

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. The steel is mainly intended for applications such as civil engineering, storage tanks, containers etc.

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 penetration into the parent metals.

Welding data

Diameter, mm	Current, A	Voltage, V
2.40	300 – 500	28 – 33
3.20	400 – 600	29 – 34

Welding flux: AVESTA Flux 805.

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

Approvals

In combination with flux
805 • CE • TÜV

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

Chemical composition, all weld metal (typical values in combination with flux, %)

Flux	C	Si	Mn	Cr	Ni	Mo	FN ¹⁾
805	0.02	0.6	0.4	23.5	6.5	< 0.5	40

¹⁾ According to WRC-92.

Mechanical properties

Typical values (IIW) in combination
with flux

	805
Yield strength $R_{p0,2}$	570 N/mm ²
Tensile strength R_m	750 N/mm ²
Elongation A_5	25 %
Impact strength KV	
+20°C	140 J
–40°C	60 J
Hardness	260 Brinell

Interpass temperature: Max. 150°C.

Heat input: 0.5 – 2.5 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).