



FUSION™ Nb is a complex high chromium cast iron welding wire for hardsurfacing components. Its combination of chromium & niobium carbides increases 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

Abrasion Resistance Excellent
Hardness HRC 62 - 64
Impact Resistance Excellent
Deposit Layers 1-3 layers, 1 or 2 typical, 3 or more please consult JADCO for technical advice.
Position Flat, Horizontal
Surface Cross Checks Normal
Machinability Non-machinable. Deposits can be ground. Care/consideration should be taken in grinding pressure and temperature to prevent damaging deposit surface.

Magnetic
 on Stainless Steel Slightly to none.
 on Carbon Steel Yes
 on Manganese Steel Yes

Hot Wear Applications Can be used up to 1000°F

Operational Characteristics / Welding Parameters

Diameter, in (mm) 1/16" (1.6 mm)
Current, Amp DCEP 150 – 350
Wire Feed Speed 150 – 350 inches per minute
Voltage 22 – 32
Wire Extension, in 3/4" – 1 1/2"
Shielding Gas NONE REQUIRED **-OR-** 100% CO₂ **-OR-** 75% Ar / 25% CO₂
 No shielding gas is required, however you may use gas to aid in arc transfer characteristics and cooling of welding torch.

Preheat / Interpass Temp. 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