

Wearshield® BU-30

CLASSIFICATION

DIN 8555 E1-UM-350-GP
EN 14700 E Fe1

GENERAL DESCRIPTION

Can be used both downhand and out of position, although the flat position is preferred
Arc characteristics are excellent with very low spatter levels
The electrode coating permits the use of the drag or contact welding technique
Good arc restriking

WELDING POSITIONS (ISO/ASME) (ISO/ASME)



PA/1G



PB/2F



PC/2G



PF/3Gu



PE/4G



PH/5Gu

CURRENT TYPE

AC / DC +

CHEMICAL COMPOSITION (W%), TYPICAL, ALL WELD METAL

C	Mn	Si	Cr	Mo
0.2	0.8	1.0	1.5	0.5

STRUCTURE

In the as welded condition the microstructure consists mainly of martensite with some bainite

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Typical hardness values

1 Layer 31 HRC (295 HB)
2 Layers 35 HRC (330 HB)
3 Layers 38 HRC (350 HB)
Welded on Mild Steel Plate

PACKAGING AND AVAILABLE SIZES

	Diameter (mm)	3.2	4.0	5.0
	Length (mm)	350	350	450
PE-Tube	Pieces / unit	65	44	23
	Net weight/unit (kg)	2.5	2.5	2.5

Identification Imprint: WEARSHIELD BU-30 Tip Color: black

Wearshield®BU-30:rev. C-EN24-01/02/16

Wearshield® BU-30

APPLICATION

Wearshield BU-30 produces a crack-free wear resistant deposit with a hardness of 31-38 HRc (295-350 HB) depending on dilution and number of layers. It is particularly suitable under conditions of moderate abrasion and friction, combined with resistance to impact. Ideally suitable for applications involving rolling, sliding and metal to metal wear. It may also be used as a final overlay on parts which need to be machined or as a build-up layer for other hardfacing materials.

Typical applications include:

Buildup:

Shovel and bucket lips

Pump impellers and housings

Dredge and shovel bucket teeth

Mill and crushing hammers

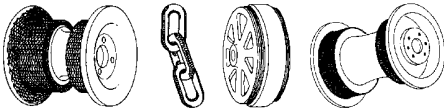
Hardfacing:

Crane and mine car wheels

Tractor rolls, idlers, links and sprockets

Cable drums

Roller guides



ADDITIONAL INFORMATION

When welding with Wearshield BU-30, DC+ is preferred for most applications, although AC provides satisfactory results too. The bead width should be limited to between 12 - 20mm for all electrode diameters when applying a weaving technique. Narrow stringer beads are preferred for edge and corner buildup.

All work-hardened base material should be removed prior to applying Wearshield BU-30 in order to prevent embrittlement and cracking.

A preheat and interpass temperature of 150-250°C is necessary to prevent cracking, especially on large complex or high restrained components. The component should be completed without interruptions, however, if interruptions are unavoidable the component should be preheated again prior to welding.

The deposited weld metal can be machined to exact dimensions using high speed or carbide cutting tools.

There is no limit to the deposit build-up with this electrode.

Wearshield BU-30 exhibits good resistance to spalling and peeling and moderate resistance to gouging and galling. If gouging is severe then Wearshield Mangjet or Wearshield 15CrMn would be more appropriate because of the higher work hardening effect. If galling is more severe then Wearshield MM or Wearshield MM 40 would be preferred.

CALCULATION DATA

Sizes		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
Diam. x length [mm]									
3.2 x 350	90-130	DC+	62	229	1.3	371	44	1.64	
4.0 x 350	140-180	DC+	63	338	1.8	54.4	32	1.72	
5.0 x 450	180-260	DC+	99	616	2.6	108.8	14	1.54	

COMPLEMENTARY PRODUCTS

Lincore® 33