



FUSION™ AP is an all positional flux cored wire for hardfacing of components exposed to metal to metal wear, impact and high abrasion. It has the capability to be applied in a single or multiple passes, leaving a good appearance and high-quality weld deposit. The wire has been developed to operate in spray transfer mode whilst welding in all positions, producing low splatter levels. FUSION™ AP has a microstructure that consists of small carbides suspended in a medium alloy martensite matrix allowing for good abrasion and impact resistance.

Typical Deposit Characteristics

Abrasion Resistance	Good
Hardness	HRC 55 – 60
Impact Resistance	Good
Deposit Layers	4 Layer Max. (Based on 1/8" thickness per layer)
Position	All
Surface Cross Checks	None-With proper preheat and interpass temperature
Machinability	Poor-Grind deposit with soft tool steel grinding wheels to prevent burning and heat checking of the surface.
Magnetic	
on Stainless Steel	Slightly
on Carbon Steel	Yes
on Manganese Steel	Yes
Hot Wear Applications	1,000° F (540° C)

Operational Characteristics / Welding Parameters

Diameter, in (mm)	0.045 (1.2 mm)	OR	1/16" (1.6mm)
Current, Amp DCEP	100 – 280	OR	150-350
Wire Feed Speed	150 – 450 inches per min		
Voltage	18 – 30	OR	22 – 30
Wire Extension, in (mm)	1/2" – 1" (15 – 25)		
Shielding Gas	100% CO ₂	OR	75% Ar / 25% CO ₂
Position	All		

TYPICAL ALL-WELD METAL ANALYSIS						
C	Mn	Si	Cr	Mo	V	Fe
0.5	1.8	1.3	7.5	0.5	0.3	Bal

Alloy Type

Small Primary Carbides in a Martensitic Matrix

Typical Applications

- Buckets/Shovels
- Chutes/Hoppers
- Dredge Parts
- Forestry Equipment
- Mining Truck Beds

Standard Sizes & Packaging

Diameter: 0.045" (1.2 mm) OR 1/16" (1.6mm)
 Packaging: 33 lbs. Spools