

EXATON Product Data Sheet

G 'Gas-shielded metal-arc welding'

Exaton 27.31.4.LCu

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
Per-Ake Bjornstedt	P-O Oskarsson	Per-Ake Bjornstedt	EN009158	EN009079	2020-04-27	1 (2)

REASON FOR ISSUE

Product Description amended.

GENERAL

Exaton 27.31.4.LCu is a copper alloyed chromium-nickel-molybdenum filler material for welding of high-alloy austenitic stainless steels such as Sanicro 28 (UNS S08028, 1.4563) type. It is also suitable for joining Sanicro 41 (UNS N08825, 2.4858) and other similar materials.

Due to its outstanding corrosion properties, Exaton 27.31.4.LCu can be used in the most diverse environments, such as phosphoric and sulphuric acid, sour gas service in the oil & gas industry and chloride bearing seawater. Typical applications are found in heat exchangers, evaporators and transport piping. It is used for MIG/MAG welding.

CLASSIFICATIONS Wire Electrode

EN ISO 14343-A G 27 31 4 Cu L
SFA/AWS A5.9 ER383

APPROVALS

CE EN 13479
NAKS/HAKC 1.2mm

CHEMICAL COMPOSITION

Wire/Strip (%)

	Nom
C	<=0.020
Si	<=0.2
Mn	1.7
P	<=0.015
S	<=0.010
Cr	27
Ni	31
Mo	3.5
Cu	1

MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

Properties	As welded Typ
Rp0.2 (MPa)	360
Rm (MPa)	540
Z (%)	65
	Comments: Elongation, A = 35

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ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H		Feed			U
$\emptyset$	Min	Max	Nom	Nom	Min	Max	Min	Max	Min	Max
0.8	40	120	12.0				4	8	15	19
1.0	60	220	12-18				4	12	15	28
1.2	150	260	18.0				3	10	24	29
1.6	230	350	18.0				3	5	25	30

W = Gas consumption (l / min)

η = Recovery, g weld metal / 100g wire (%)

H = Deposit rate (kg weld metal / hour arc time)

Feed = Feeding rate (m/min)

U = Arc voltage (V)

OTHER DATA

CORROSION RESISTANCE: Exaton 27.31.4.LCu has high resistance to general corrosion, particularly in contaminated technical phosphoric acid. It has also very good resistance to intergranular corrosion and stress corrosion cracking. For example in 50% sulphuric acid at 80 °C for 1+3+3 days, the corrosion rate is about 0.23 mm/year.

RECOMMENDED WELDING DATA:

Electrode positive is used to give good penetration in all types of welded joint.

Exaton can provide recommendations for shielding gases.

Short-arc welding is used with light gauge material of less than about 3 mm, in depositing root runs, and in welding out-of-flat positions.

The higher the inductance in short-arc welding, the higher the fluidity of the molten pool.

Spray-arc welding is normally used for heavier gauge material.

WELD METAL CHARACTERISTICS: Fully austenitic.