
COR-TEN A

ATMOSPHERIC CORROSION RESISTANT PLATES & SHEETS

— **COR-TEN A** is a strip mill product. The chemical composition of **COR-TEN A** has been designed to provide a relative resistance against atmospheric corrosion, in particular for urban environments. It can therefore be used even without painting; in this case a thin layer of stable oxides will be formed, thus preventing further corrosion inside.

Chemical composition

C	Mn	Si	P	S	Ni	Cr	Cu
< 0.12	0.20 - 0.50	0.25 - 0.75	0.07 - 0.15	≤ 0.05	≤ 0.65	0.30 - 1.25	0.25 - 0.55

Mechanical properties in delivery condition

UTS (MPa)	YS (MPa)	E (%)
345	480	22

These characteristics are guaranteed in the longitudinal directions; incrisis by approximately 20 MPa in the transverse direction.

— **Reference standards:**

COR-TEN A steel plates comply to the following standards:

NF A 35-502-E36W, ASTM A242 and A588,

EN 10155-Fe510A1K1/DD2K1, S.E.W087, S335 POW.

— **Applications:**

The mechanical characteristics and the resistance against atmospheric corrosion make this steel the best product for the fabrication of agricultural vehicles and railway wagons, bridges, water pipes, fans, chimneys and boilers and outdoor sculptures.

Processing information

— Hot forming:

This operation may be normally carried out in a temperature range of 800 °C to 1050 °C. If it is required to use a different temperature, it is advisable to carry out a normalizing treatment at the end.

— Flame cutting:

This operation can be normally carried out with the usual methods. In general no preheat is required, but operation on plates with a temperature of less than 10 °C should be avoided.

— Welding:

COR-TEN A plates can be easily welded using all common procedures used for mild steel plates (spot, GTAW, GMAW, SMAW).

Considering the chemical analysis, it can be stated that **COR-TEN A** steel is not subject to cold cracking. Welded structures fabricated with **COR-TEN A** steel does not normally need thermal stress relief treatment. Please contact Abraservice for the choice of welding products.

— Drawing:

In spite of its excellent mechanical characteristics, **COR-TEN A** can be moderately drawn.

— Cold bending:

COR-TEN A is suitable for very strict bending operations. It is recommended to follow the parameters below:

Thickness (mm)	Internal minimum radius
2 - 6	2 x th
7 - 12	3 x th

General note

— If further informations are required, please request a copy of our technical guide.

Contact

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