

## Hardfacing electrode

### Classification

AWS A 5.13-00 : ECoCr-C  
DIN 8555-83 : E20-UM-50-CRZ

### General Description

Hardfacing electrode, cobalt base weld metal  
Provides the highest abrasion resistance of the Wearshield cobalt alloy product line

### Application

Primary application is where resistance to abrasion and service temperatures exceed 600°C or corrosion is severe  
Screw components moving hot minerals, cokes, ores etc. at high temperature

### Welding positions



ISO/ASME PA/1G

### Current type

AC / DC electr. + / -

### Structure

Cobalt base

### Chemical composition (w%), typical, all weld metal

C	Cr	Ni	W
2.0	28.0	1.0	12

### Mechanical properties, all weld metal

	Typical values
Hardness	50HRc
Surface load max. approx.	1700 N/mm <sup>2</sup>

Welded on general structural steel

### Packaging, available sizes and identification

	Diameter (mm)	3.2
	Length (mm)	355
Unit: Box	Pieces/unit (nominal)	-
	Net weight/unit (kg)	1

### Identification

Imprint:

Tip colour:

Wearshield® C1: rev. EN 15

## Welding instructions

Preheating 500°C and slow cooling to prevent cracking.

Sharp angels must be round off before hardfacing.

Can be applied over carbon steel, low alloy steel, stainless steel and nickel based alloys.

If necessary weld on a buffer layer of RepTec 29 or Arosta 309Mo and at high temperature applications with RepTec 7.

Spatter is slightly less with DC+ polarity.

A short arc length or dragging of the electrode lightly on the workpiece is usually most suitable.

## Calculation data

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. current - (s)*	Energy E(kJ)	Dep.rate H(kg/h)	Weight/ 1000 pcs. (kg)	Electrodes/ kg weldmetal B	kg Electrodes/ kg weldmetal 1/N
3.2 x 350	85-110	DC+	110	-	-	40	51	-

\* stub end 35 mm