

GMAW Wire for Nickel and Nickel-Based Alloy

KMS-718

Classification

AWS A5.14/A5.14M	ERNiFeCr-2
JIS Z3334	SNi7718
EN ISO 18274	S Ni 7718
GB T15620	S Ni 7718

Shielding Gas:75% Ar+25%He

Applications and Features

- (1) KMS-718 is 52%Ni-18%Fe-19%Cr-5%Nb-3%Mo-1%Ti alloy.
- (2) High tensile strength and ductility at 700°C, and good resistance to stress corrosion crack.
- (3) Suitable for welding Inconel alloys 718, 706 and X-750.
- (4) Ideal for welding aircraft high strength components and liquid rocket components exposed to cryogenic temperatures.

Welding Position



Welding Instruction

- (1) Clean surface of base metal before welding.
- (2) Heat input should be controlled as low as possible.
- (3) For other instructions, please refer to Appendix B.

Typical Chemical Composition of Wire (wt%)

C	Si	Mn	P	S	Cr	Mo	Ti	Al	Fe	Nb	Ni
0.04	0.05	0.06	0.004	0.001	17.36	3.03	1.01	0.44	20.00	5.30	52.50

Typical Mechanical Properties of Weld Metal

Tensile Strength	Yield Strength	Elongation	Charpy V-Notch	
N/mm ²	N/mm ²	%	°C	J
1220	1055	12	-	-

Size and Suggested Operating Range (DC+)

Diameter (mm)	0.8	0.9	1.2	1.6
Current (A)	140~180	160~200	190~230	200~250
Voltage (V)	24~27	25~28	26~30	29~33