

EXATON Product Data Sheet

Exaton 25.22.2.LMn

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	EN008931	EN008728	2020-01-21	1 (2)

REASON FOR ISSUE

Product name changed from Sandvik to Exaton.

GENERAL

25.22.2.LMn is a manganese alloyed chromium-nickel-molybdenum filler material used for welding Exaton 2RE69 (UNS S31050, 1.4466), Exaton 3R60 U.G. (UNS S31603, 1.4435). The weld deposit has excellent low temperature toughness that makes it suitable for joining stainless steels for cryogenic service.

25.22.2.LMn has extensively been used successfully in all critical high-pressure units of modern urea processes, such as:

Stripper tubes - Stamicarbon, Montedison IDR

Outerlayer of bimetallic (stripper tubes) - Saipem

Ferrules - All processes

Carbamate condensers - All processes

Decomposers - Montedison

Reactor coils - UTI

25.22.2.LMn has also found extensive use in other corrosive environments in fertilizer plants, such as:

– Nitric acid cooler/condensers cooled with polluted cooling water

– Heating coils and pipe in NPK plants – Norsk Hydro process

It is used for TIG-welding.

CLASSIFICATIONS Wire Electrode

EN ISO 14343-A W 25 22 2 N L
SFA/AWS A5.9 ER"310LMo"
Werkstoffnummer 1.4466*

APPROVALS

CE EN 13479
VdTÜV 03102

CHEMICAL COMPOSITION

All Weld Metal (%) Wire/Strip (%)

	Nom	Min	Max	Nom
C	0.011		0.018	0.010
Si	0.10		0.2	0.12
Mn	4.4	4.1	4.8	4.6
P	0.012		0.015	0.013
S	0.002		0.010	0.003
Cr	25.1	24.4	25.5	25
Ni	21.9	21.4	25.7	22
Mo	2.2	1.9	2.6	2.2
Co	0.03			0.03
Nb	0.01		0.05	0.01
Cu	0.04		0.1	0.02
B	0.0016	0.0015	0.0027	0.0018
N	0.12	0.10	0.16	0.14

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MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

Properties	As welded	PWHT 400°C
	Typ	Typ
Rp0.2 (MPa)	335	225
Rm (MPa)	580	410
A5 (%)	42	29
Charpy V at 20°C (J)	120	
Charpy V at -196°C (J)	100	

OTHER DATA

CORROSION RESISTANCE: 25.22.2.LMn has been developed primarily to cope with the severe corrosion conditions existing in the urea industry. Therefore, this filler has excellent resistance to corrosion in ammonium carbamate and nitric acid. 25.22.2.LMn also exhibits excellent resistance to intergranular corrosion. As an example, the corrosion rate in a Huey test for TIG weld metal, (5 x 48 hours in boiling 65% HNO₃), is below 0.12 mm/year.

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 or helium should be used to prevent oxidation of the weld metal.

WELD METAL CHARACTERISTICS: Fully austenitic.

The wire contains < 0.6 % ferrite.

Hardness nominal 170 Hv10.