



**FUSION Nb** is a complex high chromium cast iron welding wire for hardsurfacing components. Its combination of chromium & niobium carbides increase abrasion and impact resistance compared to classical chrome carbide deposits. It can withstand extremely severe abrasive wear and moderate impact. The deposit contains hard complex carbides in a tough matrix and performs remarkably well in both fine and coarse abrasion. This wire is best used for hardfacing components undergoing heavy wear from earth, sand or other abrasives.

### Typical Deposit Characteristics

<b>Abrasion Resistance</b>	Excellent
<b>Hardness</b>	HRC 62 - 64
<b>Impact Resistance</b>	Excellent
<b>Deposit Layers</b>	1-3 layers, 1 or 2 typical, 3 or more please consult JADCO for technical advice.
<b>Position</b>	Flat, Horizontal, Half-up, Half-down
<b>Surface Cross Checks</b>	Normal
<b>Machinability</b>	Non-machinable. Deposits can be ground. Care/consideration should be taken in grinding pressure and temperature to prevent damaging deposit surface.
<b>Magnetic</b>	
on Stainless Steel	Slightly to none.
on Carbon Steel	Yes
on Manganese Steel	Yes
<b>Hot Wear Applications</b>	600°F (300° C)

### Operational Characteristics / Welding Parameters

<b>Diameter, in (mm)</b>	1/16" (1.6 mm)
<b>Current, Amp DCEP</b>	150 – 350
<b>Wire Feed Speed</b>	150 – 350 inches per minute
<b>Voltage</b>	22 – 32
<b>Wire Extension, in</b>	3/4" – 1 1/2"
<b>Shielding Gas</b>	NONE REQUIRED <b>-OR-</b> 100% CO <sub>2</sub> <b>-OR-</b> 75% Ar / 25% CO <sub>2</sub> No shielding gas is required, however you may use gas to aid in arc transfer characteristics and cooling of welding torch.
<b>Preheat / Interpass Temp.</b>	For general use, area to be hardfaced should be preheated to 150 –300°F and you should not exceed a 550°F interpass temperature. When welding on manganese, limit interpass temp to 300°F or less.

For specific procedure recommendations for your application, please consult JADCO for technical support.

TYPICAL ALL-WELD METAL ANALYSIS				
C	Mn	Si	Cr	Nb
4.5 – 6.0	0.5 – 1.0	0.5 – 1.0	20 - 25	5 - 10

### Alloy Type

Chromium and Niobium carbides in an austenitic matrix.

### Typical Applications

• Buckets & Teeth      • Dragline Buckets      • Rippers      • Fan Blades      • Brick Industry Components

### Standard Sizes & Packaging

Diameter: 1/16" (1.6 mm)  
Packaging: 33 lbs. Spools