

**Product**

A weather resistant steel in the Domex range characterized by:

- Corrosion resistance
- Extra high strength
- Good formability
- Good impact toughness
- Good weldability

The unique combination of these properties is achieved by fine grain size, precipitation hardening and closely controlled hot rolling practice. Moreover, this steel is weather resistant, i.e. during outdoor usage within a couple of years, a smooth compact oxide

layer is formed that inhibits further corrosion.

**Applications**

Typical applications are vehicle underbodies, container frame structures, steel bridges and building constructions, chimney cases, rail wagons, snow sheds, different kinds of masts i.e. applications where a corrosion resistant steel is needed together with high strength.

**Bending**

For sheet thickness 3- 6mm the minimum

inner bending radius for 90° bend is 1xt, using a die opening of 10xt.

**Impact toughness**

Charpy-V test is carried out with longitudinal test specimens. Domex 550 W can be delivered with impact toughness guarantee at -40°C and 27J.

**Heat treatment**

Stress relieving should be carried out below 580°C. Heating above this temperature, such as normalising or hot forming, reduces the strength and should be avoided.

**Welding**

The weldability of Domex 550 W is good. No preheating is required. All conventional welding methods can be used. To obtain the same corrosion resistance in the weldment as in the base metal special filler metals should be used. The producers of filler metals have given the following recommendations for welding of this type of weather resistant steels:

Producer	MMA (Manual metall arc)	MAG (Gas metalarc)	FCAW (Flux cored arc)
ESAB	OK 73.08	OK Autrod 13.26 OK	Tubrod 14.01
Filarc	85CP	PZ 6012	PZ 6112
Oerlikon	Tencord Kb	Spoolcord TD-COR	Fluxofil 18

OK Autrod 13.26 is a matching wire while the other filler metals are slightly undermatching in relation to the base metal strength of Domex 550 W

**Mechanical Properties**

Yield Strength $R_{0.01}$ N/mm <sup>2</sup>	Tensile Strength $R_m$ N/mm <sup>2</sup>	Elongation $A_5$ %
min 550	min 600	min 18

**Chemical composition**

C %	Si %	Mn %	P %	Cu %	Cr %	Micro alloying elements
max	max	max	max	max	max	
0.10	0.45	0.80	0.12	0.35	0.95	added

**Dimension Range**

Domex 550 W can be delivered in dimensions according to table below.

Thickness (mm)	Width (mill edge) (mm)	Length (mm)
3	1280	1500-13000
4	1280	1500-13000
5	1280	1500-13000
6	1280	1500-13000

For special requirements other thicknesses (within the range 3-6mm) and widths can be delivered.