

Weldox 1300

General Product Description

Weldox 1300 is a general structural steel with a minimum yield strength of 1300 MPa. Typical applications are load carrying structures having very high demands on low weight.

Available dimensions

Weldox 1300 is available in plate thicknesses of 4 – 10 mm. Weldox 1300 is available in widths up to 2900 mm and lengths up to 14630 mm. More detailed information on dimensions is provided in the dimension program at www.ssab.com.

Mechanical Properties

| Thickness mm | Yield strength R _{p0.2} min MPa | Tensile strength R _m min MPa | Elongation A ₅ min % | Typical hardness HBW |
|--------------|--|---|---------------------------------|----------------------|
| 4 - 10.0 | 1300 | 1400 - 1700 | 8 | 425 - 475 |

| Impact properties | E -40°C | F -60°C |
|---|---------|---------|
| Min. impact energy (J) for transverse tests Charpy V 10x10 mm tests specimens ¹⁾ | 27 J | 27 J |

¹⁾ Unless otherwise agreed, transverse impact testing according to EN 10025-6 option 30 will apply. For thicknesses between 6 - 11.9 mm, subsize Charpy V-specimens are used. The specified minimum value is then proportional to the cross-sectional area of the specimen compared to a fullsize specimen (10 x 10 mm).

Chemical Composition (heat analysis)

| C ^{*)} Max % | Si ^{*)} Max % | Mn ^{*)} Max % | P Max % | S Max % | Cr ^{*)} Max % | Cu Max % | Ni ^{*)} Max % | Mo ^{*)} Max % | B ^{*)} Max % |
|-----------------------|------------------------|------------------------|---------|---------|------------------------|----------|------------------------|------------------------|-----------------------|
| 0.25 | 0.50 | 1.40 | 0.020 | 0.005 | 0.80 | 0.10 | 3.0 | 0.70 | 0.005 |

The steel is grain refined. ^{*)}Intentional alloying elements.

Maximum carbon equivalent CET (CEV)

| Thickness mm | 4 - 10 |
|--------------------------|-------------|
| Weldox 1300 E: CET (CEV) | 0.43 (0.67) |
| Weldox 1300 F: CET (CEV) | 0.43 (0.67) |

$$CET = C + \frac{Mn + Mo}{10} + \frac{Cr + Cu}{20} + \frac{Ni}{40}$$

$$CEV = C + \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Cu + Ni}{15}$$

Tolerances

More details are given in SSAB's brochure 41-General product information Weldox, Hardox, ArmoX and Toolox-UK or on www.ssab.com.

Thickness

Tolerances according to SSAB's thickness precision guarantee AccRollTech. AccuRollTech meets the requirements of EN 10 029 Class A, but offers narrower tolerances.

Length and width

According to SSAB's dimension program. Tolerances conforms with EN 10 029 or to SSAB's standard after agreement.

Shape

SSAB offers tolerances according to EN 10 029

Flatness

According to SSAB's flatness tolerances, which are more narrow than EN 10 029 Class N (steel type L).

Surface Properties

According to EN 10 163-2 Class A, Subclass 1.

Delivery Conditions

The delivery condition is Q or QT (Quenched or Quenched and Tempered) at our discretion. The plates are delivered with sheared or thermally cut edges. Untrimmed edges after agreement. Delivery requirements can be found in SSAB's brochure 41-General product information Weldox, Hardox, ArmoX and Toolox-UK.

Fabrication and Other Recommendations

Welding, bending and machining

Recommendations are found in SSAB's brochures on www.weldox.com or consult Tech Support, help@ssab.com.

Weldox 1300 has obtained its mechanical properties by quenching and subsequent tempering. The properties of the delivery condition cannot be retained after exposure to temperatures in excess of 200°C.

Appropriate health and safety precautions must be taken when welding, cutting, grinding or otherwise working on this product. Grinding, especially of primer coated plates, may produce dust with a high particle concentration.

Contact and Informations

For information, see SSAB's brochures on www.ssab.com or consult Tech Support, help@ssab.com.