USER INFORMATION



METAL

gartenmetall®
GARTENOBJEKTE & STADTMÖBEL AUS METALL

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METAL
CORTEN STEEL – HIGH-QUALITY SPECIAL STEEL

TERM

CORTEN steel, or COR-TEN steel as it is written, is referred to in Germany as 'weather-resistant structural steel'. Under the influence of the elements, a protective layer forms on the surface, which protects the component from further corrosion. The name COR-TEN steel is derived from the first syllable, COR, standing for corrosion resistance, and the second syllable, TEN, standing for tensile strength. Here at Gartenmetall®, we use the particularly high-quality S355J2W+N grade steel, material number 1.8965, which can be bent and, with the correct filler material, also welded.

Beware of 'patina-style' finishes on ordinary steel
Thank you very much for choosing a Gartenmetall® product. This guarantees that your item is made from genuine, high-quality and durable Corten steel. Items with a 'patina finish' are frequently advertised online. This is a euphemism for cheap steel, which does not form a stable protective layer and will rust through quickly when left outdoors.



As well as the short lifespan of garden features, the rusting, sharp-edged particles also pose a danger to insects, pets and, not least, people. You should therefore always be mindful of the small but crucial difference between 'patina' and 'patina finish'.

APPLICATION

Corten steel is used in a wide variety of applications: for bridge structures, façades and crash barriers. Popular examples include the crash barriers on Italian motorways. In recent years, Corten steel has also been used increasingly for metal garden features and street furniture. The characteristic patina takes on a life of its own, constantly changing in texture and colour – which is no cause for complaint. After all, it is precisely this property that makes Corten steel an ideal building material in modern garden and landscape design.

Particularly in the first few months, the surface colours often vary and only even out after up to three years. Marks, black spots and areas where rust has developed unevenly can also cause irregularities. However, after a few months of natural weathering, these will fade away.

DELIVERY CONDITION: MILL-FINISHED

This user guide is intended to explain how the complex weathering process in Corten steel works, with the recurring formation of the protective layer, and how simple household remedies can be used to accelerate the visual adjustment of the surface texture.

As a general rule, new Corten steel is likely to exhibit a variety of surface colours and shades. Weather-resistant structural steel will develop different textures and colour nuances over its entire life cycle, depending on the intensity and direction of weathering.

Delivery condition: mill-finished – Corten steel without mill scale
During the production of Corten steel sheet, a layer known as mill scale forms whilst the sheet is being rolled. This consists of a firmly adhering, blue-black layer of very hard iron oxides. The mill scale is brittle and delays the formation of the protective patina layer that is desired in Corten steel. During the first few months of weathering, the mill scale flakes off bit by bit, revealing the 'proper', bare steel surface. These are important reasons for using Corten steel without mill scale. The only problem is that steelworks only produce and supply Corten steel with mill scale.

As one of the largest processors of Corten steel for garden features and street furniture, Gartenmetall® was able to implement the 'Corten steel without mill scale' project. The result is impressive: steel producers manufacture Corten steel sheet of the highest quality, without mill scale, exclusively for Gartenmetall®. This was made possible by large purchase volumes of the high-quality special Corten steel. The flaking of mill scale is now a thing of the past. Thanks to the optimal raw materials, the quality has taken a huge leap forward – not only in terms of the surface finish, but also when it comes to bending and welding.

SUPER-ROST® PROCESS

Many clients want a rust-brown finish on their metal structures right from the installation stage. Here at Gartenmetall®, we apply a rust finish to almost all visible surfaces by hand using our tried-and-tested SUPER-ROST® process, so that clients can get an initial impression of how the metal structures will look later on. This rapid rusting process is merely the start of the 'proper' weathering that follows. Through the regular alternation between damp and dry weather conditions, a dense, firmly adhering protective patina and the characteristic noble rust surface develop over several years. This patina significantly slows down further corrosion of the steel. To enable our clients to rust untreated Corten steel surfaces themselves on site, we have developed our SUPER-ROST-PADS®:

✓ Brilliantly simple and precisely measured – no risk of overdosing

✓ cannot leak

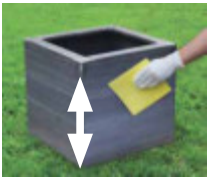
✓ easy to use

✓ The original – available exclusively from Gartenmetall®





Step 1:
Clean the surface to remove grease and dirt residues.



Step 2:
Rub in evenly in the direction of the rainwater flow.



Step 3:
Leave to work (3–12 hours).



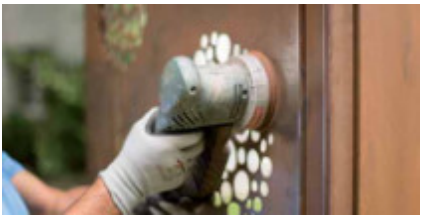
Step 4:
Rinse thoroughly with clean water after use.

Note: Please observe the safety instructions for use and the best-before date on the packaging.

CREATING A SMOOTH SURFACE

Using simple tools, you can alter the rust colour of Corten steel, accelerate the natural weathering process and remove black marks, scratches, crop circles and other irregularities. The rough surface of a standard household kitchen sponge is ideal for lightening the surface and removing dark marks.





Step 1: Remove or sand down the existing, coarse layer of rust whilst it is dry, using either the rough side of a kitchen sponge or coarse sandpaper.





Step 2: Wet thoroughly and wipe in the direction of the rainwater flow.





Step 3: You may need to repeat the process after a few days. Finally, wipe the rust-coloured surface once more with the rough side of the kitchen sponge, following the direction of the rainwater flow.

You can find a detailed user video on how to speed up the formation of a uniform surface, as well as further information, here: www.gartenmetall.de/material/cortenstahl

THE DEVELOPMENT OF THE PATINA

During the manufacture and processing of the crude steel sheets, no patina has yet formed on the surface. This only develops as a result of natural weathering conditions. The alternation between damp and dry weather is important for the formation of the protective layer. If there are areas of the surface that are not exposed to the elements, the living patina will not form there either.

The weathering and formation of the protective barrier layer on weather-resistant structural steel is a complex process. In the Central European climate, it takes at least one to three years for the chestnut-brown patina surface – familiar from photographs and so popular with building owners – to form. This process is never fully complete. Depending on seasonal and weather-related changes in weathering, the surface colour and texture change – even after the stable protective layer has fully formed. Uneven wetting from rain or the runoff of surface water also alters the surface. It is precisely this characteristic of the changing and often uneven surface that brings weather-resistant structural steel to life when used in the garden and makes it so popular with many homeowners.

However, the irregular appearance does lead to complaints from time to time. For instance, the surface colours may develop differently, particularly in the first few months, and only even out after up to three years. Marks, black spots and areas where rust has developed unevenly can also cause irregularities, which likewise gradually resolve themselves after a few months. Differences in colouration will increasingly even out as the objects are exposed to the elements. This is not a defect and therefore does not constitute grounds for a complaint.

If clients require a perfect, uniform coloured surface, Corten steel is unsuitable! In this case, we recommend using stainless steel with the 'Edelrost' colour coating.



Example of a mill-finished surface prior to weathering.



An example of rusted Corten steel in various shades.



An example of a weathered surface after more than three years.

SNAIL PROTECTION

Corten steel presents an insurmountable obstacle for snails. The reason: its rough surface deters snails; furthermore, Corten steel contains a small amount of copper, which is oxidised by the snails' slime. This produces an irritant that causes the snails to turn away. To prevent snails from burrowing underneath, the Corten steel should be embedded at least 10 cm deep in the ground.



REMOVING RUST STAINS FROM STONE

Rust-coloured deposits, caused for example by drain water, can be removed with varying degrees of success using a suitable rust remover. The effectiveness of the cleaning process depends largely on the following factors:

- Base material
- Frequency and quality of cleaning
- Suitability of the cleaning product

For light soiling, household remedies such as table salt combined with citric acid powder (=ascorbic acid) and water are suitable.

For acid-resistant floor coverings, phosphoric acid-based cleaners can be used with good results. The phosphoric acid reacts with the rust particles and converts them into iron phosphate. This has a grey tint rather than the distinctive red colour and is therefore 'invisible' on most materials.

Acid-based cleaners must not be used on concrete-bound floor coverings. Only tannin-based cleaners are likely to achieve good cleaning results. As the surface turns red-purple during treatment, it is essential to ensure the cleaner is used correctly to avoid further damage.

Note: In all cases, test the cleaner's effect on the surface using a small test area!

COMMON MISTAKES

Incorrect use of Corten steel can cause damage to the material and the adjacent natural stone. It is particularly harmful if the formation of a barrier layer is prevented by:

- Acidic contaminants on the surface (dog urine, bird droppings)
- Saline contaminants (de-icing salt)
- Persistent waterlogging (areas that are constantly in the shade and perpetually damp, water containers without an internal coating)
- Some components in fertilisers and slow-release fertilisers can have a negative effect on the stability of the barrier layer and may even prevent its formation or cause it to break down. Examples include nitrogen in the form of ammonium or nitrate. The coatings on slow-release fertilisers can cause high local concentrations of salts or acids.

In order for a uniform and protective rust patina to form, Corten steel requires a regular alternation between moisture and complete drying. It is only through these recurring wet-dry cycles that the characteristic, firmly adhering barrier layer can form. Persistent moisture or waterlogging prevents this process and can lead to progressive corrosion.

If the foreign substances mentioned above come into contact with Corten steel, the surface should be wiped down or rinsed with water as soon as possible to prevent high concentrations of salt or acid from remaining. In the event of advanced corrosion, mechanically clean the affected area to remove the foreign substances and allow the protective layer – which is necessary to prevent the steel from rusting through – to reform. Care must be taken to ensure that no further contamination occurs from foreign substances containing acid or salt. Water in planters and on earth retaining walls must be able to drain straight downwards to prevent capillary action at the lower edges. It is advisable to protect the inner surfaces using dimpled membrane, tightly fitted insulation boards or similar materials.

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Due to the waterlogging combined with the acidic environment, no protective layer was able to form on this planter. Within a short space of time, the planter rusted through just like ordinary steel. A simple solution: surround the planter all the way round with 2–5 cm of gravel.

MARKS AND SCRATCHES

During the processing of the raw slabs, these are automatically picked up at several production stations using vacuum suction cups and transported for further processing. Often, marks remain visible on the surface after the first grinding – sometimes barely noticeable, sometimes very clearly visible.

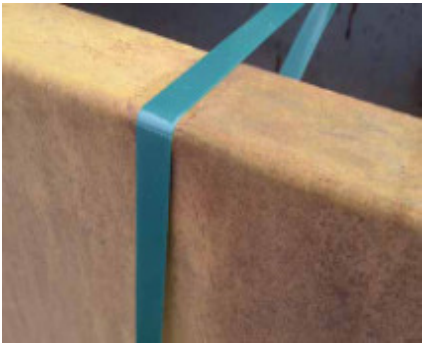
This texture, also known as 'crop circles' in specialist circles, arises because silicone-containing residual particles adhere to the surface via the suction cups. When the SUPER-ROST® agent is applied, the surface then becomes uneven. The mark only becomes visible 12 to 24 hours after the initial patina has formed. However, with natural weathering, the mark disappears after a few months. The appearance of these marks on the pre-patinated surface therefore does not constitute grounds for a complaint.

If uniform rusting is to be achieved more quickly, the irregular areas can also be sanded down here using sandpaper or a Scotch-Pad until the bare metal surface is exposed. The weathering process can then restart naturally, or weathering can be accelerated by moistening the surface.

Marks left by tension straps or scratches may occur during packaging and transport to the building site. Here too, the irregularities and scratches will disappear again through natural weathering. This process is speeded up if the scratches are removed with sandpaper, so that they disappear completely after a short time through natural weathering.



Suction marks (= crop circles) after the first rusting.



Lashing straps used for transport may leave marks on the surface.

BEWARE OF RUST BUILD-UP

When using rusted metal objects in combination with natural stone surfaces and wood, it is always important to bear in mind that, despite the formation of a protective layer and patina, rust particles will detach from the surface as a result of the ongoing weathering process and settle on the natural stone or wooden surfaces. This can lead to damage or unsightly discolouration.

Incidentally: When combining Corten steel with wood, it is important to bear in mind that wood species rich in tannins – such as oak – in particular can release tannic acids and other wood constituents when exposed to moisture. If these substances come into contact with the Corten steel surface via rainwater, this can lead to unwanted discolouration and irregularities in the formation of the protective rust patina. Direct contact, as well as the prolonged running of water from wood rich in tannins over the Corten steel surface, should therefore be avoided wherever possible.

BLACK SPOTS ON CORTEN STEEL

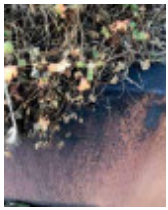
In the absence of air and in the presence of moisture, the still-new, rusted surface may turn black. This can occur during the transport of the items if the protective film lies directly against the surface and the items are exposed to rain or moisture for a certain period after delivery. Depending on the extent of the black discolouration, the familiar chestnut-coloured hybrid tea rose surface will reappear after a few days of natural weathering. In cases of severe black discolouration, it may be necessary to sand down the black areas with sandpaper or a Scotch-Brite pad until the bare metallic surface is exposed, and then allow the weathering process to start afresh.



Black discolouration caused by air pockets and moisture on the fresh surface.

Black discolouration can also occur in autumn when organic matter, such as dead leaves, accumulates on the surface.
Here too, once the debris has been removed, the characteristic surface of the hybrid tea rose will soon reappear as a result of natural weathering.





Black discolouration on the Corten steel surface caused by organic matter.

SEALING CORTEN STEEL

Auch zur Reduzierung von rostroten Ablagerungen und zum „Schutz“ von Cortenstahl, besteht die Möglichkeit, die rostige Oberfläche zu versiegeln. Das ist möglich, sobald sich die gewünschte Edelrostoberfläche mit der dazu passenden Schutzschicht ausgebildet hat. ROST-PROTECT® (Art. Nr. 64 00 38) basiert auf einem Naturöl auf Leinölbasis. Es wird mit Additiven so ergänzt, dass es besonders tief in die Poren der Edelrost-Oberfläche eindringen kann. Das Besondere an ROST-PROTECT® ist, dass es den Rost schützt und diesen an der vorhandenen Oberfläche stabilisiert.

Purpose and function of ROST-PROTECT®:

✓ Binds loose rust particles, thereby protecting the surrounding area from unwanted rust deposits and rust stains on contact.

✓ Captures the ever-changing surface of the hybrid tea rose.

✓ The colour intensity and colour effect of the surface texture are enhanced, just as with a clear varnish. A perfectly sealed surface has a silk-matt finish and appears slightly darker.

Please note: The ROST-PROTECT® coating is permanent. The product penetrates so deeply into the existing hybrid tea rose surface that it is practically impossible to remove. To remove it, the surface would have to be completely stripped and the rusting process started all over again. It is therefore essential to carefully consider why and whether the existing hybrid tea rose surface should be sealed.

When ROST-PROTECT® is applied, Corten steel loses its matt, open-pored surface, becomes darker and glistens in the sun. You should therefore always apply the product to a test area first to assess the result before coating the entire ‘Edelrost’ object with ROST-PROTECT®. Under favourable weather conditions, the natural oil can keep the surface stable for several years. Under unfavourable conditions, an annual re-treatment may be necessary.

Practical application guidance for ROST-PROTECT® and plenty more information and videos on sealing, rusting and cleaning can be found at www.gartenmetall.de/cortenstahl.



Corten steel sealed with ROST-PROTECT® on an AQUA BOWL water bowl.

FEATURES

Steels classified as 'stainless steel' exhibit high corrosion resistance. Even if the stainless steel is scratched or otherwise damaged, a protective layer forms again immediately. This explains why stainless steel requires neither coatings nor other forms of surface protection. As a precaution, we advise against the use of water additives containing chlorides on stainless steel items, as this can also lead to corrosion of the material under particularly heavy use.

SURFACE

Gartenmetall® generally supplies stainless steel items with a 'rotex-polished' surface. Thanks to this special, non-directional polish, sunlight is diffused evenly and fingerprints are barely visible. The most important advantage, however, is that any scratches caused during use or installation can be easily removed on site without any loss of quality.



Example: stainless steel surface with a 'Rotex finish'.

CAUTION

Even on stainless steel (V2A and V4A), surface rust can form as a result of 'foreign' iron particles adhering to it. These particles can end up on the surface, for example, through contact with steel, rust particles from adjacent 'Edelrost' surfaces, or during cutting operations in the vicinity of stainless steel. If the rust particles have not been on the stainless steel surface for very long, they can be removed with a standard kitchen sponge. If, on the other hand, the particles have already 'rusted into the surface', we recommend removing them with special stainless steel cleaners that chemically convert the rust-red iron oxide particles.



An example of how to use STAINLESS STEEL LOTION to remove corrosion stains from stainless steel.

STAINLESS STEEL LOTION FOR RUST STAINS

The safest way to remove rust stains from stainless steel is to chemically transform them and thereby remove them. The Gartenmetall® product 'EDEL-STAHL-LOTION' (item no. GA-64 00 39) was developed specifically for this purpose. When applied, the surface is simultaneously cleaned, visually brightened and treated with a protective sealant. EDELSTAHL-LOTION is not suitable for 'normal' routine cleaning of stainless steel, as it has a harsh effect on the surface.



Shake the STAINLESS STEEL LOTION vigorously before use, then apply it evenly to the surfaces to be treated using a sponge or cleaning cloth. After leaving it to work for approx. 5 minutes, rinse off with plenty of water and wipe dry with a soft cloth. The surface should not be allowed to dry out whilst the product is taking effect. In the case of particularly heavy soiling or corrosion marks, the process may be repeated. To be on the safe side, please always test on a small area first.

STAINLESS STEEL LOTION for removing rust stains from stainless steel – order directly from the shop: https://shop.gartenmetall.de/reinigung/

MAINTENANCE

When installed outdoors, rain is usually sufficient to keep the surface clean. Areas not reached by rain, however, require regular cleaning. Fingerprints can be wiped off with a solution of washing-up liquid. For routine cleaning and maintenance of stainless steel with lighter soiling, particularly organic and greasy stains, we recommend using mild, alkaline-based cleaners. Thanks to the alkaline nature of the cleaner, there is virtually no risk to the stainless steel, even if the dosage is incorrect.

Scouring powders are unsuitable as they scratch the surface. Heavily oily and greasy stains can be removed with alcoholic cleaning agents and solvents, such as methylated spirits. Natural clay, used as an abrasive, provides a powerful yet gentle clean, which also removes limescale marks and slight discolouration. After application, the surface should be polished with a dry cloth.

Mortar and cement splashes can be removed with warm, diluted phosphoric acid. Rinse thoroughly afterwards with neutral, ideally demineralised water. Alternatively, vinegar can be used, which can be diluted with water depending on the degree of soiling. The same polishing pastes used for chrome-plated parts are also suitable for the maintenance of stainless steel surfaces.

FEATURES

In hot-dip galvanising, the steel base material is immersed in a molten zinc bath (approx. 450 °C). Once the excess zinc has dripped off, a more or less thin layer of zinc remains as a coating. This provides both active and passive corrosion protection: the thin layer protects the base metal from moisture (passive) and also acts as a sacrificial anode (active). The steel beneath the zinc layer is thus protected from corrosion until the zinc has been completely consumed (corroded). When fresh, the zinc layer has a bright, shiny appearance. Over time, corrosion causes it to develop a patina, which makes it appear darker and duller.

All hot-dip galvanised items from Gartenmetall® are treated in accordance with the technical standard and guideline DIN EN ISO 1461:2009. This guarantees a minimum coating thickness of 55 µm for material thicknesses between 3 and 6 mm, and a coating thickness of 70 µm for sheet thicknesses exceeding 6 mm. Under favourable environmental conditions, this can result in a service life of more than 50 years without the need for maintenance. Hot-dip galvanising protects steel from corrosion by means of a zinc coating and can therefore extend the service life of steel components.

Due to the heat involved in hot-dip galvanising (approx. 450 °C) and the repeated, extreme temperature fluctuations of several hundred degrees within a short period of time, the components ALWAYS experience a certain degree of warping. The permissible tolerances are greater than architects and building owners would wish, and do not generally constitute grounds for a complaint.

When assessing the surface appearance, warping and the white rust that often forms, it must always be borne in mind that hot-dip galvanising is a very cost-effective, durable and low-maintenance method of protecting metal garden features and street furniture against corrosion. The disadvantages mentioned are therefore inherent characteristics of the product.



Typical local warping in flat, hot-dip galvanised elements. The warping is due to the manufacturing process and falls within the permissible limits set by the standard.

TECHNICAL SURFACE

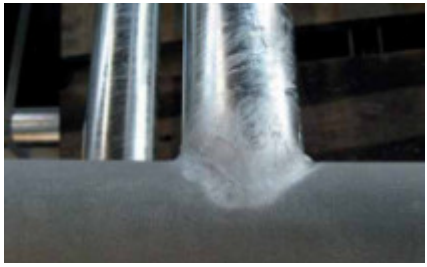
Hot-dip galvanising is a tried-and-tested and cost-effective process for providing long-lasting protection against corrosion in steel. The primary focus is on the technical protective function, rather than on achieving a decorative or perfectly uniform surface.

Due to the nature of the material and the process, hot-dip galvanised items may exhibit varying shades of grey, matt or glossy areas, mottling and slight surface irregularities. These characteristics are typical of hot-dip galvanising and do not generally impair the corrosion protection.

For garden features or metal items with higher aesthetic requirements, we therefore recommend choosing a colour-coated surface with a stainless steel base material instead of a purely hot-dip galvanised finish. A colour coating ensures a significantly more uniform appearance and allows for a specific colour scheme.

The galvanising process may also cause existing stresses in the material to become visible, which can result in slight deformations. Machining or material marks such as indentations, pits, scratches or similar irregularities may also be more clearly visible after hot-dip galvanising. Provided that these do not impair function, suitability for use or corrosion protection, such appearances do not constitute a defect in the hot-dip galvanising process.





Example of permissible surface variations following hot-dip galvanising (Image source: Beuth-Verlag, Corrosion Protection: Hot-Dip Galvanising).

Excerpt from the technical guidelines of DIN EN ISO 1461:2009:
"The primary purpose of the zinc coating is to protect the underlying iron or steel material from corrosion. Considerations regarding aesthetics and decorative properties should be of secondary importance."

WHITE RUST

White rust is the term used to describe corrosion products on a hot-dip galvanised surface. White rust is undesirable as it is unsightly. Its negative impact on corrosion protection is usually overestimated. The coating thickness generally remains largely intact or is reduced by only a few micrometres.

White rust can form when freshly galvanised objects are stored on site under unfavourable weather conditions, are temporarily sealed off from the air and simultaneously come into contact with water, particularly condensation with a low mineral content. Temperatures falling below the dew point and low temperatures also promote the formation of white rust. The classic scenario is as follows: the objects are left in the rain in autumn and spring, covered by a protective film, whilst awaiting installation. In such cases, the undesirable white rust can form after just a few hours. In many cases, white rust only forms after installation and handover to the client.



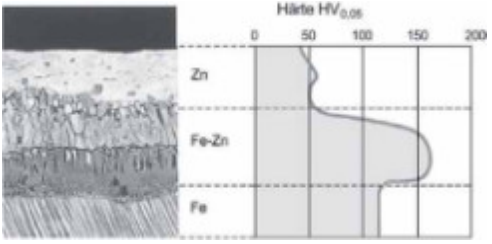
Example: White rust on a bench following incorrect temporary storage on the building site.

Quote from the technical guidelines of DIN EN ISO 1461:2009:
"The formation of (whitish or dark) corrosion products, consisting predominantly of zinc oxide, is not grounds for rejection, provided that the required minimum thickness of the zinc coating is still present."

REMOVING WHITE RUST

In most cases, white rust can be removed. The rule is: the sooner you act after it has formed, the easier it is to remove the white streaks.

Using a stiff nylon brush and plenty of running water, work on the surface with light pressure until the unwanted streaks have been removed. Metal wire brushes are not suitable, as they would scratch the soft zinc coating! The hardness of the galvanised surface increases within the transition layer. This makes it comparatively resistant to cleaning.



Hardness profile within the galvanised surface: The hardness increases in the transitionlayertowardsthebasematerial. (Image source: Beuth-Verlag, 'Corrosion Protection: Hot-dip Galvanising').

REPAIR OF DAMAGED AREAS

Defective areas – that is, areas without a zinc coating – can and must be repaired on site using, for example, zinc spray. As the repair will differ visually from the original zinc coating, the generally applicable technical guidelines set out precise requirements. Here too, the following applies: hot-dip galvanised steel is a purely technical surface with no aesthetic requirements.

Quote from the technical guidelines of DIN EN ISO 1461:2009:
"The total area of uncoated sections requiring repair must not exceed 0.5 per cent of the total surface area. No single uncoated area may exceed 10 cm^2 in size."

METAL
COLOR COATED STAINLESS STEEL

FEATURES

At Gartenmetall®, colour-coated metal objects are manufactured from high-quality stainless steel. This corrosion-resistant base material ensures a service life that is well above average. Furthermore, scratches and other damage can be repaired easily and simply by hand using the appropriate topcoat and 'household remedies' – without having to worry about a complex base coat structure or potential damage to the primer.

LINE-UP

Particularly at the points of contact between the paint-coated objects and the floor, surface damage often occurs as early as the installation stage – either when objects are dragged across the floor or when they are placed on a hard surface (e.g. stone paving, moraine gravel, etc.) without a protective layer in between. To prevent corrosion and mechanical damage, we strongly recommend placing non-metallic materials such as plastic or rubber mats underneath.

CLEANING AND MAINTENANCE

Paint finishes also require maintenance. Check the surfaces for damage at least once a year and repair any damage immediately to prevent it from spreading.

Acidic contaminants (e.g. bird droppings) should be removed from the surface straight away to prevent the paint finish from being corroded.

The surface of the objects can be cleaned using standard household products such as neutral soap. To do this, wipe the surface with a damp sponge and then dry it with a dry cloth. Please do not use 'harsh' cleaning agents or abrasive sponges. These could damage the surface or cause it to become dull.

REPAIR

During transport, unloading, assembly or even in everyday use, damage and scratches to the surface can occur from time to time.

If the damage consists only of fine scratches or small areas of damage, these can be very easily touched up with the appropriate paint. To do this, clean the damaged area, lightly roughen the surface, then carefully apply the paint locally using a suitable brush, cloth or, for small areas, even a toothbrush, and allow it to dry thoroughly. In all cases, we strongly recommend testing the paint on a small area in a visually inconspicuous part of the item. For more extensive damage, please contact the company that installed the item.

AGEING

All Gartenmetall® products are supplied with a very high-quality paint finish that is particularly well suited to outdoor use.

In practice, however, every paint finish loses its colour depth over time due to UV radiation, natural ageing and weathering. The susceptibility to fading varies depending on the colour shade. Just as with a car, the surface of paint-coated garden items also needs to be looked after. It may be necessary to treat the surfaces after a few years.

BLEACHING EFFECT

Under certain conditions, a so-called 'bleaching effect' may occur on colour-coated surfaces. This results in light-coloured patches, areas of lightening or cloudy discolouration on the surface. This is caused by an unfavourable combination of moisture in or beneath packaging materials and exposure to high temperatures, for example from direct sunlight. If surface temperatures reach approximately 60 °C to 80 °C, components of the packaging materials may react with the coating. This results in the visual changes shown in the images below.

Important storage information
To prevent the bleaching effect, the transport packaging must be removed immediately upon receipt of the goods. The products must then be stored in a dry, well-ventilated place and protected from direct sunlight. Prolonged storage whilst still in their packaging, particularly when exposed to moisture and heat, should be avoided. Our products are stored in a dry condition and dispatched in a dry state. The bleaching effect requires the presence of moisture, which may come into contact with the goods after they leave our premises due to weather conditions, condensation, improper storage or other external influences. These storage-related phenomena do not constitute a product defect and cannot be the subject of a complaint.

Possible remedy
For powder-coated surfaces, the affected area can be carefully heated to approx. 150 °C using a hot-air gun. This causes the moisture that has penetrated the surface to evaporate, and in many cases the surface will recover completely. This method is generally not effective for painted surfaces. In such cases, the surface may need to be reworked or repainted by a specialist firm.









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