



# Hardalloy® 140 MAIN LINE

HARD SURFACING ELECTRODE

Overlay

Replaces HS-155A

220-E INDEX: 981201

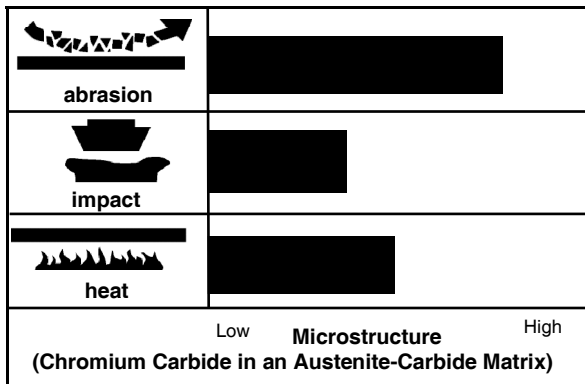
## DESCRIPTION:

**Hardalloy 140** deposits a high chromium carbide alloy steel. It is an excellent general purpose alloy for high abrasion applications coupled with some impact. It maintains its wear resistance to a temperature of 1200°F and offers some corrosion resistance. Hardalloy 140 is designed for overlay on carbon, low alloy, or austenitic manganese base metals or a weld metal base of Hardalloy 32, Hardalloy 118, or Chrome-Mang. Some relief check will occur. The cracking is not detrimental to the wear properties of the deposit and provides some degree of stress relief for the weld metal.

## OPERATIONAL CHARACTERISTICS:

Hardalloy 140 is an exceptionally smooth operating electrode with a quiet, stable arc. It has good restrike characteristics and easily removed slag. It produces a smooth, almost ripple-free bead surface. Using the lower end of the suggested amperage ranges will keep the bead from flattening. It operates well on AC. When welding vertical, the smaller diameters have better operating characteristics and can be used successfully by building a series of horizontal beads on a "shelf" using a weave technique.

## RELATIVE WEAR RESISTANCE:



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

### Weld Metal Analysis

Carbon (C)	3.00
Manganese (Mn)	0.40
Silicon (Si)	2.00
Chromium (Cr)	30.00
Molybdenum (Mo)	0.70
Iron (Fe)	Bal.

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

	Number of Layers†	As-Deposited	
		on 1020 Steel	on Mn Steel
Hardness	1	53 Rc	50 Rc
	2	57 Rc	55 Rc
Nonmachinable - grinding is difficult	3	54 Rc	56 Rc
Cannot be flamed cut			
Deposit will relief-check crack			
Deposit maintains hot hardness to 1200°F			

\*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.



# Hardalloy® 140

## RECOMMENDED OPERATING PARAMETERS:

Diameter Inches	Diameter mm	Type of Power	Minimum Amps	Optimum Amps	Maximum Amps	Deposition Rate lb/hr <sup>†</sup>
1/8	3.2	DCEP* or AC	95	120	150	3.5
5/32	4.0	DCEP* or AC	110	155	190	4.5
3/16	4.8	DCEP* or AC	160	190	245	6.0

\* Preferred

<sup>†</sup> Typical at optimum settings

Note: To maximize deposition use higher amperages. To minimize penetration (and dilution) use lower amperages.

## AVAILABLE DIAMETERS AND PACKAGES:

Diameter Inches	Diameter mm	Length Inches	Length mm	10-lb. Can
1/8	3.2	14	355	S544044-033
5/32	4.0	14	355	S544051-033
3/16	4.8	14	355	S544058-033

## APPLICATIONS:

- Ammonia Knives
- Augers
- Bucket Teeth and Lips
- Bulldozer Blades
- Cement Chutes
- Cultivator Chisels and Sweeps
- Dredge Cutter Heads and Teeth
- Dredge Pump Side Plates
- Grizzly Bars and Fingers
- Manganese Pump Shells
- Mill Guides
- Pipeline Ball Joints
- Plow Shares
- Scraper Blades
- Screw Conveyers
- Sheepsfoot Tampers
- Sizing Screens

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