

ASTM CortenA steel plate/sheet for steel resistant to atmospherical corrosion

CortenA

CortenA Steel Description:

ASTM CortenA steel grade is a hot rolled products of structural steels in technical delivery conditions with improved atmospheric corrosion resistance. The steel grade CortenA is according to ASTM standard which with the yield strength of 355MPa and the tensile strength of 470-630MPa. Corten-A steel was first used in buildings in 1958 because it has anti-corrosion properties. Then Corten-A especially in China and Japan was widely used for bridges, trains, cars, trucks and industrial facilities and so on.

CortenA Steel Application :

COR-TEN A is a strip mill product. ASTM CortenA is mainly used for the manufacture of container, rolling stock, oil rigs, harbor construction, oil platforms and other structural parts containing hydrogen sulfide corrosive media in petrochemical equipment. 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.

Corten A is a weather resistant steel created by alloying copper, chromium and nickel. In addition to this, Corten A has added phosphorous which makes the material best suited for gas flue applications and for aesthetic facials. Corten A is not recommended in heavy load bearing applications – in this case Corten B or S355J2W should be considered.

The top layer of Corten A reacts with atmospheric elements to form a rust coloured protective layer which not only makes the steel virtually maintenance free but also provides a pleasing and consistent finish.

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.

CortenA Steel Delivery state:

Hot Rolled, Cold Rolled, Normalized, Quenched, Tempering, Thermal Mechanical Control Process (TMCP), Electroslag Remelting Technical, HIC test.

CortenA Steel Specification(mm):

Thickness:2-460

Width:1500-3200

Bebon steel — The most professional exporter on weathering resistant steel

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Length:6000-12000

ASTM Corten A steel chemical composition by [%]

Grades	C max	Si	Mn.	P	S max	Cr	Ni	Cu	Nb+V+Ti
Corten A	0.12	0.25- 0.75	0.20- 0.50	0.07- 0.15	0.03 0	0.50- 1.25	0.65	0.25- 0.55	-

In order to obtain fine grain structure a sufficient amount of nitrogen absorbing elements is added (e.g. $\geq 0.02\%$ Al)

ASTM CortenA steel Mechanical properties

At room temperature for plates $\geq 3\text{mm}$ in thickness (transverse test specimens, according to EN 10002).

Requirements to hot rolled plates $\leq 3\text{mm}$ in thickness according to EN 10025-5.

Grade	Permissible yield point ratio	Yield Strength MPa(min)	Tensile Strength MPa	Elongation % (min)	Bend
Corten A	-	355	470-630	20	1t

1 Mpa = These

1N/mm² characteristics are guaranteed

in the longitudinal direction; increases by approximately 20 N/mm² in the transverse direction.

In case of cold rolled material the yield point is min. 310 Mpa and the tensile strength min. 445 MPa.

Furthermore cold rolled sheets $\leq 3\text{mm}$ in thickness made of steel grade COR-TEN A-F for increased demand to the cold formability is available.

Henan BEBON international co.,ltd was founded in 2001 as a professional supplier of corten A steel plate in China. It is awarded by the Henan government as an outstanding exporter of corten A steel plates to the international market. To provide quick and quality services, a large-scale service center equipped with full range of production lines was established in zhengzhou to meet demands from the company's increasing numbers of customers abroad. So if you need this material,BEBON is your top choice of Corten steel plate supplier.

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