

Solid Steel Wires For TIG and GAS

Carbon Steel Filler Alloys Cut Lengths and Spooled Wires

J.W. Harris carbon steel filler metals are produced to exacting compliance with the standards of AWS A5.18.

ER70S-2: A premium, multiple deoxidized, wire. J. W. Harris alloys maintain precise chemistry and strict conformance to mechanical requirements and exhibit a smooth wire finish for rock-solid welds.

Packaging: 36" cut lengths, four 10 lb. tubes per carton.

Each container has an identification label, showing grade, size, weight and heat number. Conformance certifications can be furnished on request.

Chemical Compositions

Classification	C	Mn	Si	Ti	Zr	Al	P	S
ER70S-2	0.07	0.90 to 1.40	0.40 to 0.70	0.05 to 0.15	0.02 to 0.12	0.05 to 0.15	0.025	0.035

Note: Single values shown are maximum. Ni, Cr, Mo and V may be present but are not intentionally added. The maximum weight of copper due to any coating plus the residual copper content in the steel shall be 0.50.

TIG

Current - DC, Straight Polarity (while AC may sometimes be used, DCSP is generally most preferable). Reverse Polarity is never used.

Shielding - Argon. In some instances, the addition of helium might be considered for deeper penetration or on large sections, but He-Ar or He are generally restricted to automatic welding.

GAS

Oxy Acetylene is a recommended gas mixture with a neutral flame. The Harris 196 Model Torch with its wide range of tips and accessories would be an ideal choice to provide high operator appeal and consequently better welds.

File Test to Estimate Hardness of Steel

Approx. Hardness		Surface Reaction to Filing	Type of Steel
Brinell	Rockwell		
100	60B	Metal is readily cut by file	Low Carbon
200	15C	Metal is readily cut by file under moderate pressure	Med. Carbon
300	30C	Metal is difficult to file though it can be cut	High Alloy
400	40C	Metal is cut only with greatest effort	High Carbon
500	50C	Metal nearly impossible to cut	Tool Steel
600	60C	Metal cannot be cut with a file	Hardened Tool Steel