



Recommendations for bridge builders

COR-TEN® is an extremely flexible and high-strength steel that can be used in multiple applications to deliver the best results for your construction needs. However there are certain things that must be considered when using Weathering steel. By following these recommendations you can be sure that your steel will have a long-life and remain looking spectacular as it ages and it's unique hue adapts with its environment and atmosphere.

BEFORE USE

Always remove any scale from hot rolled steels and plates. If the scale layer is not removed the patina may form unevenly and the scale may peel off. The surface of Weathering steel should also be shot blasted (if thicker than 4 mm) or pickled to ensure a uniform patina coloring.

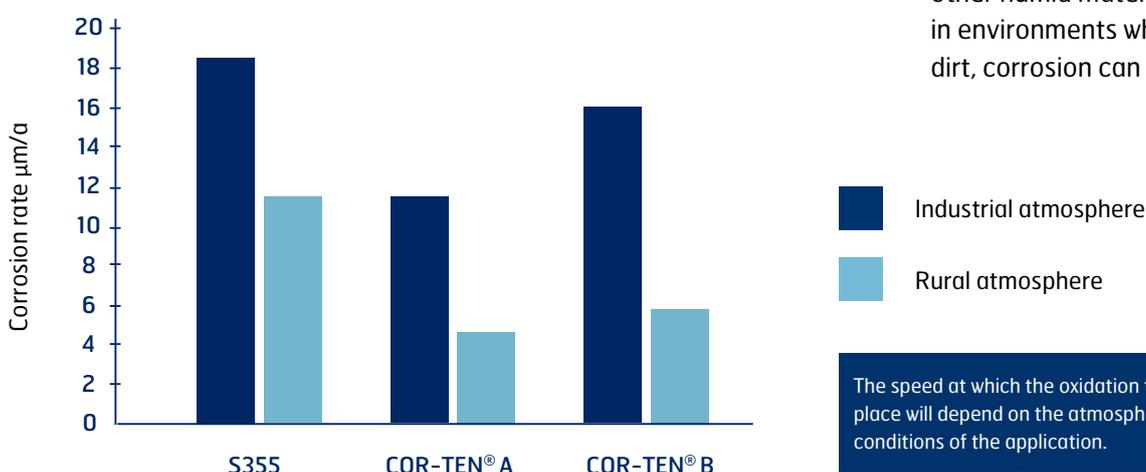
ONLY USE WEATHERING STEEL OUTDOORS IN CHANGEABLE CLIMATIC CONDITIONS

The protective patina coating of Weathering steel cannot form evenly in constantly dry or wet conditions. Therefore it is not recommended to use COR-TEN® in these types of climatic conditions, or indeed indoors for the same reason.

AVOID SALT-RICH ENVIRONMENTS AND LONG-TERM CONTACT WITH HUMIDITY

Structures with COR-TEN® should not be located in close proximity to salty environments such as roads where de-icing salt is used regularly. In fact they should be a minimum of 200 meters from the shoreline of seawater. Weathering steel should also never be in direct contact with soil, standing water, surfaces where vegetation grows, or other humid materials. Furthermore, in environments where there is a lot dirt, corrosion can also occur.

Atmospheric corrosion rate



SSAB Weathering and COR-TEN®



AVOIDING STAINS DURING THE PATINA PROCESS

During the patina process, water that comes into contact with the steel will become rusty. This water can stain some materials if it comes into contact with them. To avoid this, water runoff can be collected until the oxidation process is complete.

If for some reason runoff water cannot be collected and staining is a concern, such as buildings and artworks, it is recommended that Weathering steel is used in combination with materials that can be cleaned. These include:

- semi-matte or glossy enamel coating
- anodized or plain aluminum
- stainless steel
- neoprene
- ceramic tiles and glazed tiles
- glass

PLEASE NOTE: the following materials are easily stained and are difficult to clean properly:

- concrete and mortar
- unpainted hot dip galvanized steel
- unglazed brick
- matte enamel
- stone
- wood

WHEN USING AS A DESIGN FEATURE ON FACADES

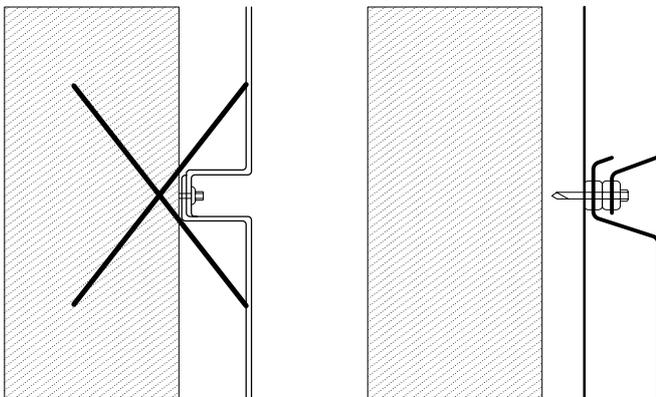
Always ensure there is sufficient airflow around the steel and that water and moisture can escape from all the surfaces including the back of the plate.



Weathering steel should not be used in salt-rich environments such as roads where de-icing salt is used.



A ventilation gap is required behind a cassette



Left: Incorrect fastening
Right: Recommended fastening

In case of complex designs or if you have any questions regarding your application, please consult SSAB Technical support