



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

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, Half-up, Half-down
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	600°F (300° C)

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% CO ₂ -OR- 75% Ar / 25% CO ₂ 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