

# PRODUCT AND DELIVERY INFORMATION

OXELÖSUND SITE



**SSAB**

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The values in this brochure are direct conversions from the uk English version.  
In the case of discrepancies, the given values in the uk English version shall prevail.

# PRESENTATION

SSAB Special steels in Oxelösund is a proud producer of general construction steels that conforms to international and national standards, steels for offshore and shipping conforming to rules of international classification societies and pressure vessel steels.

All the steels mentioned above can be supplied with guaranteed properties in the through thickness direction, Z-plate according to EN 10164. For pressure vessel steel and offshore/shipping steel the maximum thickness is 2.953", unless otherwise agreed. For structural steel with yield strength up to 58 ksi, the thickness limits are as follows; Z15 up to 3.937", Z25 up to 3.543" and Z35 up to 3.150".

Structural steels with yield strength up to 73 ksi are supplied mainly in as-rolled, normalized or thermo mechanically rolled condition. EN 10225 is the standard that specifies the requirements for weldable structural steels for use in stationary offshore installations. The standard covers plate up to 5.906" thick with yield strengths between 51 and 102 ksi. The allowed delivery conditions are N, M and Q depending on the strength level. For pressure steels SSAB EMEA has an approval from TÜV to produce plates according to PED (Pressure Equipment Directive 97/23/EC).

On Pages 4-6 in this brochure you will find three tables showing comparable information between EN and ASTM standards and also several classification societies.

## **Table 1 - Structural steel**

Shows the most common structural steels in comparable equivalent steel groups in accordance with EN standards and ASTM.

## **Table 2 - Offshore steels and ship plates**

Shows the most common ship plate grades, in comparable steel groups for various classification societies.

## **Table 3 - Pressure vessel steel**

Shows the most common pressure vessel steels in comparable steel groups for EN and ASTM.

# INDUSTRIAL, COMMERCIAL & HIGH STRENGTH STEEL PLATE

Dimension program is available at [www.ssab.com](http://www.ssab.com). For more information regarding dimension, please contact your local sales person or Tech Support.

## Available dimensions

As a general rule, plate that exceeds one of the following limit values of weight or dimensions can be supplied only subject to special agreement.

Weight:	12.125 (US) t
Thickness:	0.157" - 6.299"
Length:	78,740" - 575.983"
width:	39.370" - 131.890"

## Minimum quantities per item

The minimum quantity per item of plate rolled to order is:

Thickness (mm)	Min quantity weight
0.157" - 2.362"	2.759 (US) t
2.366" - 3.937"	3.858 (US) t
3.941" - 4.724"	4.409 (US) t
4.728" -	5.512 (US) t

Smaller quantities can be supplied after agreement.

## Restrictions

The maximum length is reduced by 15.748" when test specimens are required on both ends (such as pressure vessel steels).

Plates over 575.983" are possible to deliver only with special agreement.

- Limited flatness guarantees: for more information, please contact Tech support.

# OXELÖSUND AND STANDARDIZED STRUCTURAL STEELS

Table 1 - Structural steel

Main group	Yield strength class (ksi)	Toughness class Charp V (°F)	EN 10025-2	EN 10025-3	EN 10025-4	ASTM Toughness Class as per ASTM A6
Commercial steels	- 37	+ 68 ± 32 - 4	S 235 JR (S 235 JRG2) S 235 J0  S 235 J2 (S235 J2G3) (S235 J2G4)			A 283 C A 283 D  A 36  A 573-58 A 573-65
	38 - 44	+ 68 ± 32 - 4  - 58	S 275 JR S 275 J0 S275 J2 (S 275 J2G3) (S 275 J2G4)	S 275 N  S 275 NL		A 572-42 A 537-70 A 633 A
High strength steels	50 - 54	+ 68 ± 32  - 4	S 355 JR S 355 J0  S 355 J2 (S 355 J2G3) (S355 J2G4) S 355 K2 (S 355 K2G3) S 355 K2G4)	S 355 N	S 355 M	A 633 C A 633 D A 572-50
		- 58		S 355 NL	S 355 ML	

# OXELÖSUND STEELS AND STANDARDIZED SHIP PLATE

Table 2 – Offshore steels and ship plates

Main group Class	Yield strength (ksi)	Toughness class Charp V (°F)	ABS American Bureau of shipping	ABS Offshore	DNV Det Norske Veritas Lloyd	LR Lloyd's Register of Shipping
Commercial steels	34	+ 68 ± 32 - 4	A B D E		A B D E A 27 S	A B D E AH 27 S
	38	± 32 - 40			D 27 S E 27 S	DH 27 S EH 27 S FH 27 S
High strength steels		- 4 - 40				
	46	± 32 - 4 - 40	AH 32 DH 32 EH 32		A 32 D 32 E 32	AH 32 DH 32 EH 32 FH 32
	51	± 32 - 4 - 40	AH 36 DH 36 EH 36 FH 36		A 36 D 36 E 36	AH 36 DH 36 EH 36 FH 36
	57	± 32 - 4 - 40 - 76	AH 40 DH 40 EH 40		A 40 D 40 E 40	AH 40 DH 40 EH 40 FH 40
Extra high strenght steels	61	± 32 - 4 - 40 - 76				AH 42 DH 42 EH 42 FH 42
	67	± 32 - 4 - 40 - 76			A 460 D 460 E 460	AH 46 DH 46 EH 46 FH 46
	73	± 32 - 4 - 40 - 76			A 500 D 500 E 500	AH 50 DH 50 EH 50 FH 50
	80	± 32 - 4 - 40 - 76			A 550 D 550 E 550	AH 55 DH 55 EH 55 FH 55
	90	± 32 - 4 - 40 - 76		EQ63	A 620 D 620 E 620	AH 62 DH 62 EG 62 EH 62
	100	± 32 - 4 - 40 - 76		EQ70	A 690 D 690 E 690	AH 69 DH 69 EH 69 FH 69

# OXELÖSUND STANDARDIZED PRESSURE VESSELS STEEL

Table 3 - Pressure vessel steel

Main group Class	SSAB Oxelösund	Yield strength class (ksi)	EN 10028-2	EN 10028-3	EN 10028-5 (TM-steel <sup>1</sup> ) EN 10028-6 (QT-steel)	ASTM Toughness class as per ASTM A20
Commercial steels		- 37				A 285 C A 516-55 A 516-60
			P 235 GH			A 516-65 A 516-70
		38 - 44	P 265 GH  P 295 GH	P 275 NH P 275 NL1 P 275 NL2		A 662 A A 662 B A 663 C
High strength steels		44 - 49				A 738 A
		50 - 54		P 355 N P 355 NH  P 355 NL1 P 355 NL2	(P355 M)  (P 420 ML1) (P 420 ML2)	A 737 B
Extra high strength steels		61			(P 420 M) (P 420 ML1) (P 420ML2)	
		67			(P 460 M) P 460 Q, -QH (P 460 ML1) P 460 QL1 (P 460 ML2) P 460 QL2	
	SSAB Domex 500 PC SSAB Domex 500 PD SSAB Domex 500 PE	73			P 500 Q-QH P 500 QL1 P 500 QL2	

<sup>1</sup>) Thermomechanically rolled steels cannot be hot formed with maintained properties. Original properties cannot be achieved with post heat treatment.

# MANAGEMENT SYSTEM IN OXELÖSUND

Unless otherwise agreed, delivery and inspection are subject to the technical provisions of EN 10021.

## Quality management system

The quality management system at SSAB in Oxelösund is based on the quality standard EN ISO 9001 and also in accordance with AQAP 2110:ed D.

SSAB in Oxelösund is also certified for environmental according to ISO 14001 and the health and safety according to ISO 45001. The management systems are certified by an accredited inspection body.

SSABs management systems are describe in the guideline "SSAB Oxelösund Management system manual". This management manual has been compiled to show how SSAB Special steels production and site in Oxelösund manage its productions based on our context, our stakeholders and the vision, values and principles we have chosen.

## CE marking

CE-marking will be performed on structural steel products according to Construction Products Regulation (EU) No 305/2011. The approval, which has been issued by TÜV-NORD, applies to structural steel products according to EN 10025 part 2-6. CE-marking can also be offered for Branded structural steels with help of dual steel grade certification.





# TOLERANCES AND SURFACE REQUIREMENTS FOR PLATE

SSAB was first in the world to introduce a comprehensive precision guarantee on the thickness of heavy plate – AccuRollTech™. This high precision is made possible by the four high rolling mill, which is designed for very high precision products.

Unless otherwise specified in the material standard or otherwise agreed, plate is delivered with surface condition in accordance with EN 10163-2, Class A, Sub class 1, flatness tolerances conforms to provision of EN 10029, Class N, with length and width tolerances to EN 10029, and with thickness tolerances to AccuRollTech™ that conforms to the provisions of EN 10029. Extracts from EN 10029 adapted to the SSAB dimensional range, thickness and flatness tolerances in accordance with AccuRollTech™.

## Thickness tolerances

The thickness tolerances to AccuRollTech™ are closer than those specified in EN 10029, except for thicknesses  $\geq 3.150$ ", for which the tolerance range is the same. In AccuRollTech™, SSAB guarantee on maximum thickness variation within one plate. The tolerances are applicable to plate in asrolled or heat treated condition. Unless otherwise agreed, tolerance class A for AccuRollTech™.

Tolerance class B, C or some other requirement within the AccuRolltech™ tolerance range for each thickness interval can be supplied. Subject to special agreement, plate with Extra – Close tolerances can be supplied.

Class B: Constant minimum tolerance of  $-0.012$ ".

Class C: Constant minimum tolerance of  $0$ ".

## AccuRolltech™

Nominal thickness (inches)	Tolerance Class A (inches)		Max thickness variation within one plate (inches)
	Min	Max	
$- 0.193$ "	$- 0.012$ "	$+ 0.016$ "	$0.020$ "
$0.197 - 0.311$ "	$- 0.012$ "	$+ 0.020$ "	$0.024$ "
$0.315 - 0.587$ "	$- 0.016$ "	$+ 0.024$ "	$0.028$ "
$0.591 - 0.980$ "	$- 0.020$ "	$+ 0.028$ "	$0.031$ "
$0.984 - 1.571$ "	$- 0.028$ "	$+ 0.031$ "	$0.039$ "
$1.575 - 3.146$ "	$- 0.035$ "	$+ 0.059$ "	$0.043$ "
$3.150 -$	$- 0.039$ "	$+ 0.087$ "	$0.047$ "

## AccuRollTech™ Extra close

Other tolerance classes within the Extra close tolerance range for each thickness interval can be supplied. If tolerances to AccuRollTech™ Extra Close are specified, only surface requirements in accordance with EN 10 163-2 Class B, Subclass 3 are applied.

Nominal thickness (inches)	Tolerance Class A (inches)		Max thickness variation within one plate (inches)
	Min	Max	
$- 0.315$ "	$- 0.008$ "	$+ 0.012$ "	$0.016$ "
$0.319 - 0.630$ "	$- 0.008$ "	$+ 0.016$ "	$0.020$ "
$0.634 - 0.787$ "	$- 0.012$ "	$+ 0.020$ "	$0.028$ "
$0.791 - 0.984$ "	$- 0.012$ "	$+ 0.031$ "	$0.031$ "

## Length and width tolerances

Length and width tolerances are according to those specified in EN 10029. According to EN 10029, the length of the plate is the length of the shorter of both longitudinal edges. The width should be measured perpendicular to the major axis of the plate.

Nominal length (inches)	Length tolerances (inches)	
	Min	Max
- 157.480"	0	+ 0.787"
157.480" - 236.181"	0	+ 1.181"
236.220" - 314.921"	0	+ 1.575"
314.960" - 393.661"	0	+ 1.969"
393.700" - 590.511"	0	+ 2.953"
590.550" - 708.660"	0	+ 3.937"

Nominal thickness (inches)	Width tolerances (inches)	
	Min	Max
- 1.535"	0	+ 0.787
1.575" - 5.866"	0	+ 0.984"
5.906"	0	+ 1.181"

Mill edge tolerances upon request. Please contact your local sales representative for more information.

## Flatness measurement

Flatness tolerances conforms to provision of EN 10029, Class N. Tolerance class S is applied only subject to special agreement.

Nominal thickness (inches)	Normal tolerance, Class N		Special tolerance, Class S	
	Measurement length (inches)			
	39.370"	78.740"	39.370"	78.740"
0.118"* - 0.193"	0.354"	0.551"	**	**
0.197" - 0.311"	0.315"	0.472"	0.157"	0.315"
0.315" - 0.626"	0.276"	0.433"	0.118"	0.236"
0.591" - 0.980"	0.276"	0.394"	0.118"	0.236"
0.984" - 1.571"	0.236"	0.354"	0.118"	0.236"
1.575" - 6.102"	0.197"	0.315"	0.118"	0.236"

\* Restricted flatness tolerances apply to 0.118"- 0.157" thick plate. Further information is available from SSAB.

\*\* Subject to special agreement

Short waves (11.811" - 39.370") according to EN 10029. In the case of discrepancies, the given tolerances in the English version shall prevail.

# FLATNESS, EDGE CAMBER & OUT-OF-SQUARENESS

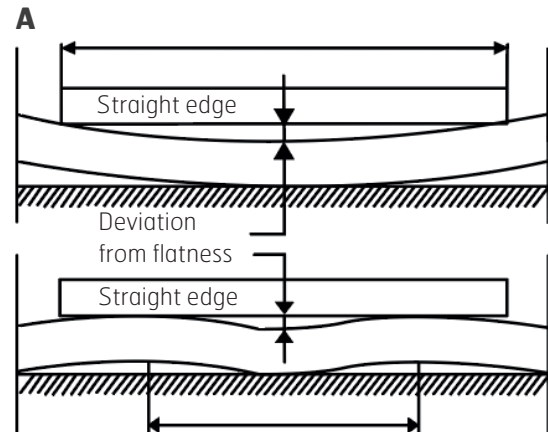
The information below is a presentation of how to inspect your SSAB deliveries using the product guarantees. This information is according to EN 10029 for plates. For more information, please contact your local sales representant or Tech Support.

## Flatness measurement

To determine the flatness deviation during production, the plate is measured manually or by laser. The measurement conforms to the manual procedure according to EN 10029.

Flatness measurement for plate is according to EN 10029. The plate is measured at least 0.984" from the long side of the plate and at least 7.874" from its short side. The vertical height is rounded off to the nearest mm. See figure A.

The flatness measurement shall always be performed when the plate is placed on a flat surface.

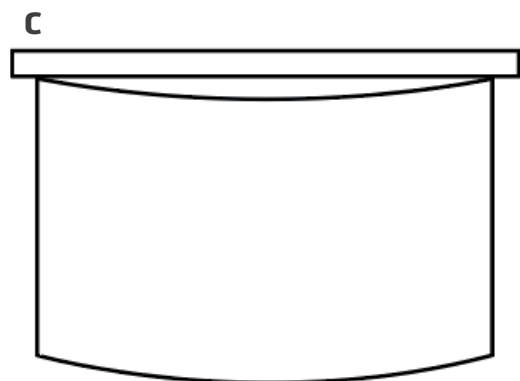
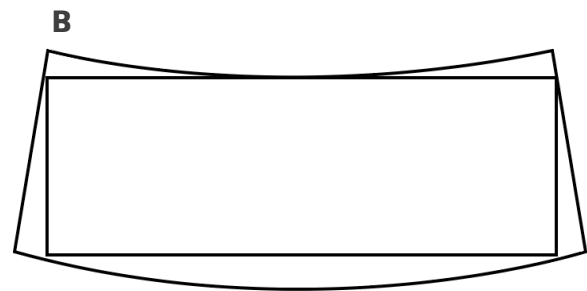


## Edge camber and out-of-squareness

For plate specified with normal edge camber and out of squareness in the order, the edge camber and out of squareness shall be so that it is possible to inscribe a rectangle with the dimensions of the ordered plate within the delivered size. See figure B.

The edge camber value is the maximum deviation between the longitudinal edge and the straight line joining the two ends of this edge. It is measured on the concave edge of the plate.

The out-of-squareness value is the orthogonal projection of one transverse edge on one longitudinal edge. See figure C.



# TESTING

Unless otherwise agreed, inspection and testing are carried out and the results are reported as specified in the relevant material standard or in our data sheets. When placing the order, always specify whether the material requires special inspection, the scope of such inspection, and also the type of inspection document required.

## Mechanical testing

Tensile testing according to ISO 6892.

Impact testing is performed in accordance with ISO 148-1.

Hardness testing in accordance with EN ISO 6506-1, 6507-1, 6508-1

## Ultrasonic testing

Ultrasonic testing is performed upon agreement according to EN 10160 or equivalent national standard. SSAB guarantees internal soundness corresponding to class E<sub>1</sub>, S<sub>1</sub>/ EN 10160 for plates in thicknesses up to and including 3.937". For plates above 3.937" thickness, SSAB guarantees internal soundness corresponding to class E<sub>0</sub>, S<sub>0</sub>/ EN 10160, unless otherwise agreed. For more information, please contact your local sales representative.

## Z-Testing

Almost all of the steels can be supplied with guaranteed properties in the through thickness direction, Z-plate according to EN 10164. For pressure vessel steel and offshore/shipping steel, unless otherwise agreed, the maximum thickness is 5.906". For structural steel with a yield strength up to 58 ksi the thickness limits are as follows; Z15 up to 3.937", Z25 up to 3.543" and Z35 up to 3.150". Z-Plate in higher thicknesses than here mentioned can be approved depending on grade and dimension.

## Testing<sup>1</sup>

As per EN 10160	Distance between parallel scanning lines (inches)	Min. defect area to register (in <sup>2</sup> )	Max. permissible defect area (in <sup>2</sup> )	Max. number of local defects (defects/ft <sup>2</sup> )
-	3.937"	1.55	15.5	10.764
S <sub>0</sub>	3.937"	1.55	7.75	215.28
S <sub>1</sub>	3.937"	0.155	1.55	161.46
S <sub>2</sub>	1.969"	0.077	0.155	107.64
S <sub>3</sub>	1.969"	0.031	0.077	107.64

As per EN 10160	Edge zone width <sup>2)</sup> (inches)	Min. defect length to register (inches)	Max. permissible defect length (inches)	Max. permissible defect area (in <sup>2</sup> )	Max. number of defects per 39.370" length
E <sub>0</sub>	1.969" - 3.937"	1.969"	3.937"	0.155	0.236"
E <sub>1</sub>	1.969" - 3.937"	0.984"	1.969"	0.077	0.197"
E <sub>2</sub>	1.969" - 3.937"	0.787"	1.575"	0.062	0.157"
E <sub>3</sub>	1.969" - 3.937"	0.591"	1.181"	0.046	0.118"
E <sub>4</sub>	1.969" - 3.937"	0.591"	0.787"	0.031	0.079"

<sup>1)</sup> Testing can be ordered and carried out either as total testing e.g E<sub>1</sub>, S<sub>1</sub> or E<sub>2</sub>, S<sub>2</sub> or as edge or surface testing individually e.g E<sub>1</sub>, S<sub>1</sub>.

<sup>2)</sup> The width of the edge zone on edge scanning varies with the plate thickness.

# DISTRIBUTION OF INSPECTION DOCUMENTS

SSAB has a certificate system that electronically produces, distributes and records all types of inspection documents. The documents are delivered electronically as PDF files. The certificate system offers excellent opportunities for simple and rational handling of inspection documents.

## Inspection documents

Unless otherwise agreed, certificates are issued in English in accordance with SS-EN 10204:2004. The certificates include the particulars specified in the material standard, which usually includes:

- Name of manufacturer.
- Clear reference to the purchase agreement and delivery batch.
- Material designation in accordance with the purchase agreement.
- Description of product.
- Nominal dimensions.
- Quantity.
- Results of inspection.
- Date of issue.

The following types are available:

### Inspection certificate 3.1.

The inspection certificate declares that the products delivered conform to the requirements of the purchase agreement. The results of testing are shown for the products that will be delivered or on inspection batches comprising part of the products delivered. The document is validated by an inspection representative who is authorized by the manufacturer and who is independent of the production department.

### Inspection certificate 3.2.

The inspection certificate declares that the products delivered conform to the requirements of the purchase agreement. The results of testing are shown for the products that will be delivered or on inspection batches comprising part of the products delivered. Document issued both by the inspection representative authorized by the manufacturer and either by an inspection representative authorized by the customer or by an inspector appointed in accordance with official regulations.

# EXAMPLE OF A CERTIFICATE ISSUED FROM OXELÖSUND



SSAB EMEA AB, SE-613 80 OXELÖSUND, Sweden

Inspection certificate EN 10 204 - 3.1		A02		Issuing department Quality inspection		A05		Purchaser order no		A07		Our order no		A08		Invoice no		A19		Certificate no and date		A03			
Purchaser A11 29986				Product		B01		Marking (Stamping)		B06		Standard/rules EN 10028 -3 Steel grade P355N		B02											
				Quantity B08		Dimensions [mm] T W L		B09-B11		Weight [kg]		B12		Deliv. Cond. B04		Internal code		B16							
				Consignee				59500 DOUAI		A06		Customer marks						B15							
MATERIAL ID																							B07		
Chemical composition																							C93-C99		
Heat no		C	Si	Mn	P	S	Cr	Ni	Mo	V	Ti	Cu	Al	Nb	N	C07	C11	C71-C92		Carbon equivalent etc C07 = V + Ti + Nb C11 = CR + MO + CU					
Testtype		C04	Millcode		C00	Specimen position		C01	Direc- tion		C02	Treat- ment		B05	Specimen type		C10	Temp [degr C]		C03	Test results				
Tensile Test		Top end		Transvers		Delivery condition		Rectangular		C11 Reh [MPa]		C12 Rm [MPa]		C13 A5 [%]											
Impact test		Top end		Transvers		Delivery condition		Charpy-V		C42 E [J]		C42 E [J]		C43 Ave [J]											
It is hereby certified that the material described above complies with the requirements of the order.		Z02		This certificate is produced with EDP and valid without signature		Z01		A22		A04															

# HOW TO READ A CERTIFICATE

Unless otherwise agreed, certificates are issued in English in accordance with SS-EN 10204:2004. Additional Information can be found in EN 10168. SSAB guarantees that the certificates are according to compliance and that the measured test result is according to the products performed result.

The basic rule of a certificate is that every box is containing information from the placed order data and the measured test result is from the specific ordered material. In the top end of the certificate you find reference information important for your and SSABs administration, these boxes are marked in the upper right corner with an A. This information is purchaser order no which is the customer reference number, SSABS order No, invoice No, certificate No and the date when the certificate was issued.

Below the administration information you will find information around the ordered product and it's visible appearance, these boxes are marked in the upper right corner with a B. This includes; marking, purchaser, consignment address, customer marks the product dimension and weight, delivery condition, steel grade and reference number. This section ends with the material ID, which is the product reference number from the production.

Last section includes measured testing results and information of special agreement, these boxes are marked in the upper right corner with a C. The box number are broken down by sections and specified below.

## Administration and delivery information

A01 - Production site where the certificates is issued from.  
A02 - Control standard.  
A03 - Certificate number and the issued date.  
A04 - Product logo and web address.  
A05 - Issuing dep, whom responsible for the document.  
A06 - Consignee /delivery address.  
A07 - Purchasers own reference (order) number.  
A08 - SSABs order number.  
A11 - Purchaser.  
A19 - Invoice number.  
A22 - CE mark.

## Mechanical testing and result

C00 - Millcode, test sample id.  
C01 - Specimen position on the plate.  
C02 - Test direction, transverse/along.  
C03 - Temperature the test was performed in.  
C04 - Test type.  
C10 - Specimen type.  
C71 - C92 - Chemical composition result.  
C93 - C99 - carbon equivalent equation.

## Product information

B01 - Ordered product.  
B02 - Standard/rules and steel grade.  
B04 - Delivery conditions.  
B05 - Treatment.  
B06 - Marking (stamping) on the plate.  
B07 - Material ID.  
B08 - Quantity, the amount of ordered plates.  
B09 - B011 - Thickness, width and length.  
B12 - Weight in kg.  
B15 - Customer marks.  
B16 - internal reference number.

## Control information

Z01 - Certificates of compliance.  
Z02 - Signatures from quality department.

# MARKING

All products are clearly marked on delivery. The steel grade and the product identity are stamped, unless the relevant standard specifies no stamping or after special agreement. For thicknesses of 0.197" or below and if stamping is not carried out for any other reason, stamping is replaced by marking with white paint.

## Product identity

All production systems (works, plants, facilities) within the SSAB group have their own production identity systems and identity codes. The product identity code combines numbers, letters and symbols in one text string. The maximum number of characters is 25. The product identity is unique and is specified by two groups or three groups of digits, with each group containing up to six or seven digits, respectively. These groups of digits give every product a unique identity. Example of product identities from SSAB are listed below. For certain production facilities, the location of the stamped marking may be shown by two white painted dots. Contact your local sales representative for more detailed options.

Heat number (6) - Serial number (6 or 7) = 13 - 14 characters.

Example: 095150 - 555621.

## Marking and stamping

The steel grade and plate identity are always low-stressed stamped perpendicular to the rolling direction. For products without stamping, the steel grade and product identity are marked and the rolling direction is ink marked with arrows. Marking with paint may be carried out in the direction of rolling.

The customer's mark, product dimensions of length, width and thickness, product identity and the pile number for internal use are marked on the product. The marking is performed with white paint dot matrix printing or black ink jet marking. The location of the stamp is occasionally indicated with two white paint dots.

## Brand marking

Unless otherwise agreed, to maintain traceability of the material at its destination SSABs products are marked as follows: Painted product is normally marked in a number of rows over the entire product surface. Unless otherwise agreed, a simplified steel grade designation and SSAB are painted. The product identity number can also be marked in rows over the product surface.

Note that the complete steel grade designation in accordance with the standard/data sheet or specification is stamped or is included in the paint marking.



# ANTI-CORROSION PAINTING

Unprotected steel plate will corrode. SSAB can therefore provide the plate with effective anti-corrosion treatment known as shop primer. The shop primer protects the product while it is in transit.

The primer types we use have been tested by various institutes to ensure good working conditions for the end user. If good ventilation is provided, the hygienic limit values will not be exceeded in conjunction with welding, cutting or grinding.

Regardless of the anti-corrosion treatment specified, the appearance and cleanliness of the steel surface before treatment are decisive for the effectiveness of the anti-corrosion treatment. We shot-blast the plate, which is then immediately anti-corrosion painted. The primers used are mainly of low-zinc silicate.

The plate we keep in stock is painted with low-zinc silicate primer, since it does not need to be removed before normal welding. In order to provide visual distinction, our steel grades are painted in different colors. Before selecting the final paint system, the relevant paint supplier should be consulted.

## Shop primers

Type	Color	Protection time	Remarks
Low zinc	grey	6 months	

Degree of blasting SA 2.5 as per ISO 8501-1.

## Dimensions of shot blast/painted plate

Dimension (inches)	Plate size (inches)	
	Min	Max
Plate thickness	0.157"	6.299"
Plate length	78.740"	575.983"
Plate width	39.370"	133.858"

# PALLETIZING

Our delivery standard presents rules and guidelines for palletizing the deliveries. When placing your order, always specify whether the material should be subject to special agreement.

The aim of the standard is to palletize the material in a way that avoids handling damage and that creates cost effective and manageable volumes.

For deliveries in which SSAB is responsible for loading, the goods are always secured in accordance with the laws and regulations in force at that time. To regulate who pays for freight and insurance, we apply either CIP or CIF 2020 delivery conditions.

## Concepts

Pallet	A platform loaded with packages. The pallets are separated with timber spacers measuring 2.48" x 3.543".
Stack	A partial load on a pallet. Separated from other stacks by timber spacers measuring 1.26" x 1.26".
Pallet label	A label attached to the top plate on a pallet containing the printed pallet number, legible text, bar code, painted colour code, quantity, weight, and the identity of the top plate.
Color	Painted colour coding on the short and/or coding long side of the plate for delivery by sea.
Short plate	Plate <240.157" long.

## General pallet rules

- The maximum pallet weight is 13,228 (US) tonnes.
- Thick and thin plates are never loaded on the same pallet, when order from stock
- Painted and unpainted plates are never loaded on the same pallet.
- The widest plate is always at the bottom on the pallet.
- Graduated width loading (widest plate on the pallet, gradually diminishing to the narrowest at the top) is employed for plate thicknesses <1.185".
- Random length loading (plates of different lengths are loaded in random order) is employed.
- Some thin plate may be strapped.

## Options

- Strapping with steel straps around both the pallet and the stack. 240.12" maximum plate length.
- Stack weights as agreed.
- Pallet weights as agreed.
- Special colour coding.
- Delivery codes outside the standard.
- Other requirements on dimensional separation.

## Optional marking

- On the top plate on a pallet or stack. Up to 3 lines with 21 characters (manuell marking)\* stack, up to 3 lines.
- Edge label attached on the thickness surface of the short side. Available in three variants with different information about the plate. Edge label possible above 8 mm thickness.

\* Carried out free of charge, if required.



# SERVICE AND SUPPORT

SSAB offers extensive service and support to customers. We have a long tradition of helping customers to develop their steel products and processes with our unique knowledge. Unlike other steel mills SSAB offers two different services, Tech Support and the Knowledge Service Center. We offer technical and innovation support as well as technical training, handbooks and tools to help you become more productive.

SSAB offers advanced logistics solutions, including stock services worldwide, mill-direct deliveries, processing and logistics management solutions.



## CONTACT INFORMATION

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SSAB is a Nordic and US-based steel company. SSAB offers value added products and services developed in close cooperation with its customers to create a stronger, lighter and more sustainable world. SSAB has employees in over 50 countries. SSAB has production facilities in Sweden, Finland and the US. SSAB is listed on Nasdaq Stockholm and has a secondary listing on Nasdaq Helsinki. [www.ssab.com](http://www.ssab.com).

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