EXATON Product Data Sheet

W 'Tungsten inert gas arc welding'

Exaton SX

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
Per Ake Bjornstedt	P-O Oskarsson	Per Ake Bjornstedt	EN010787	EN010628	2023-07-11	1 (2)

REASON FOR ISSUE

Classification and General amended.

GENERAL

Exaton SX is a high silicon containing austenitic stainless steel wire for joining grades, such as UNS S32615 (e.g. Alleima® SX). The wire is developed for use in concentrated sulfuric acid and in high concentrated nitric acid. Exaton SX GTAW is used for joining and overlay welding.

Shielding Gas: I1, I3 (EN ISO 14175) **Alloy Type:** Austenitic - 19%Cr 13%Ni 5%Si 2%Cu - Low C

CLASSIFICATIONS Wire Electrode

EN ISO 14343-A W Z 18 13 Si Cu L

APPROVALS

CE EN 13479

UKCA EN 13479

CHEMICAL COMPOSITION

	All Weld Metal (%)			Wire/Strip (%)
	Nom	Min	Max	Nom
C	0.01		0.018	0.01
Si	4.8	4.7	5.3	4.9
Mn	1.7	1.3	2.2	1.7
P	0.014		0.015	0.011
S	0.001		0.005	0.002
Cr	18.4	17.8	19.0	18.5
Ni	13.2	12.9	13.9	13.5
Mo	0.03		0.1	0.02
Co	0.03		0.1	0.02
Nb	0.01		0.01	0.01
Cu	1.9	1.6	2.4	2.0
N	0.04	0.03	0.08	0.06

MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

Condition	Rp0.2 [MPa/ksi]		Rm [MPa/ksi]			A5 [%]	
	Min	Typ	Min	Max	Typ	Min	Typ
As welded		420/61			750/109		35

Comments:
Z Typical - 30%

Condition	Temp [°C/°F]	Charpy V [J/ft-lb]	
		Min	Typ
As welded	20/68		50/37

Comments:

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OTHER DATA

CORROSION RESISTANCE ALL WELD METAL:

Exaton SX has excellent corrosion resistance in hot (90-120°C) concentrated (>96%) sulfuric acid, both in static and dynamic conditions. The corrosion resistance is close to that of the parent material.

Hardness:

Typical 230 HV10.

RECOMMENDED WELDING DATA:

Always weld with as low heat input as possible (max 1.0 kJ/mm), keep interpass temperature below 60°C (140°F) and no autogenous welding. Thorough cleaning of joints before welding and use pickling paste for post weld cleaning.

If an Argon/Helium mixture is used as shielding gas, 20-30% He is suggested.