

Strenx® 700 OME

General Product Description

A structural steel developed for use in demanding load-bearing structures within the Offshore and Marine Industry.

Strenx® 700 OME exceeds the requirements of S690QL, EN 10025-6. Strenx® 700 OME can be ordered with dual steel grades certificate, where the additional steel grade is defined and approved by one of the Classification Societies listed below. The dual certification offers You the benefits of excellent mechanical properties, extra tight tolerances, formability and consistency of SSAB Strenx® Guarantees.

Classification society:

American Bureau of Shipping	AB EQ70	4.8 to 130 mm thickness
DNV - GL	NV E690, VL E690	6 to 80 mm thickness
Lloyds Register	LR EH 69	8 to 80 mm thickness

Dimension Range

Strenx® 700 OME is available in plate thicknesses of 4 – 130 mm and available in widths up to 3350 mm and lengths up to 14630 mm depending on thickness. 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 (MPa)	Elongation A ₅ (min %)
4.0 - 130.0	700	780 - 930	14

For transverse test pieces.

Impact Properties

Product	Min impact energy for transversal testing, Charpy V 10x10 mm test specimen
Strenx® 700 OME	69 J / -40 °C

Unless otherwise agreed, only transverse impact testing.

Additional Options for Mechanical properties:

Option 1 - Min guaranteed impact energy (J) for transverse testing Charpy V 10x10 mm tests specimens 50 J/ -60 °C.

Option 2 - Improved deformation properties perpendicular to the surface. Through- thickness tensile testing according to EN 10 164, Class Z35, Z25 and Z15.

Chemical Composition (ladle analysis)

C ^{*)} (max %)	Si ^{*)} (max %)	Mn ^{*)} (max %)	P (max %)	S (max %)	Cr ^{*)} (max %)	Cu ^{*)} (max %)	Ni ^{*)} (max %)	Mo ^{*)} (max %)	B ^{*)} (max %)
0.20	0.55	1.60	0.015	0.003	0.80	0.30	2.0	0.70	0.005

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

Carbon Equivalent CET(CEV)

Thickness (mm)	4.0 - 30.0	30.1 - 100.0	100.1 - 130.0
Max CET(CEV)	0.38 (0.57)	0.39 (0.58)	0.41 (0.67)

$$CET = C + \frac{Mn + Mo}{10} + \frac{Cr + Cu}{20} + \frac{Ni}{40} \quad CEV = C + \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Cu + Ni}{15}$$

Tolerances

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

Thickness

Tolerances according to Strenx® Thickness Guarantees.

Strenx® Guarantees meet the requirements of EN 10029 Class A, but offers narrower tolerances.

Length and Width

According to SSAB's dimension program. Tolerances conform with EN 10029 or to SSAB's standard after agreement.

Shape

Tolerances according to EN 10029.

Flatness

Tolerances according to Strenx® Flatness Guarantee Class C, which are more narrow than EN 10029 Class N.

Surface Properties

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

Delivery Conditions

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

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

Fabrication and Other Recommendations

Welding, bending and machining

Recommendations are found in SSAB's brochures at www.ssab.com or consult Tech Support.

Strenx® 700 OME has bending guarantees according to Strenx® Bending Guarantees Class A. Strenx® 700 OME 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 580°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