



# Hardalloy® 61

**HARD SURFACING ELECTRODE**

**Overlay**

Replaces Preliminary

220-K INDEX: 981201

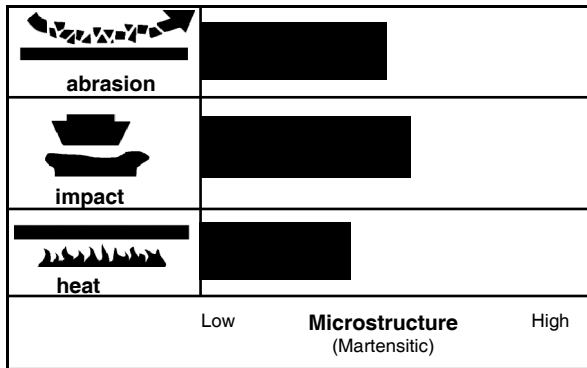
**DESCRIPTION:**

**Hardalloy 61** deposit is a martensitic alloy similar to a high-speed tool steel deposit. An AWS A5.13 EFe5-B wire, it can be used for metal-to metal wear in high temperature service.

**OPERATIONAL CHARACTERISTICS:**

Hardalloy 61 deposits a very smooth, dense bead that bonds well without cracking. In applying M-Type molybdenum bearing high-speed tool steel deposits, the work must be carefully cleaned of all foreign material and all cracked or spalled metal should be removed. These precautions ensure good sound fusion of weld and base metals. Diameters 1/8" and 5/32" can be used out-of-position using reduced amperages, building a series of horizontal beads on a "shelf," by using a weave technique.

**RELATIVE WEAR RESISTANCE:**



**TYPICAL WELD METAL PROPERTIES\* (CHEM PAD):**

**Weld Metal Analysis**

Carbon (C)	0.80
Manganese (Mn)	0.50
Silicon (Si)	0.70
Chromium (Cr)	4.00
Tungsten (W)	1.10
Molybdenum	8.00
Vanadium (V)	1.10
Nickel (Ni)	Bal.

**TYPICAL MECHANICAL PROPERTIES\* (AS WELDED):**

	Number of Layers	As-Deposited on 1020 Steel
Hardness	1	53-55 Rc
	2	57-63 Rc
Maintains hot hardness up to 1000°F		
Cannot be flamed cut		
Machinability-grinding only		

\*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and McKay expressly disclaims any liability incurred from any reliance thereon. No data is to be construed as a recommendation for any welding condition or technique not controlled by McKay.



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## RECOMMENDED OPERATING PARAMETERS:

Diameter		Type of Power	Optimum Amps
Inches	mm		
1/8	3.2	DCEP* or AC	140
5/32	4.0	DCEP* or AC	180

\* Preferred

## AVAILABLE DIAMETERS AND PACKAGES:

Diameter		Length		10-lb. Can
Inches	mm	Inches	mm	
1/8	3.2	14	355	S540544-033
5/32	4.0	14	355	S540551-033

## APPLICATIONS:

- Punching Dies
- Shear Blades
- Sliding Metal Parts
- Trimming Dies

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