



Material data and care instructions

COR-TEN steel

Notes on using products made of COR-TEN steel from
Richard Brink GmbH & Co. KG

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We manufacture a range of garden products from COR-TEN steel. There are two types of COR-TEN steel: COR-TEN A (*alloy with phosphorus, material no. 1.8946*) and COR-TEN B (*alloy not containing phosphorus, material no. 1.8965*). The materials essentially differ in terms of their ability to be welded and moulded. COR-TEN B is easy to weld and mould. COR-TEN A is used for products that do not need to be welded and moulded.

Our edging solutions with a material thickness of 1.5 mm are manufactured from COR-TEN A because this sheet thickness is only available in COR-TEN A. For raised beds (*material thickness of 3.0 mm*), we use COR-TEN B.

COR-TEN steel has a very high level of corrosion resistance and therefore a very long service life. Its natural rust colouring gives this steel a special aesthetic quality. A few points should be noted when using and caring for this material.

**Do you have any questions?
We will be pleased to help you!**

1. How is COR-TEN steel corrosion-resistant and are there any limitations?

COR-TEN steel is designated as weatherproof steel in Germany. After several weeks of exposure to weather, a protective layer (patina) made of firmly adhering sulphates and phosphates forms on the surface of this material. This layer permanently protects the steels from perforation corrosion. It is important to ensure that the material is not exposed to constant moisture, but rather alternating cycles of wet and dry. These conditions are generally met if the products are used in the garden, for example.

Contact corrosion may occur if the steel comes into contact with a more precious metal (*e.g. high-alloyed stainless steel, copper, tin*). If COR-TEN steel comes into contact with more base metals, such as zinc or aluminium, these base metals experience corrosion. For this reason, contact with other metals should be avoided when using these products.

2. Damaging influences on COR-TEN steel surfaces

The products are not suitable for use in permanently wet environments, as this prevents the protective corrosion-resistant patina layer from forming properly.

It is also not a good idea to use the products in areas with strong influences from the sea (*in Germany up to 500 meters from the sea*), because the high chloride content in the atmosphere damages the material.

The products should not come into direct contact with de-icing grit as the grit water can damage the surface. In general, COR-TEN steel should not be used in pedestrian areas where rust-causing particles can be transferred to the material.



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Hinweise zur Verwendung von Produkten aus Cortenstahl aus dem Hause Richard Brink GmbH & Co. KG

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3. Cleaning and caring for COR-TEN steel products

Once the patina layer is formed, COR-TEN steel is extremely low maintenance. Nevertheless, we recommend cleaning the surface regularly and checking it for any changes (*once or twice a year*).

- Do not use cleaning agents to clean the material. It is generally sufficient to lightly brush the surface in order to remove soiling.
- Never use cleaning agents containing chlorine.
- Use non-ferrous cleaning tools; never touch the surfaces of the material with non-rust-proof tools (scraper, file, etc.), ferrous sponges or non-rust-proof steel wool.
- Remove protective films early, as otherwise the film and steel surface may bond. Remove adhesive residues with spirit. Warming it up slightly makes removal easier.
- Dissolve scale and grout spots with phosphoric acid and rinse with clear water. Never use cement film remover or diluted hydrochloric acid.
- Avoid strong heat transfer to the material (*e.g. from working with an angle grinder, drilling without emulsion, or from plasma cutting, the effects of fire, etc.*)
- Do not allow sparks to touch COR-TEN steel surfaces.
- Freshly welded areas must be suitably cured.
- Ferrous particles must be removed immediately, as they can penetrate the passive layer of the COR-TEN steel and cause corrosion. Ferrite-free cleaning sponges or similar can be used for this purpose. If corrosion has already occurred, a pickling treatment may be necessary.
- Remove surface rust immediately.
- Avoid contact with salt.
- Oil and grease can be removed with organic cleaning agents. All cleaning agent residues must be removed.
- Residual paint can be removed with an alkaline or solvent-based cleaning agent. All cleaning agent residues must be removed.
- Avoid extraneous rust:
 - Work on steel and COR-TEN steel in physically separate areas.
 - Use separate tools for COR-TEN steel or ensure that tools are completely free of ferrous particles.
 - Do not use transport equipment or hoisting equipment made of steel (*forklift etc.*), or if such equipment is used, protect the COR-TEN steel products accordingly using protective covers.

**Do you have any questions?
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