

EXATON Product Data Sheet

G 'Gas-shielded metal-arc welding'

Exaton Ni72HP

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
Per-Ake Bjornstedt	P-O Oskarsson	Per-Ake Bjornstedt	EN009117	EN008903	2020-02-26	1 (2)

REASON FOR ISSUE

Updating chem and mech prop and name change Sandvik to Exaton

GENERAL

Exaton Ni72HP is filler material for joining NiCrFe alloys, 9% Ni steels used at cryogenic temperatures, stainless steels to carbon steels, high service temperature NiCu alloys to carbon steels and NiCu alloys to nickel alloys. Exaton Ni72HP can be used in air up to 1175°C (2145°F) and in sulphur dioxide atmospheres up to 800°C (1470°F). It is used for MIG/MAG welding.

CLASSIFICATIONS Wire Electrode

SFA/AWS A5.14	ERNiCr-3
EN ISO 18274	S Ni 6082 (NiCr20Mn3Nb)

APPROVALS

CE	EN 13479
VdTÜV	00073

CHEMICAL COMPOSITION

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

	Nom	Min	Max	Nom
C	<0.02		0.05	<=0.03
Si	0.01		0.30	0.1
Mn	3.2	2.5	3.5	3
P	<0.003		0.03	<=0.01
S	0.003		0.015	<=0.01
Cr	20	18.0	22.0	20.0
Ni	73	67.0		73
Mo	0.01			≤0.05
Co	<0.02			≤0.10
Nb	2.2			2.5
Cu	0.01		0.10	<=0.05
Al				0.4
Ti	0.4		0.75	0.4
Fe	≤1		3.0	<=1
N	0.03			<=0.05
Nb+Ta	2.5	2.0	3.0	2.6

MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

Properties	As welded	
	Min	Typ
Rp0.2 (MPa)	390	420
Rm (MPa)	550	660
A5 (%)		35
Z (%)		40

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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 - ALL-WELD METAL: Exaton Ni72HP has very good resistance to general corrosion, stress corrosion cracking, and due to its low carbon and high chromium contents, good resistance to intergranular corrosion.

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.

MICROSTRUCTURE - ALL-WELD METAL: Fully austenitic