



Product Data Sheet

E 'Manual metal-arc welding'

OK Tooltrode 50

Former OK 85.58

Prepared by A-C Thorsson	Qualified by Tero Borg	Approved by Tapio Huhtala	Reg no EN007059	Cancelling EN006245	Reg date 2016-02-15	Page 1 (2)
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REASON FOR ISSUE

Product description and information under Other Data revised.

GENERAL

Electrode for surfacing hot working tools. Suitable for service temperatures up to about 550 °C and applications where toughness and good wear resistance are required. Typical applications include hot working blades and shears, punches and bottom dies.

Preheating and interpass temperature should be minimum 200°C to avoid issues with cracking.

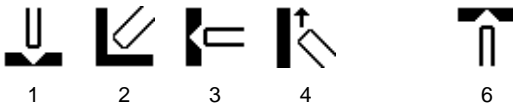
Min AC OCV: 65

Alloy Type: High speed steel

Polarity: AC, DC+

Coating Type: Lime Basic

WELDING POSITIONS



CLASSIFICATIONS Electrode

EN 14700

E Z Fe3

CHEMICAL COMPOSITION

All Weld Metal (%)

	Min	Max
C	0.30	0.40
Si	0.7	1.5
Mn	0.6	1.4
P		0.03
S		0.03
Cr	1.30	2.40
W	6.5	9.5
Co	1.6	2.4
Nb	0.7	1.0

ECONOMICS & CURRENT DATA

Dimension (mm) Ø x Length	Current (A)		W	η	N	B	H	T	U	Welding Positions
	Min	Max								
2.5 x 350	70	110	2.1	115	0.65	72	0.9	53	22	1,2,3,4,6
3.2 x 350	100	150	3.6	115	0.63	45	1.3	62	23	1,2,3,4,6
4.0 x 350	130	190	5.3	115	0.63	30	1.7	75	23	1,2,3,4
5.0 x 350	180	250	8.3	120	0.66	18	2.2	88	25	1,2,3

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

Welding:

Preheat and interpass temperature shall, for most applications, be at least 200 °C, preferably 500 °C.

Weld metal hardness, typical:

As welded, 1, 2 or 3 passes on mild steel, 47-52 HRC (preheat and interpass temperature 350 °C).

After tempering 1 hour:

°C.....HRC

10051

20051

30052

40053

50053

55055

60053

65045

70035

Annealing and hardening:

Soft annealing at 850 °C. Hereafter, cooling at 10 °C/hour down to 650 °C. Then cooling in air.

Hardening by quenching from 1100-1150 °C in air or oil.

Machinability: Grinding only

Abrasion resistance: Good

High temperature resistance: Very good

Redrying: 200 °C, 2h.
