



# Product Data Sheet

E 'Manual metal-arc welding'

## OK Weartrode 30

Former OK 83.28

|              |              |               |          |            |            |       |
|--------------|--------------|---------------|----------|------------|------------|-------|
| Prepared by  | Qualified by | Approved by   | Reg no   | Cancelling | Reg date   | Page  |
| A-C Thorsson | Tero Borg    | Tapio Huhtala | EN010036 | EN007049   | 2022-06-14 | 1 (2) |

### REASON FOR ISSUE

CE approval removed.

### GENERAL

Electrode depositing a low alloy steel for the protection of parts exposed to metallic wear.

Typical application include rail and rail crossing section, cog wheels of cast steel, detail in rolling mills, e.g. grooved rollers and clutches.

Weld metal hardness approximately 30 HRC.

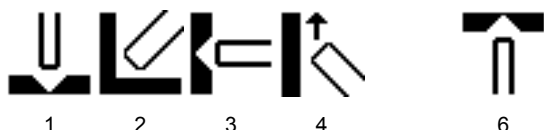
**Min AC OCV:** 65

**Alloy Type:** Martensitic steel

**Polarity:** AC, DC+

**Coating Type:** Lime Basic

### WELDING POSITIONS



### CLASSIFICATIONS Electrode

EN 14700

E Z Fe1

### APPROVALS

DB

82.039.07

### CHEMICAL COMPOSITION

#### All Weld Metal (%)

|    | Min  | Max  |
|----|------|------|
| C  | 0.06 | 0.14 |
| Si |      | 0.7  |
| Mn | 0.4  | 1.0  |
| P  |      | 0.03 |
| S  |      | 0.03 |
| Cr | 2.5  | 3.9  |
| Mo |      | 0.1  |
| W  |      | 0.1  |
| V  |      | 0.1  |



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## ECONOMICS & CURRENT DATA

| Dimension                         | Current (A) |     | W    | $\eta$ | N   | B   | H                      | T   | U   | Welding Positions |
|-----------------------------------|-------------|-----|------|--------|-----|-----|------------------------|-----|-----|-------------------|
| $\varnothing$ x Length            | Min         | Max | Nom  | Nom    | Nom | Nom | Nom                    | Nom | Nom |                   |
| 2.5 x 350 mm<br>(0.098 x 13.8 in) | 60          | 90  | 2.3  | 120    | 64  | 69  | 0.7 kg/h<br>(1.5 lb/h) | 75  | 20  | 1,2,3,4,6         |
| 3.2 x 450 mm<br>(1/8 x 17.7 in)   | 100         | 140 | 4.4  | 115    | 66  | 34  | 1.2 kg/h<br>(2.6 lb/h) | 88  | 21  | 1,2,3,4,6         |
| 4.0 x 450 mm<br>(5/32 x 17.7 in)  | 140         | 190 | 6.7  | 110    | 66  | 23  | 1.7 kg/h<br>(3.7 lb/h) | 92  | 22  | 1,2,3,4,6         |
| 5.0 x 450 mm<br>(0.197 x 17.7 in) | 190         | 260 | 9.8  | 110    | 68  | 15  | 2.8 kg/h<br>(6.2 lb/h) | 86  | 23  | 1,2,3             |
| 6.0 x 450 mm<br>(0.236 x 17.7 in) | 230         | 320 | 14.2 | 110    | 68  | 11  | 3.7 kg/h<br>(8.2 lb/h) | 92  | 23  | 1,2,3             |

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

**$\eta$**  = Filler metal efficiency (g weld metal x 100 / g wire)(%)

**N** = Deposition efficiency (g weld metal x 100 / g electrode)(%)

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

**H** = Deposition 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)

## OTHER DATA

Weld metal hardness, typical:

- as welded : 30 HRC (no preheat, interpass temp. < 90 °C).

- after tempering:

Temp °C.....HRC (1h tempering)....HRC (24 h tempering)

100.....33.....33

300.....33.....33

400.....34.....34

500.....35.....28

600.....27.....17

700.....18

Machinability: Good

Impact resistance: Very good

Metal to metal wear resistance: Very good

Redrying the electrodes: 200 °C, 2 h.