



# Product Data Sheet

E 'Manual metal-arc welding'

# OK NiCrMo-5

Formerly OK 92.35

Prepared by Helene Rasmuson	Qualified by Tero Tolonen	Approved by Tapio Huhtala	Reg no EN006283	Cancelling None	Reg date 2013-11-11	Page 1 (2)
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## REASON FOR ISSUE

New product. Changed name from OK 92.35.

## GENERAL

OK NiCrMo-5 deposits an all weld metal that is similar to AWS classification ENiCrMo-5.

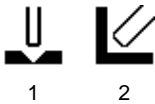
The all weld metal consists of a Ni-Cr-Mo-W alloy of Hastelloy C type. The weld metal is tough and work hardens. The high temperature properties regarding tensile strength, hardness, thermal shock and scaling are good. It is resistant to damp chlorine gas and to hydrochloric-, nitric-, sulphuric- and phosphoric acids at room temperature.

Typical applications and welding procedures recommendations are given under the heading "Other Data".

**Min AC OCV:** 70  
**Polarity:** DC+, AC

**Alloy Type:** Nickel alloy  
**Coating Type:** Rutile Basic

## WELDING POSITIONS



## CLASSIFICATIONS Electrode

EN 14700      E Z Ni2

## APPROVALS

Not applicable

## CHEMICAL COMPOSITION

### All Weld Metal (%)

	Min	Max
C	0.02	0.10
Si	0.4	1.0
Mn	0.4	1.0
P		0.03
S		0.02
Cr	14.5	16.5
Ni	51.0	64.0
Mo	15	18
W	3.0	4.6
Fe	4.0	7.0

## MECHANICAL PROPERTIES OF WELD METAL

Properties	ISO
	As welded Typ
Rp0.2 (MPa)	515
Rm (MPa)	750
A5 (%)	17



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## ECONOMICS & CURRENT DATA

Dimension (mm) Ø x Length	Current (A)		W	η	N	B	H	T	U	Welding Positions
	Min	Max								
2.5 x 300	65	110	2.9	190	0.61	56	1.1	62	18	1,2
3.2 x 350	110	150	5.8	185	0.63	28	1.6	86	18	1,2
4.0 x 350	160	200	8.4	185	0.64	19	2.3	89	20	1,2
5.0 x 350	190	250	13.6	190	0.65	11	3.1	106	20	1,2

**W** = Weight (kg / 100 electrodes)

**η** = Efficiency (g weld metal x 100 / g core wire)

**N** = Effective value (kg weld metal / kg electrodes)

**B** = Changes (number of electrodes / kg weld metal)

**H** = Deposit rate at 90% of max current (kg weld metal / hour arc time)

**T** = Fusion time at 90% of max current (s / electrode)

**U** = Arc voltage (V)

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## OTHER DATA

Typical applications:

Hardfacing:- hot forging dies, hot working tools and hot shear blades.

Joining:- Nimonic and Inconel alloys and these alloys to carbon- and alloy steels.

Cladding:- Corrosion-and wear resistant layers on valves and pump components.

Welding procedure:

When welding Ni-alloys it is important that area to be welded is clean. Swarf, dirt, paint and oxides should be removed. Preferably by grinding, blasting or pickling. In some cases stainless steel brushing followed by degreasing may be enough.

Welding is normally done without preheating and with low interpass temperature. Small weld pools and lowest possible heat input should be applied.

Weld metal hardness: as welded, 240-260 HV ; work hardened, 40-45 HRC.

Machinability: Good (as welded)

Redrying the electrodes: 350 °C, 2 h.

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