

ArmoX[®] 370T Class 1

General Product Description

Rolled homogeneous armor for vehicles.

ArmoX[®] 370T Class 1 is a rolled homogeneous armor plate (RHA) that combines good resistance to penetration with excellent toughness.

Benefits of ArmoX[®] 370T Class 1 include:

- Market-leading steel protection
- Superior workshop properties
- Optimized solutions
- Expertise in ballistic protection from SSAB

ArmoX[®] 370T Class 1 is not intended for further heat treatment.

Dimension Range

ArmoX[®] 370T Class 1 is available in thicknesses between 3.0 and 100.0 mm. Other dimensions to be agreed with SSAB.

Mechanical Properties

Thickness (mm)	Hardness (HBW)	Yield strength R _{p0.2} (min MPa)	Tensile strength R _m (MPa)	Elongation A ₅ (min %)	Elongation A ₅₀ (min %)
3.0 - 3.9	380 - 430	1000	1150 - 1350	8	8
4.0 - 5.9	380 - 430	1000	1150 - 1350	10	10
6.0 - 19.9	380 - 430	1000	1150 - 1350	10	12
20.0 - 39.9	340 - 390	900	1050 - 1250	11	13
40.0 - 59.9	300 - 350	850	950 - 1150	12	14
60.0 - 100.0	300 - 350	—	—	—	—

Mechanical Testing

Brinell hardness test according to EN ISO 6506-1 on each heat treatment individual.

Charpy impact test according to EN ISO 148-1 on each heat and thickness from 6 mm.

Tensile test according to EN ISO 6892-1 on each heat and thickness under 60 mm.

Ultrasonic testing

According to EN 10160 Class E₃S₃ for thicknesses up to 80 mm and E₁S₂ for > 80 mm.

Impact Properties

Thickness (mm)	Min impact energy for transversal testing, Charpy V 10x10 mm test specimen ¹⁾
3.0 - 19.9	20 J / -40 °C
20.0 - 100.0	40 J / -40 °C

¹⁾ Average of three tests. Transverse to rolling direction. Single value min. 70% of specified average. For plate thicknesses under 12 mm sub-size Charpy-V specimen are used. The specified minimum value is then proportional to the specimen cross-section.

Chemical Composition (ladle analysis)

C ^{*)} (max %)	Si ^{*)} (max %)	Mn ^{*)} (max %)	P (max %)	S (max %)	Cr ^{*)} (max %)	Ni ^{*)} (max %)	Mo ^{*)} (max %)	B ^{*)} (max %)
0.32	0.40	1.20	0.010	0.003	1.0	1.80	0.70	0.005

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

Tolerances

More details are given in SSAB brochure Armox® Guarantees or on www.ssab.com.

Thickness

Tolerances according to Armox® Thickness Guarantees.

Armox® Guarantees meet the requirements of EN 10029 Class C, but offers narrower tolerances.

Length and Width

Tolerances conform to EN 10029 or to SSAB's standard after agreement.

Dimensional tolerances for plate with mill edge according to special agreement.

Shape

Tolerances according to EN 10029.

Flatness

Tolerances according to Armox® flatness guarantees, which are more restrictive than EN 10029 Class N (steel type L).

Surface Properties

According to EN 10163-2 Class B, Subclass 3.

Delivery Conditions

The delivery condition is QT (Quenched and Tempered).

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

Fabrication and Other Recommendations

Welding, bending and machining

For information concerning welding and fabrication, see SSAB's brochures on www.armoxplate.com or consult Tech Support.

Armox® 370T Class 1 is not intended for further heat treatment. If Armox® 370T Class 1 is heated above 400 °C after delivery from SSAB no guarantees for the properties of the steel are given.

Nitriding or surface coating may be carried out if the temperature is below 400 °C.

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

Contact Information

www.ssab.com/contact