HARDOX®
WEAR PLATE

Hardox® HiTuf

General Product Description

The extra-high tough steel for structural wear parts

Hardox® HiTuf is an abrasion-resistant plate with guaranteed impact toughness. With a nominal hardness of 350 HBW, it's a good choice for structural wear parts like thick cutting edges, demolition tools and rippers.

Dimension Range

Hardox® HiTuf is available in thicknesses of 1.575 – 6.299". Hardox® HiTuf is available in widths up to 131.889" and lengths up to 575.984". For thicknesses over 4.921" preferred width is 64.960". More detailed information on dimensions is provided in the dimension program.

Mechanical Properties

Thickness (Inches)	Hardness (HBW) Min - Max [1)]	Typical yield strength, not guaranteed (ksi)
1.575 - 6.299	310 - 370	123

[1)] Brinell hardness, HBW, according to EN ISO 6506-1, on a milled surface 0.019 – 0.118" below surface. At least one test specimen per heat and 40 tonnes.

The nominal material thickness will not deviate more than ± 0.590" mm from that of the test specimen.

Hardox® is through-hardened. Minimum core hardness is 90 % of the guaranteed minimum surface hardness.

Impact Properties

Grade	Min. Impact energy (J) for transverse tests Charpy V 0.393x0.393" test specimen[2)]
Hardox® HiTuf	29 ft-lb / -40°F

[2)] Impact testing according to ISO EN 148 per heat and thickness group. Average of three tests. Single value minimum 70% of specified average.

Chemical Composition (heat analysis)

C *) (max %)	Si *) (max %)	Mn *) (max %)	P (max %)	S (max %)	Cr *) (max %)	Ni *) (max %)	Mo *) (max %)	B *) (max %)
0.20	0.60	1.60	0.050	0.020	0.70	2.0	0.70	0.005

The steel is grain refined. *) Intentional alloying elements.

Carbon Equivalent CET(CEV)

Thickness (Inches)	1.575 - 2.756	2.760 - 6.299
Max CET(CEV)	0.38 (0.56)	0.41 (0.67)
Typ CET(CEV)	0.36 (0.55)	0.39 (0.64)

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

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

SSAB

Tolerances

More details are given in SSAB´s brochure 41-General product information Strenx, Hardox®, Armox and Toolox-UK and Hardox® Guarantees or on www.ssab.com.

Thickness

Tolerances according to Hardox® Thickness Guarantees. Hardox® Guarantees meets the requirements of EN 10 029 Class A but offers more narrow tolerances.

Length and Width

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

Shape

Tolerances according to EN 10 029

Flatness

Tolerances according to Hardox® Flatness Guarantee class C, which are more restrictive than EN 10 029 Class N.

Surface Properties

EN 10 163-2 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 41-General product information Strenx, Hardox®, Armox and Toolox-UK or www.ssab.com.

Fabrication and Other Recommendations

Welding, bending and machining.

Recommendations can be found in our brochures on www.hardox.com or consult Tech Support, techsupport@ssab.com.

Hardox® HiTuf is not intend 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 842ºF .

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

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