

Wearshield® 60 (e)

Hardfacing electrode

Classification

DIN 8555-83 : E10-UM-60-GR

General Description

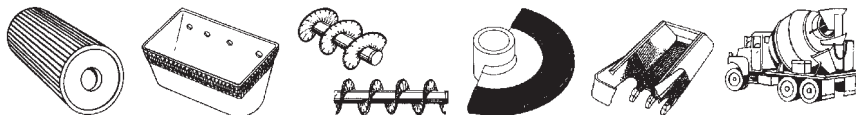
A basic coated downhand 200% recovery electrode that produces a primary carbide weld deposit. The electrode coating facilitates easy arc control and arc visibility whilst maintaining a short arc.

Application

Wearshield 60 produces an primary carbide deposit with a hardness range of 60-62 HRc. The primary carbide microstructure makes Wearshield 60 ideally suitable for applications of severe abrasion

Typical applications include:

Crusher rolls, plates and jaws
Conveyor screws and sleeves
Shovel lips
Brick & coke machinery
Cement mill parts



Mechanical properties, all weld metal

Typical hardness values

1 Layer	57-60 HRc
2 Layer	60-62 HRc

Welded on Mild Steel Plate

Packaging, available sizes and identification

	Diameter (mm)	3.2	4.0
	Length (mm)	450	450
Unit: Box	Pieces / unit (nominal)	37	23
	Net weight (kg)	2.5	2.5

Identification Imprint: Wearshield 60 (e)

Tip colour: Violet

Wearshield® 60 (e): rev. EN 15

Wearshield® 60 (e)

Additional information

When welding with Wearshield 60 stringer beads should be employed. Weaving is not advised since wide weaves generally increase the check crack spacing which can result in deposit spalling.

The as-welded deposit readily check cracks.

Preheat is not necessary when surfacing austenitic substrates such as stainless steels and manganese steels, although the interpass temperature should be limited to about 260°C for manganese steels.

The deposited weld metal is not machinable.

The deposit thickness is usually limited to 2 layers.

For applications requiring build-ups in excess of 2 layers, buttering layers of RepTec 126, Wearshield BU30 or Wearshield Mangjet (manganese steels) should be used prior to Wearshield 60. Alternatively, a preheat of 650°C can be used to eliminate the formation of check cracks.

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Welding positions



ISO/ASME PA/1G PB/2F

Current type

AC / DC electr. + / -

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

C	Cr	Si
5	35	4

Structure

In the as welded condition the microstructure consists of primary chromium carbides in an austenite - carbide eutectic matrix

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)
3.2 x 450	110 - 150	DC+	-	-	1.75
4.0 x 450	140 - 180	DC+	-	-	2.20

* stub end = 35 mm

Complementary products

Complimentary products include flux cored wire Lincore® 60-O and submerged arc wire Lincore® 60-S