

# LDX 2101

For welding steels such as Outokumpu	EN	ASTM	BS	NF	SS
LDX 2101®	1.4162	S32101	–	–	–

## Standard designations

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## Characteristics and welding directions

AVESTA LDX 2101 is designed for welding the ferritic-austenitic (duplex) stainless steel Outokumpu LDX 2101. LDX 2101 is a "lean duplex" steel with excellent strength and medium corrosion resistance. It is mainly intended for applications such as civil engineering, storage tanks, containers etc.

AVESTA LDX 2101 is "over alloyed" with respect to nickel to ensure the right ferrite balance in the weld metal.

The weldability of LDX 2101 is excellent. However, duplex steels are somewhat more difficult to weld compared to austenitic steels such as 316L, mainly with respect to fluidity and penetration into the parent metals. Welding without filler metal (TIG dressing) is not recommended.

## Welding data

Diameter, mm	Current, A	Voltage, V
1.20	60 – 80	9 – 11
1.60	80 – 110	10 – 12
2.40	130 – 180	16 – 19
3.20	160 – 220	17 – 20

For further recommendations, please contact Avesta Welding.

## Shielding gas

Ar (99.95%). Ar with an addition of up to 2% nitrogen (N<sub>2</sub>) is advantageous and will have a positive effect on both mechanical and corrosion properties.

Gas flow rate 4 – 8 l/min.

## Chemical composition, wire (typical values, %)

C	Si	Mn	Cr	Ni	Mo	N
0.02	0.40	0.5	23.0	7.0	<0.5	0.14

Ferrite 40 FN WRC-92

## Mechanical properties

	Typical values (IIW)	Min. values EN ISO 14343
Yield strength R <sub>p0,2</sub>	550 N/mm <sup>2</sup>	–
Tensile strength R <sub>m</sub>	730 N/mm <sup>2</sup>	–
Elongation A <sub>5</sub>	30 %	–
Impact strength KV		
+20°C	180 J	
–40°C	180 J	

**Interpass temperature:** Max. 150°C.

**Heat input:** 0.5 – 2.0 kJ/mm.

**Heat treatment:** Generally none (in special cases quench annealing at 1020 – 1080°C).

**Structure:** Austenite with 35 – 65% ferrite.

**Scaling temperature:** Approx. 850°C (air).

**Corrosion resistance:** Good resistance to general corrosion. Corrosion resistance on a level with, or better than, AISI 304.

## Approvals

- CE
- TÜV