

General Product Description

Hardox® Extreme steel for extreme abrasion resistance.

Hardox® Extreme is the world's hardest wear plate with a nominal hardness of 60 HRC (Rockwell) and typical hardness of 650-700 HBW. Hardox® Extreme is an abrasion resistant steel with a nominal hardness of 60 HRC, intended for applications with extreme high demands on abrasion resistance. Typical applications is liner plates, etc.

Dimension Range

Hardox® Extreme is supplied in plate thickness of 8.0 – 19.0 mm, up to 2000 mm in width and up to 14630 mm in length, preferred widths are 2000 x 4000 mm, other width on request. More detailed information on dimensions is provided in the dimension program.

Mechanical Properties

Product	Thickness (mm)	Typical Hardness (HRC), not guaranteed
Hardox® Extreme	8.0 - 19.0	57 - 63

Chemical Composition (heat analysis)

C (max %)	Si (max %)	Mn (max %)	P (max %)	S (max %)	Cr (max %)	Ni (max %)	Mo (max %)	B (max %)
0.47	0.50	1.40	0.015	0.010	1.20	2.50	0.80	0.005

The steel is grain refined.

Carbon Equivalent CET(CEV)

Thickness (mm)	8.0 - 19.0
Max CET(CEV)	0.57 (0.69)
Typ CET(CEV)	0.55 (0.66)

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

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

Tolerances

More details are given in SSAB's brochure Hardox® Guarantees or at www.ssab.com.

Thickness

Tolerances according to Hardox® Thickness Guarantees.

Hardox® Guarantees meet the requirements of EN 10029 Class A, but offer more narrow tolerances.

Length and Width

According to SSAB's dimensions program. Tolerances conforms to EN 10029 or to SSAB's standard after agreement.

Shape

Tolerances according to EN 10029.

Flatness

Tolerances according to Hardox® Flatness Guarantee class E, which are more restrictive than EN 10029.

Surface Properties

According to EN 10163-2 Class A, Subclass 1.

Delivery Conditions

The delivery condition is Quenched. The plates are delivered with sheared or thermally cut edges. Untrimmed edges after agreement.

Delivery requirements can be found in SSAB's brochure Hardox® Guarantees or www.ssab.com.

Fabrication and Other Recommendations

Welding, bending and machining

Recommendations can be found in SSAB's brochures at www.hardox.com or consult Tech Support.

Hardox® Extreme is not intended for further heat treatment. It has obtained its mechanical properties by quenching and when necessary by means of subsequent tempering. The properties of the delivery condition cannot be retained after exposure to temperatures in excess of 150°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 Information

www.ssab.com/contact