

EN 1.4482 UNS S32001 SS LD24

Sverdrup Steel SS LD24 is a low alloyed Lean Duplex stainless steel developed with increased Cr, Mo and N content to achieve a PRE of ≥ 24 .

The microstructure consists of a phase balance of approximately 50 % ferrite and 50 % austenite that provides much higher yield strength than AISI 304 and AISI 316. Also, it exhibits good formability and corrosion resistance.

PRE value ($\%Cr + 3.3\%Mo + 16\%N$) of ≥ 24 .

UNS S32001 IS CHARACTERIZED BY:

- Good resistance to stress corrosion cracking.
- Good resistance to general corrosion.
- High mechanical strength.
- High resistance to erosion corrosion and corrosion fatigue.

EN 1.4482 / UNS S32001 / SS LD24

CHEMICAL COMPOSITIONS

Weight %	C	Si	Mn	Cr	Ni	Mo	N	S	P
Min.			4,00	19,5	1,5		0,05		
Max.	0,03	1,00	6,00	21,50	3,0	0,60	0,17	0,015	0,035

Product Standards: EN 1.4482, UNS S32001, EN 10088-2, EN 10088-4, EN 10028-7, ASTM A240, ASTM A480, ASME SA240

Approvals: Sverdrup Steel MDS SS LD24

MECHANICAL PROPERTIES

	Yield Rp0.2, MPa	Tensile Rm, MPa	Elongation [%]	Hardness [HB]	Pre	Surf.
CR (Coil)	≥ 530	700-900	≥ 25		24	2B
HR (Coil)	≥ 480	660-900	≥ 30	≤ 290	24	1D
PLATE	≥ 450	650-850	≥ 30	≤ 290	24	1D

PLATE

Thickness	1,5	2	2,5	3	4	5	6	8	10	12	15	20	25	30
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Our standard stock formats are 1500 x 3000 mm and 1500 x 6000 mm

COIL

1500 mm	1	1,5	2	2,5	3	4	5	6
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Corrosion Resistance

Sverdrups Steel has created a Lean Duplex with guaranteed PRE ≥ 24. In general SS LD24 exhibits good corrosion resistance, better than AISI 304 austenitic and can even be compared with 316 in most cases.

Stress Corrosion Cracking

SS LD24 is more resistant to stress corrosion cracking than austenitic stainless steels.

Atmospheric Corrosion

SS LD24 is more resistant to atmospheric corrosion than AISI 304, being similar to AISI 316.

Welding

SS LD24 can be welded using most of the conventional welding methods, such as MMA/SMAW, TIG, MIG, SAW, FCAW, laser, etc. Due to its two-phase structure, it is resistant to hot cracking, grain coarsening embrittlement and martensite formation. Set up recommendations for proper welds conditions include over alloyed filler material, a heat input of 2 KJ/mm maximum and nitrogen addition in the shielding gas. As for other duplex stainless steels, preheating or after welding process heat treatments are not recommended for SS LD24.