) steel strip**. Please direct any of your questions to your responsible sales personnel or technical specialist at voestalpine.

QUALITY MANAGEMENT

voestalpine is a quality leader in a challenging market environment, and it has become the company philosophy to meet the justified expectations and requirements of both the market and the customer with respect to every possible aspect of quality. Comprehensive quality management is a central component of the company strategy. In addition to this comprehensive quality management system, production monitoring using the modern testing systems is also a necessity. These systems are inspected on a regular basis by external and independent agencies.

COMPREHENSIVE QUALITY MANAGEMENT

The voestalpine companies meet the highest standards of quality management and are certified pursuant to Lloyd's Register QA Ltd./U.K. as well as **ISO 9001** and **ISO 16949**.

This has been confirmed by numerous customer awards presented for best quality performance. Focus has been continually on this pursued path as well as on consistent implementation of all quality standards.

STATE-OF-THE-ART TESTING TECHNIQUES

voestalpine uses the modern testing techniques and methods, laboratory information and management systems equipped with state-of-the-art technologies. The technical expertise of our testing and inspection laboratories is certified in accordance with international standards, e.g. **ISO/IEC 17025** and **ISO/IEC 17020**, and is accredited by Austrian national standards.

PRODUCT OVERVIEW

colofer® is a composite material that consists of a metallic substrate material and an organic coating.

MANUFACTURING PROCESSES

The substrate entering the coating mill is cleaned in a continuous process, chemically pretreated in an environmentally friendly manner (without chromates) and is bake-coated with one, two or several layers depending on the requirements of the customer. A removable hot-laminated protective film can be applied to the enameled surface on the top side. In an additional work step, an adhesive film can also be applied downstream from the coating line.

SUBSTRATES

colofer® is available with the following substrates:

- » Hot-dip galvanized steel strip Z or ZM
- » Cold-rolled steel strip (upon request)
- » Electrogalvanized steel strip (upon request)

Please find more detailed information about the mechanical and technological properties of the desired steel grade, the manufactured dimensions (limit curves) and the supplied zinc or zinc-magnesium coatings in the respective technical terms of delivery, or use the following link to access the product information portal: <https://eva-steel.voestalpine.com/app/va-pds/home>

It is important to note that the mechanical and technological properties of the base material can fluctuate as a result of the coil coating process.

ORGANIC COATING

The functional properties of colofer®, such as adhesion, formability, hardness, resistance to weather conditions, corrosion resistance, temperature stress, foamability, etc., must be taken into account during processing and use. colofer® is available in several different color shades, degrees of gloss and surface qualities. Depending on the intended use, different products are suitable for outdoor or indoor applications. Any processing of the colofer® product delivered by voestalpine must be carried out at room temperature and within six months of the agreed delivery date. Otherwise there can be no guaranty for relevant properties.

INFLUENCE OF ENVIRONMENTAL CONDITIONS ON colofer® PRODUCT SELECTION

Varying environmental conditions lead to different types of stress and therefore play an important role in the selection of the most suitable colofer® product. Depending on the atmosphere, geographical location and altitude, materials are exposed to different degrees of stress.

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 latitude north (recommended UV resistance class: RUV 3)



Locations south of the 37th latitude north (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).










































colofer®-BUILDING – THE BEST CHOICE FOR YOUR APPLICATION




Atmospheres and corrosivity category	Corrosion resistance category	colofer® plus 50	colofer® plus 65	colofer® matt rough / extra rough	colofer® matt fine / ultra fine	colofer® robust 35	colofer® classic 25	colofer® classic 35	colofer® uv 25	colofer® vario metallic	colofer® vario iridescent	colofer® vario design
 C2	RC2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 C3	RC3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 C4	RC4	✓	✓	✗	✗	✓	✗	✓	✗	✓	✓	✓
 C5	RC5	☰	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗
	RC5+	☰	☰	✗	✗	✗	✗	✗	✗	✗	✗	✗
Geographic location	UV resistance	colofer® plus 50	colofer® plus 65	colofer® matt rough / extra rough	colofer® matt fine / ultra fine	colofer® robust 35	colofer® classic 25	colofer® classic 35	colofer® uv 25	colofer® vario metallic	colofer® vario iridescent	colofer® vario design
 RUV3	RUV3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 RUV4	RUV4	✓	✓	✓*	✓*	✓	✗	✗	✓	✗	✓	✓*
	RUV5	✗	✓*	✗	✗	✗	✗	✗	✓*	✗	✗	✗
Altitude	UV resistance	colofer® plus 50	colofer® plus 65	colofer® matt rough / extra rough	colofer® matt fine / ultra fine	colofer® robust 35	colofer® classic 25	colofer® classic 35	colofer® uv 25	colofer® vario metallic	colofer® vario iridescent	colofer® vario design
 < 900	RUV3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
 > 900	RUV4	✓	✓	✓*	✓*	✓	✗	✗	✓	✗	✓	✓*
	RUV5	✗	✓*	✗	✗	✗	✗	✗	✓*	✗	✗	✗

☰ upon request ✓ recommended ✗ not recommended

* applies exclusively to selected standard colors

colofer®-HVAC – THE BEST CHOICE FOR YOUR APPLICATION

Atmospheres and corrosivity category	Corrosion resistance category	colofer® HVAC premium outdoor	colofer® HVAC design outdoor	colofer® HVAC classic outdoor
 C2	RC2			
 C3	RC3			
 C4	RC4			
 C5	RC5			
	RC5+			
Geographic location	UV resistance	colofer® HVAC premium outdoor	colofer® HVAC design outdoor	colofer® HVAC classic outdoor
	RUV3			
	RUV4			
	RUV5			
Altitude	UV resistance	colofer® HVAC premium outdoor	colofer® HVAC design outdoor	colofer® HVAC classic outdoor
	RUV3			
	RUV4			
	RUV5			

 upon request  recommended  not recommended

colofer® PRODUCT PROPERTIES IN DETAIL

The properties shown below are based on **EN 10169**. This also includes tolerance limits for coating thicknesses, gloss and classification of the coating systems pursuant to the RC, RUV and CPI classes. Properties are generally tested in accordance with the standard method described in **EN 13523**. Property details for each colofer® product and information on testing methods are found in the respective product data sheets.

colofer®-BUILDING – OVERVIEW OF THE MOST IMPORTANT PROPERTIES, PART 1

The following table summarizes the most important properties of all colofer® BUILDING products. Please do not hesitate to contact your voestalpine specialist for additional information.

Property	Criteria	colofer® plus 50	colofer® plus 65	colofer® matt rough / extra rough	colofer® matt fine / ultra fine	colofer® robust 35	colofer® classic 25	colofer® classic 35
Coating thickness approx.	EN 13523-1	50 µm	65 µm	40 µm	35 µm	35 µm	25 µm	35 µm
Number of coating layers		2	3	2	2	2	2	2
Color	EN 13523-3	upon agreement	upon agreement	upon agreement	upon agreement	upon agreement	upon agreement	upon agreement
Gloss (60°)	EN 13523-2	3 – 50 ¹⁾	3 – 50	2 – 5	2 – 5	20	10 – 95	10 – 95
Adhesion after cupping	EN 13523-6	6 mm Gt0B	6 mm Gt0B	6 mm Gt0B	6 mm Gt0B	6 mm Gt0B	6 mm Gt0B	6 mm Gt0B
Adhesion after bending	EN 13523-7 free of cracks	≤ 1 T	≤ 1 T	≤ 1 T	≤ 1 T	≤ 1 T	≤ 1 T	≤ 1 T
Crack formation after bending	EN 13523-7 free of cracks	≤ 1.5 T	≤ 1.5 T	≤ 3 T	≤ 3 T	≤ 3 T	≤ 3 T	≤ 3 T
Scratch resistance	Based on EN 13523-12	≥ 40 N (Matt: ≥ 30 N)	≥ 40 N	≥ 15 N	≥ 15 N	≥ 35 N	≥ 20 N	≥ 25 N
Temperature resistance (during use) ²⁾		+100 °C	+100 °C	+80 °C	+80 °C	+80 °C	+80 °C	+80 °C
Resistance to humidity » Continuous humidity test	EN 13523-25 No formation of blisters on surface after:	1000 h	1500 h	750 h	750 h	750 h	750 h	750 h
Corrosion resistance » Salt spray test	EN 13523-8 Average creep-age 2 mm max., no formation of blisters on surface	500 h	750 h	360 h	360 h	500 h	360 h	500 h
Corrosivity category	DIN 55634: 2018	C3 (on ZM120) / C5 (on Z275)	C3 (on ZM120) / C5 (on Z275)	C3 (on Z275)	C3 (on Z275 or ZM120)	C3 (on Z275 or ZM120)	C3 (on Z275 or ZM120)	C3 (on Z275 or ZM120)
RC category	EN 10169	RC5 on Z275	RC5+ (being certified) on Z275	RC3 on Z275	RC3 on Z275 or ZM120	RC3 on Z275 or ZM120 / RC4 on Z275	RC3 on Z275 or ZM120	RC3 on Z275 or ZM120 / RC4 on Z275
CPI category	EN 10169	CPI4	CPI4	CPI4	CPI4	CPI4	CPI4	CPI4
UV resistance category ³⁾	EN 10169	RUV4	RUV 4, RUV 5 ⁴⁾	RUV 3, RUV 4 ⁴⁾	RUV 3, RUV 4 ⁴⁾	RUV 4	RUV 3	RUV 3
Surface appearance		smooth, structured or matt	structured	matt rough, matt extra rough	matt fine, matt ultra fine	structured	smooth	smooth
Classification according to fire behavior	EN 13501-1	A1 ⁵⁾	upon request	A1 ⁵⁾	A1 ⁵⁾	A1 ⁵⁾	A1	A1 ⁵⁾

¹⁾ Other gloss upon request

²⁾ No delamination on even surfaces pursuant to the applicable colofer® guaranty for coating adhesion.

Color shades will change as a result of long-term stress at high temperature.

³⁾ UV resistance category depends heavily on color. The respective RUV class is achievable only for colors noted in table „Overview of color shades“ in the Technical Terms of Delivery for colofer®. (with the exception of special regulations on colofer® matt fine, matt rough and matt extra rough).

Additional colors upon request.

⁴⁾ Only applies to selected standard colors.

⁵⁾ Exclusively in combination with colofer® REVERSE as a backing coat.

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colofer®-BUILDING – OVERVIEW OF THE MOST IMPORTANT PROPERTIES, PART 2

The following table summarizes the most important properties of all colofer® BUILDING products. Please do not hesitate to contact your voestalpine specialist for additional information.

Property	Criteria	colofer® uv 25	colofer® vario metallic	colofer® vario iridescent	colofer® vario design	colofer® indoor 15	colofer® reverse
Coating thickness approx.	EN 13523-1	25 µm	35 – 40 µm	30 – 40 µm	35 – 40 µm	15 – 17 µm	10 – 15 µm
Number of coating layers		2	3	3	4	2	1
Color	EN 13523-3	upon agreement	upon agreement	upon agreement	upon agreement	upon agreement	approx. RAL 9002
Gloss (60°)	EN 13523-2	5 – 40	n. V.	n. V.	n. V.	15 – 80	40 ¹⁾
Adhesion after cupping	EN 13523-6	6 mm Gt0B	6 mm Gt0B	6 mm Gt0B	6 mm Gt0B	6 mm Gt0B	-
Adhesion after bending	EN 13523-7 free of cracks	≤ 1 T	≤ 1 T	≤ 1 T	≤ 1 T	≤ 1.5 T	≤ 2 T
Crack formation after bending	EN 13523-7 free of cracks	≤ 3 T	≤ 3 T	≤ 3 T	≤ 3 T	≤ 4 T	-
Scratch resistance	Based on EN 13523-12	≥ 20 N	≥ 20 N	≥ 20 N	≥ 25 N	≥ 15 N	-
Temperature resistance (during use) ²⁾		+110 °C	+80 °C	+110 °C	+80 °C	+80 °C	+80 °C
Resistance to humidity » Continuous humidity test	EN 13523-25 No formation of blisters on surface after:	750 h	750 h	750 h	750 h	500 h	500 h
Corrosion resistance » Salt spray test	EN 13523-8 Average creep-age 2 mm max., no formation of blisters on surface	360 h	500 h	500 h	500 h	-	-
Corrosivity category	DIN 55634: 2018	C3 (on Z275 or ZM120)	C3 (on Z275 or ZM120)	C3 (on Z275 or ZM120)	C3 (on Z275 or ZM120)	C2 (on Z275 or ZM120)	-
RC category	EN 10169	RC3 on Z275 or ZM120	RC3 on Z275 or ZM120 / RC4 on Z275	RC3 on Z275 or ZM120 / RC4 on Z275	RC3 on Z275 or ZM120 / RC4 on Z275	-	-
CPI category	EN 10169	CPI4	CPI4	CPI4	CPI4	CPI4	CPI 2 on Z275 or ZM120, otherwise CPI 1
UV resistance category ³⁾	EN 10169	RUV4/ RUV5 ⁴⁾	RUV 3	RUV 4	RUV 3, RUV 4 ⁴⁾	-	-
Surface appearance		smooth	smooth	smooth	smooth, structured or matt	smooth	smooth
Classification according to fire behavior	EN 13501-1	A1	A1 ⁵⁾	A1 ⁵⁾	A1 ⁵⁾	A1	A1

¹⁾ Other gloss upon request

²⁾ No delamination on even surfaces pursuant to the applicable colofer® guaranty for coating adhesion.

Color shades will change as a result of long-term stress at high temperature.

³⁾ UV resistance category depends heavily on color. The respective RUV class is achievable only for colors noted in table „Overview of color shades“ in the Technical Terms of Delivery of colofer®. (with the exception of special regulations on colofer® matt fine, matt rough and matt extra rough).

Additional colors upon request.

⁴⁾ Only applies to selected standard colors.

⁵⁾ Exclusively in combination with colofer® REVERSE as a backing coat.

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colofer®-HVAC – OVERVIEW OF THE MOST IMPORTANT PROPERTIES

The following table summarizes the most important properties of all colofer® HVAC products. Please do not hesitate to contact your voestalpine specialist for additional information.

Property	Criteria	colofer® HVAC premium outdoor	colofer® HVAC design outdoor	colofer® HVAC classic outdoor	colofer® HVAC classic indoor	colofer® HVAC design indoor	colofer® reverse
Coating thickness approx.	EN 13523-1	50 µm	35 – 40µm	35 µm	25 µm	35 µm	10 – 15µm
Number of coating layers		2	4	2	2	3 – 4	1
Color	EN 13523-3	upon agreement	upon agreement	upon agreement	upon agreement	upon agreement	approx. RAL 9002
Gloss (60°)	EN 13523-2	3 – 50 ¹⁾	n. V.	10 – 95	10 – 95	n. V.	40 ¹⁾
Adhesion after cupping	EN 13523-6	6 mm Gt0B	6 mm Gt0B	6 mm Gt0B	6 mm Gt0B	6 mm Gt0B	-
Adhesion after bending	EN 13523-7 free of cracks	≤ 1 T	≤ 1 T	≤ 1 T	≤ 1 T	≤ 1 T	≤ 2 T
Crack formation after bending	EN 13523-7 free of cracks	≤ 1.5 T	≤ 3 T	≤ 3 T	≤ 3 T	≤ 3 T	-
Scratch resistance	Based on EN 13523-12	≥ 40 N (Matt: ≥ 30 N)	≥ 25 N	≥ 25 N	≥ 20 N	≥ 20 N	-
Temperature resistance (during use) ²⁾		+100 °C	+80 °C	+80 °C	+80 °C	+80 °C	+80 °C
Resistance to humidity » Continuous humidity test	EN 13523-25 No formation of blisters on surface after:	1000 h	750 h	750 h	750 h	750 h	500 h
Corrosion resistance » Salt spray test	EN 13523-8 Average creep-age 2 mm max., no formation of blisters on surface	500 h	500 h	500 h	360 h	360 h	-
Corrosivity category	DIN 55634: 2018	C3 (on ZM120) / C5 (on Z275)	C3 (on Z275 or ZM120)	C3 (on Z275 or ZM120)	-	-	-
RC category	EN 10169	RC5 on Z275	RC3 on Z275 or ZM120	RC3 on Z275 or ZM120 / RC4 on Z275	-	-	-
CPI category	EN 10169	CPI4	CPI4	CPI4	CPI4	CPI4	CPI 2 on Z275 or ZM120, otherwise CPI 1
UV resistance category ³⁾	EN 10169	RUV 4	RUV 3	RUV 3, RUV 4 ⁴⁾	-	-	-
Surface appearance		smooth, structured or matt	smooth, structured or matt	smooth or structured	smooth or structured	smooth, structured or matt	smooth
Classification according to fire behavior	EN 13501-1	A1 ⁵⁾	A1 ⁵⁾	A1 ⁵⁾	A1	A1 ⁵⁾	A1

¹⁾ Other gloss upon request

²⁾ No delamination on even surfaces pursuant to the applicable colofer® guaranty for coating adhesion.

Color shades will change as a result of long-term stress at high temperature.

³⁾ UV resistance category depends heavily on color. The respective RUV class is achievable only for colors noted in table „Overview of color shades“ in the Technical Terms of Delivery for colofer®. (with the exception of special regulations on colofer® matt fine, matt rough and matt extra rough). Additional colors upon request.

⁴⁾ Only applies to selected standard colors.

⁵⁾ Exclusively in combination with colofer® REVERSE as a backing coat.

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PROTECTIVE FILM

As an optional service, most colofer® materials can be ordered with a protective film that protects the surface of the product during transport, storage and processing at the customer until the product is installed. The option of film lamination is dependent on the selected coating and is subject to agreement with voestalpine prior to the order.

SUPPLIED WITH HOT-LAMINATED POLYETHYLENE PROTECTIVE FILM

Thickness roughly 120 µm, full surface or with one or two-sided edge relief possible (detailed clarification of any exemption prior to the order). The maximum coil mass covered with a protective film is 10 kg/mm of strip width.

The thicker hot-laminated protective film is preferred in places where a higher level of protection is required. This film has the advantage that no adhesive remains on the coated surface during UV stress after the protective film has been removed. The coating must be adjusted for the application of protective film, which is not possible for all coating systems.

SUPPLIED WITH ADHESIVE FILM

The adhesive film is available in different thicknesses from our Steel Service Centers in Poland and Romania (upon request).

The entire coating layer structure and film must be adjusted to meet specific customer requirements. Environmental conditions such as temperature and UV stress, etc., influence the adhesiveness of the protective film. For this reason, colofer® products must be processed/installed within six months following the designated delivery date. The protective film has to be removed within this time frame.

INFLUENCE OF COLOR ON colofer® PRODUCT SELECTION

As colofer® products must fulfil certain resistance criteria depending on their area of application, the use of coating materials is subject to certain restrictions.

As a result, not all colour shades can be used in the same way for outdoor applications even if a suitable colofer® product has been selected for the respective application.

The color overview in the Appendix indicates which RAL colors can be used for which RUV classes indicated in the data sheets. A binding commitment cannot be assumed based on any of the data contained in the table. Deviations are possible in individual cases. This discrepancy is explained by the differing UV resistance of various pigments, which might be counterproductive to the achievability of the desired colors.

Achievable RUV classes for each coating can be determined upon request in collaboration with a voestalpine coating expert.

Depending on the color shade and specific requirements of the UV resistance class, the achievable color may differ substantially from the RAL color chart. For this reason, binding agreements made between the customer and voestalpine with respect to color are always based on coated samples and are referenced by a system key number.

New developments or changes to legally applicable standards (such as prohibited pigments) may also lead to changes in the future and make it impossible to achieve certain RAL colors.

ORDER QUANTITIES AND MANUFACTURED UNITS

Ordered thickness and respective tolerances refer to the substrate material without consideration of the organic coating.

colofer® AS WIDE STRIP (COIL)

- » The minimum order quantity per line item is one coil production unit (depending on the steel grade, between approx. 20 kg/mm and approx. 21 kg/mm strip width) and/or its multiple.
- » It is possible to subdivide these coil units into smaller coils.
- » The target is fulfillment of customer orders with respect to the requested coil weight. It is permissible to fall below the ordered coil weight by up to a maximum of 30%.
- » The weight tolerance of line items whose ordered weight exceeds 100 tons is plus/minus a coil production unit typical for this item.
- » Additional project requirements must be agreed upon separately, e.g. for required minimum volumes of special colofer® products.

colofer® AS SLIT STRIP OR CUT SHEETS

- » The minimum order quantity per line item is one coil production unit, which ranges roughly between approx. 20 kg/mm and approx. 21 kg/mm strip width and/or its multiple, depending on the steel grade.
- » This coil production unit can be subdivided.
 - » Possible in small coils for slit strip, e.g. 20, 10, 5 kg/mm
 - » Cut sheets can be divided into units ≤ 6 tons
- » Overdelivery and underdelivery is permitted up to $\pm 10\%$.

WEIGHTS

- » The maximum weight per steel coil is 35 tons.
- » The maximum weight per package of cut sheets is 6 tons.

AVAILABLE DIMENSIONS

colofer® is supplied based on European standards such as **EN 10169** and **EN 13523**. Other international recommendations, such as the European Coil Coating Association (ECCA) in Brussels and the National Coil Coaters Association (NCCA) in Philadelphia, USA, may apply upon request. Limited tolerances and other parameters not contained in the standard are subject to special agreement between the customer and voestalpine and must be included in written form in the order. A symmetric tolerance zone position is a prerequisite for the ordered thickness.

Products made of colofer® are supplied in the following forms:

- » Wide strip (coil), with mill edge or cut edge
- » Longitudinally slit strips with cut edges
- » Sheets with cut edges

colofer® AS WIDE STRIP (COIL)

Product variant	Thickness [mm]	Width max. [mm]	Outer diameter max. [mm]	Inner diameter [mm]
colofer®	0.40–2.50	900–1730	2000	500/600*

Available combinations of widths and thicknesses vary depending on the steel grade.
* Indicated references are standard values.

colofer® STEEL IN SLIT STRIPS

Product variant	Thickness [mm]	Strip width max. [mm]	Outer diameter max. [mm]	Inner diameter [mm]
colofer®	0.40–2.50	10–1730	700–2200	500/600*

Available combinations of widths and thicknesses vary depending on the steel grade.
* Indicated references are standard values.

colofer® AS CUT-TO-LENGTH SHEETS

Product variant	Thickness [mm]	Width max. [mm]	Length max. [mm]	Package weight max. [t]
colofer®	0.40–2.50	210–1730	200–6700	6

Available combinations of widths and thicknesses vary depending on the steel grade.

INSPECTIONS

voestalpine is committed to supporting customers in submitting applications.
The following permits and certificates are generally available for all colofer® products:

- » Certified according to ISO 9001
- » Suitability of corrosion protection
- » Fire behavior
- » Certificate of equivalence
- » Environmental Product Declaration (EPD)

colofer® products manufactured in larger quantities are inspected annually by an independent institute with respect to their corrosion protection (pursuant to DIN 55634) and are classified with respect to their fire behavior (EN 13501-1). The achieved corrosion-protection and fire-behavior classes are found in the respective product data sheets.

LABELING

Standard labeling consists of a tag per package unit and indicates the following:

- » Supplier
- » Recipient
- » Order number
- » Strip number (identification number)
- » Heat number
- » Part or package number
- » Steel grade
- » Dimension
- » Number of units
- » Weight
- » Date of production
- » Test samples are labeled as such

Additional data or marking directly on the material (coil, package or bundle marking) is subject to special agreement.

ADDITIONAL INFORMATION

STORAGE AND TRANSPORT

colofer® must be protected from damage, contamination, moisture (from rain, splashing, ground-water and condensation) during storage and transportation. In order to guarantee optimum protection during transport, packing types must be selected according to specific transport requirements and the destination of the shipment. The use of a cardboard sleeve to protect the eye of the coil is available upon request.

In order to guarantee optimum protection during storage, support bases must be made of plastic, steel or wood. Steel bases must be clad with rubber or plastic. The design of the support base must correspond to the coil geometry. Coils must not be stacked unless damage (indentations) to the material is excluded without any doubt.

Protective films do not provide sufficient protection against moisture and dampness and are only intended to protect the painted surface against mechanical damage during processing, storage and transport. Protective films made of polyethylene do not provide any resistance to water diffusion. colofer® material, even when covered with a protective film, must not be exposed to moisture. The protective film must be immediately removed from any coil that comes into contact with moisture so the coil can dry and be processed as quickly as possible.

MARKING

Standard deliveries are not marked. Supply of water-based or insoluble marking is possible upon request. Deliveries not marked by reason of a defective marking system shall not be subject to any claim.

PROCESSING OF CLAIMS AND COMPLAINTS

As a result of a lack of sorting possibilities, defects in up to 2% of coil products and 1% of cut sheets with respect to the order volume per line item are included in the price and shall not constitute a reason for any claim. Individual coils (cut sheets) may contain a higher percentage of defects. This refers to the top surface coating. Minor coating defects on the reverse side, even when both sides are coated, cannot be referenced to determine the percentage of defects and shall not be subject to any claim.

In order to ensure their validity, claims must be submitted within five workdays after the subject of the claim is discovered.

Apparent transport damage must be noted directly on the shipping note at the time the material is accepted during unloading. This damage must be documented with photographs and reported within 24 hours to the sales department by email.

If an immediate response is required by voestalpine (danger of delay, necessity of immediate commercial decision or approval), it will be additionally necessary to establish telephone contact. As a general rule, voestalpine must be given the opportunity to repair the material or make a replacement delivery without incurring any consequential costs. All related measures must be coordinated with voestalpine.

Precise documentation of any damage is required and must include a description of the defect, photographs or samples and is required for technical processing of the claim.

The following data will be required for any processing of claims:

- » Customer, recipient
- » Corresponding coil numbers, cut-sheet batch numbers and related rolling order numbers (delivery notes/coil stickers)
- » Weight or surface area of affected material (canceled coils, stock list)
- » Level of urgency
- » Customer request (amount of damage, replacement delivery, reimbursement of additional costs, depreciation, action plan, etc.)
- » Problem description (including photo documentation whenever possible)
- » Place of installation (address)
- » translated original customer letter of claim
- » Contact person at the customer, telephone number

voestalpine implements suitable cause analysis methods. Should the customer request that more expensive methods be used, voestalpine reserves the right to invoice the customer for additional analysis expenses to the extent that the result of the analysis confirms that voestalpine Stahl GmbH is not accountable.

GENERAL TERMS OF SALE

To the extent that individual technical properties and specifications are not specifically defined by the customer, e.g. by means of meaningful measurements and limit values, such properties and specifications shall merely serve as technical guidelines and non-binding target values unless otherwise agreed. voestalpine shall not grant any guaranty nor be held liable for properties and/or specifications other than those explicitly agreed individually with the customer. This also applies to the suitability and applicability of hot-dip galvanized steel strip for certain applications as well as to the further processing of materials. All application risks and suitability risks are borne by the customer.

Please use the following link to find the applicable **general terms of sale for goods and services of the voestalpine Steel Division**: www.voestalpine.com/stahl/en/The-Steel-Division/General-Terms-of-Sale

OVERVIEW OF COLOR SHADES

List of colors that comply with the UV resistance parameters indicated in the data sheets (exceptions possible)

RAL color	Color name	RAL color	Color name	RAL color	Color name
1000	green beige	5013	cobalt blue	7015	slate gray
1001	beige	5014	pigeon blue	7016	anthracite gray
1002	sand yellow	5015	sky blue	7021	black gray
1006	maize yellow	5017	traffic blue	7022	umbra gray
1007	daffodil yellow	5018	turquoise blue	7023	concrete gray
1011	brown beige	5019	capri blue	7024	graphite gray
1012	lemon yellow	5021	water blue	7026	granite gray
1013	pearl white	5023	distant blue	7030	stone gray
1014	ivory	5024	pastel blue	7031	blue gray
1015	bright ivory	6000	patina green	7032	pebble gray
1016	sulfur yellow	6001	emerald green	7033	cement gray
1017	saffron yellow	6002	leaf green	7034	yellow gray
1019	gray beige	6003	olive green	7035	light gray
1020	olive yellow	6004	blue green	7036	platinum gray
1024	ochre yellow	6005	moss green	7037	dusty gray
1027	curry yellow	6006	gray olive	7038	agate gray
1032	broom yellow	6007	bottle green	7039	quartz gray
1033	dahlia yellow	6008	brown green	7040	window gray
1034	pastel yellow	6009	fir green	7042	traffic gray a
1037	sun yellow	6010	grass green	7043	traffic gray b
2000	yellow orange	6011	reseda green	7044	silk gray
2001	red orange	6012	black green	8000	green brown
2002	vermilion	6013	reed green	8001	ochre brown
2004	pure orange	6014	yellow olive	8002	signal brown
2010	signal orange	6015	black olive	8003	clay brown
2011	deep orange	6017	may green	8004	copper brown
2012	salmon orange	6019	pastel green	8007	fawn brown
3000	flame red	6020	chrome green	8008	olive brown
3001	signal red	6021	pale green	8011	nut brown
3002	carmine red	6022	olive drab	8012	red brown
3009	oxide red	6024	traffic green	8014	sepia brown
3012	beige red	6025	fern green	8015	chestnut brown
3013	tomato red	6028	pine green	8016	mahogany brown
3016	coral red	6029	mint green	8017	chocolate brown
3020	traffic red	6032	signal green	8019	gray brown
3022	salmon pink	6033	mint turquoise	8023	orange brown
3027	raspberry red	6034	pastel green	8024	beige brown
3031	orient red	7000	squirrel gray	8025	pale brown
4002	red violet	7001	silver gray	8028	terra brown
5000	violet blue	7002	olive gray	9001	cream white
5001	green blue	7003	moss gray	9002	gray white
5003	sapphire blue	7004	signal gray	9003	signal white
5004	black blue	7005	mouse gray	9004	signal black
5005	signal blue	7006	beige gray	9005	deep black
5007	brilliant blue	7008	khaki gray	9010	pure white
5008	gray blue	7009	green gray	9016	traffic white
5009	azure blue	7010	tarpaulin gray	9018	papyrus white
5010	gentian blue	7011	iron gray	9006	white aluminum
5011	steel blue	7012	basalt gray	9007	gray aluminum
5012	light blue	7013	brown gray		

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voestalpine
ONE STEP AHEAD.