

COR-TEN® A for façades

General Product Description

COR-TEN® A is a weathering steel product which can be used in façades without corrosion prevention treatments or paint layers due to its anti-corrosive patina layer on the surface. In order to have a good patina layer, COR-TEN® A needs to be exposed to atmospheric conditions with alternating wet and dry cycles. In addition to excellent corrosion protection, the appearance of a well-formed patina layer is attractive in a natural way. Low maintenance costs, the reduced need for corrosion prevention means less use of paint and solvents, making COR-TEN® A an environmental friendly choice of steel.

More information on how to use COR-TEN® A weathering steel as facade claddings or profiles, can be found in SSAB's instructions "COR-TEN® Design Guide".

Dimension Range

Typical COR-TEN® A weathering steel thicknesses for application in façades are 1.0 – 1.5 mm. However, COR-TEN® A weathering steel in cold rolled delivery condition is available in thicknesses ranging from 0.7 – 3.0 mm and widths from 30.0 - 1530 mm as slit coil / coil. Cut to length sheet are available in widths ranging from 1000 – 1530 mm and lengths from 900 mm – 8500 mm. For any further information on dimensions available or special requests, please contact SSAB's Tech Support at techsupport@ssab.com.

Appearance

COR-TEN® A weathering steel in cold rolled delivery condition looks like any other cold rolled steel. Typically, it comes with a thin layer of protective oil. As soon as this protective oil is removed, and the steel is exposed to alternating wet & dry atmospheric conditions, the patina layer will start to form.

Mechanical Properties

Yield strength R_{eL} (min MPa)	Tensile strength R_m (min MPa)	Elongation A_{80} (min %)	Minimum bending radius
310	450	22	0,5 x t

Mechanical properties are tested in the transversal direction.

If the yield point is not pronounced, the values apply to the 0.2% proof strength $R_{p0.2}$. If the yield point is pronounced, the values apply to the lower yield point (R_{eL}).

Chemical Composition

C (max %)	Si (%)	Mn (%)	P (%)	S (max %)	Al (%)	Cu (%)	Cr (%)	Ni (max %)
0.12	0.25 - 0.75	0.20 - 0.50	0.07 - 0.15	0.03	0.015 - 0.060	0.25 - 0.55	0.50 - 1.25	0.65

Tolerances

COR-TEN® A in cold rolled condition is supplied with thickness and width tolerances in accordance to EN 10131. More narrow thickness tolerances are available on request.

Cut to length are supplied with length tolerances in accordance to EN 10131.

Delivery Conditions

Cold rolled dry or cold rolled protection oiled. We recommend protection oiled delivery condition.

Protective oil protects the surface from water and prevents the patina formation too early or unevenly. However, when delivered as oiled, the oil as well as other impurities must be removed from surfaces when steel sheets are installed. When delivered as dry, there is a risk that patina starts to create unevenly leading to irregular appearance in the end application.

Fabrication and Other Recommendations

The COR-TEN® A steel can be cold formed in the same manner as general structural steels of the same strength.

COR-TEN® is an internationally registered trademark of United States Steel Corporation and can only be used for products produced by United States Steel Corporation or its licensees. SSAB is official licensee.

For information concerning fabrication, see SSAB's brochures on www.ssab.com or consult SSAB's Tech Support, techsupport@ssab.com. Appropriate health and safety precautions must be taken when bending, welding, cutting, grinding or otherwise working on the product.

Contact Information

www.ssab.com/contact