

# Docol LA

## Cold reduced high strength micro alloyed steels (HSLA)

### Product

Docol LA grades are high strength low alloyed (HSLA- steels) steels intended for general presswork, forming and bending operations, offering consistent properties that assist modern rapid production methods. These grades can be bent, sheared and punched on standard workshop equipment. Slightly higher forces may be necessary but this does not generally cause problems. The consistency of the mechanical properties of Docol LA steels is guaranteed within the specified minimum and maximum values.

Select Docol LA as an option to downgauge from mild steel. This will not only save weight but the total cost will generally decrease as the quantity of steel needed is reduced.

Docol LA is suitable for hot-dip galvanizing up to yield strength 340 N/mm<sup>2</sup>.

These grades are fully weldable by standard methods.

### Dimension range

Thickness: 0.40 - 3.00 mm

Width: 600 - 1500 mm

The maximum width is depending on steel grade and thickness.

### Mechanical properties

Grade		Yield strength R <sub>e</sub> N/mm <sup>2</sup>		Tensile strength R <sub>m</sub> N/mm <sup>2</sup>		Elongation A <sub>80</sub> %	Bending radius 180° bend
		min	max	min	max	min	
SSAB	EN 10268:2006						
Docol 260LA	HC 260 LA	260	330	350	430	26	0xt
Docol 300LA	HC 300LA	300	380	380	480	23	0xt
Docol 340LA	HC 340LA	340	420	410	510	21	0xt
Docol 380LA	HC 380LA	380	480	440	560	19	0,25xt
Docol 420LA	HC 420LA	420	520	470	590	17	0,25xt
Docol 500LA	-	500	620	570	710	14	0,50xt

### Chemical composition

(typical values)

Steel grade	C %	Si %	Mn %	P %	S %	Al %	Nb %
Docol 260LA	0,05	0,01	0,40	0,01	0,01	0,04	0,01
Docol 300LA	0,05	0,01	0,40	0,01	0,01	0,04	0,01
Docol 340LA	0,05	0,01	0,40	0,01	0,01	0,04	0,03
Docol 380LA	0,05	0,01	0,50	0,01	0,01	0,04	0,05
Docol 420LA	0,05	0,20	0,60	0,01	0,01	0,04	0,04
Docol 500LA	0,06	0,40	1,20	0,01	0,005	0,04	0,05

## Welding

Docol LA offer excellent welding characteristics. All the conventional fusion welding methods can be used. For spot welding it is recommended to use increased electrode force and weld time to optimise the weld quality.

The following filler materials (matching) are recommended for welding with shielded metal arc and gas metal arc methods.

Steel grade	Manual metal arc welding (MMA)	Gas metal arc welding (MAG)
Docol 260LA	AWS: A5.1 E7018	AWS: A5.18 ER70S-X
Docol 300LA	-"-	-"-
Docol 340LA	-"-	-"-
Docol 380LA	AWS: A5.5 E9018	AWS: A5.18 ER80S-X
Docol 420LA	-"-	-"-
Docol 500LA	-"-	-"-

## Technical service and information

Knowledge Service Center will be pleased to assist with additional information concerning this product from SSAB Tunnpåt.

The particulars in this data sheet are correct at the time of going to print and are intended to give general guidance for the use of the product. Subject to changes arising from continual product development. The information and data must not be regarded as guaranteed values, unless specially confirmed in writing.

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