EXATON Product Data Sheet — Sandvik 25.10.4.L

W 'Tungsten inert gas arc welding'

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
Per-Ake Bjornstedt	P-O Oskarsson	Per-Ake Bjornstedt	EN008786	EN008697	2019-10-03	1 (2)

REASON FOR ISSUE

Elongation value updated.

GENERAL

25.10.4.L is used for welding of Sandvik SAF 2507 and other super-duplex steels. The grade is characterized by excellent resistance to stress corrosion in chloride-bearing environments and excellent resistance to pitting and crevice corrosion.

25.10.4.L can also be used for welding Sandvik SAF 2205 and corresponding duplex steels when the highest possible corrosion resistance is required. It is used for TIG-welding.

CLASSIFICATIONS Wire Electrode

EN ISO 14343	25 9 4 N L
SFA/AWS A5.9	ER2594
Werkstoffnummer	1.4410*

APPROVALS

CE	EN 13479
DNV-GL	duplex stainless steels
VdTÜV	06592

CHEMICAL COMPOSITION

	All Weld Metal (%)		Wire/Strip (%)		
	Max	**Nom**	**Min**	**Max**	**Nom**
C	0.020	0.01		0.020	0.012
Si		0.4	0.2	0.5	0.3
Mn		0.4	0.3	0.7	0.4
P		0.02		0.020	0.015
S	0.015	0.001		0.015	0.0005
Cr		25	24	26	25
Ni		9.5	9	10.5	9.5
Mo		3.9	3.5	4.5	4
W		0.01		0.1	0.01
Co					0.04
V					0.05
Nb		0.01		0.05	0.01
Cu		0.1		0.3	0.07
Ti					0.003
N		0.24	0.2	0.3	0.25
PRE		41.7	41.5		42
FN WRC-92		52			50

MECHANICAL PROPERTIES OF WELD METAL

	All Weld Metal	
	As welded	
Properties	**Min**	**Typ**
Rp0.2 (MPa)	550	650
Rm (MPa)	760	850
A5 (%)	18	25
Charpy V at 20°C (J)		210
Charpy V at -40°C (J)		170
Charpy V at -46°C (J)		150
Charpy V at -50°C (J)		140

OTHER DATA

CORROSION RESISTANCE: 25.10.4.L has a high resistance to intergranular corrosion and pitting. The grade passes the ASTM G48A test at 40°C (105°F). The filler also has good resistance to stress corrosion cracking, especially in environments containing H2S or chlorides.

RECOMMENDED WELDING DATA:

The parameters for TIG welding depend largely upon the base metal thickness and the welding application.

Electrode negative and a shielding gas of argon + 2-3 % N2 should be used.

RECOMMENDED THERMAL DATA:

The interpass temperature should be kept below 150°C (302°F) and the heat input between 0.2 and 1.5kJ/mm for joint welding. Preheating is normally not recommended. In case post weld heat treatment is needed from a construction point of view, contact Sandvik for support.

WELD METAL CHARACTERISTICS: 25.10.4.L gives an austenitic-ferritic (duplex) microstructure with approximately 40 FN, calculated from the WRC-92 diagram