

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
Per-Ake Bjornstedt	P-O Oskarsson	Per-Ake Bjornstedt	EN008911	EN008808	2020-01-21	1 (2)

REASON FOR ISSUE

Product name changed from Sandvik to Exaton.

GENERAL

19.9.L is used for TIG welding and is suitable for joining stainless steels of the 18Cr/8Ni/ELC and 18Cr/8Ni/Nb types for service temperatures up to 350°C (660 F). 19.9.L is approved by TÜV-Rheinland for use at cryogenic temperatures down to 4°K (-269°C). It is used for TIG-welding.

Shielding Gas: I1 (EN ISO 14175)**Alloy Type:** Austenitic (with approx. 8 % ferrite) 19% Cr - 9% Ni - Low C**CLASSIFICATIONS Wire Electrode****APPROVALS**

EN ISO 14343-A W 19 9 L

CE EN 13479

SFA/AWS A5.9 ER308L

VdTÜV 00064

Werkstoffnummer 1.4316

CHEMICAL COMPOSITION**All Weld Metal (%) Wire/Strip (%)**

	Max	Nom	Min	Max	Nom
C	0.02	0.012		0.025	0.010
Si		0.4	0.2	0.6	0.4
Mn		1.7	1.4	2.1	1.9
P		0.020		0.025	0.020
S		0.010		0.015	0.009
Cr		19.9	19.5	21	20
Ni		10.1	9.0	11.0	10
Mo		0.3		0.5	0.2
Co		0.05		0.20	0.10
Nb		0.01		0.05	0.01
Cu		0.15		0.3	0.2
Ti		0.003			0.003
N		0.06	0.04	0.08	0.05
FN WRC-92		9			9

MECHANICAL PROPERTIES OF WELD METAL**All Weld Metal**

Properties	As welded	
	Min	Typ
Rp0.2 (MPa)	320	490
Rm (MPa)	520	600
A5 (%)	35	37
Charpy V at 20°C (J)		145
Charpy V at -196°C (J)		72
Charpy V at -269°C (J)		40

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OTHER DATA

CORROSION PROPERTIES: 19.9.L has good resistance to general corrosion and due to its low carbon content, good resistance to intercrystalline corrosion. It also has good resistance to oxidizing agents. Example: Huey test for MIG weld metal (5 x 48 hours in boiling 65% HNO₃). Rate of corrosion mean value, 0.11 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: Austenitic microstructure with ferrite number 10FN according to the WRC-1992 (based on aim analysis).
