



ARMOX 370T CLASS 1

General Product Description

Rolled homogeneous armor for vehicles

ArmoX[®] 370T Class 1 is a rolled homogeneous armor (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

| Plate thickness (mm) | Hardness (HBW) | Charpy-V ¹⁾ , 10x10 mm test specimen ²⁾ Min. | 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 | 20 J/-40°C | 1000 | 1150- 1350 | 10 | 12 |
| 20.0- 39.9 | 340- 390 | 25 J/-40°C | 900 | 1050- 1250 | 11 | 13 |
| 40.0- 59.9 | 300- 350 | 30 J/-40°C | 850 | 950- 1150 | 12 | 14 |
| 60.0- 100.0 | 300- 350 | 30 J/-40°C | - | - | - | - |

¹⁾ Average of three tests. Transverse to rolling direction. Single value min. 70% of specified average.

²⁾ 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.

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Mechanical Testing

Brinell hardness test according to EN ISO 6506 on each heat treatment individual.
Charpy impact test according to EN ISO 148 on each heat and thicknesses from 6 mm.
Tensile test according to EN ISO 6892 on each heat and thicknesses under 60 mm

Ultrasonic testing

According to EN ISO 10 160 Class E₁S₁ on each plate in thicknesses between 60 and 100 mm

Chemical Composition (ladle analysis)

| C *) (max %) | Si *) (max %) | Mn *) (max %) | P (max %) | S (max %) | Cr *) (max %) | Ni *) (max %) | Mo *) (max %) | B *) (max %) |
|-----------------|------------------|------------------|--------------|--------------|------------------|------------------|------------------|-----------------|
| 0.32 | 0.4 | 1.2 | 0.015 | 0.010 | 1.0 | 1.8 | 0.7 | 0.005 |

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

Tolerances

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

Thickness

| Heavy Plate Plate thickness (mm) | Tolerances (mm) |
|--|---------------------|
| 3.0- 12.9 | - 0.0 / + 0.8- +0.8 |
| 13.0- 19.9 | - 0.0 / + 1.0 |
| 20.0- 39.9 | - 0.0 / + 1.2 |
| 40.0- 59.9 | - 0.0 / + 1.6 |
| 60.0- 79.9 | - 0.0 / + 2.0 |
| 80.0 | - 0.0 / +2.4 |

Length and Width

According to SSAB's dimension program.

- 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 SSAB's flatness tolerances which are more restrictive than EN 10029 Class N (steel type L).

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Surface Properties

According to EN 10163-2 Class B Subclass 3.

Delivery Conditions

SSAB's brochure 41-General product information Strenx, Hardox, Armox and Toolox-UK or on 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, techsupport@ssab.com.

Armox 370T Class 1 is not intended for further heat treatment. If Armox 370T Class 1 is heated above 390 °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 390 °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.



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