

AI-1725

Specifications

AWS/ASME A5.14 : ERNiCrMo-3
MIL-RN625 & **EN 625**
DIN 1736, 2.4831

Description and Applications

AI-1725 is a nickel-chromium alloy that is used for its high strength and outstanding corrosion resistance and is designed to weld to itself or to other materials. One of the features of this alloy is that the welded deposits require no further postweld heat treatments to maintain their high strength and ductility.

AI-1725 is used in various industries such as the marine and aerospace industry and, also in chemical processing where it is an excellent choice for its resistance to pitting and crevice corrosion.

It has excellent corrosion resistance to a wide variety of severe corrosive environments. The nickel and chrome combination provide resistance to oxidising chemicals, the high molybdenum supplies resistance to pitting and crevice corrosion. The niobium stabilizes the alloy during welding, thus, preventing inter-granular cracking.

Applications include: propeller blades, submarine motors, springs and seals for submerged controls, instrument components, engine exhaust systems, and aircraft components.

Typical Weldmetal Analysis

C	Mn	Si	Cr	Ni	Fe	P	S	Mo	Nb
0.018	0.19	0.21	21.70	Bal	2.30	0.009	0.007	9.10	3.40

Mechanical Properties of Weldmetal

	As Welded
Micro Structure	Fully Austenitic
Tensile Strength	> 750 MPa
Elongation A5	>30%
Impact Energy, Charpy V	20°C 150J, -190°C 70J
Hardness	220 HV
Shielding Gas	98% Ar + 2% O₂ or 100% Ar

Welding Parameters

Diameter (mm)	Current type	Amps
1.20	DC(+)	150-220
1.60	DC(+)	180-300

Also available as TIG 1.6mm & 2.40mm and Electrodes 2.5mm, 3.2mm & 4.0mm diameters



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Welding Positions

(1G, 1F) Downhand/flat position, (2F) Horizontal position, (2G) Horizontal vertical position

Disclaimer

All figures in this datasheet should be considered indicative only. No guarantee is made as to their accuracy.

All figures subject to change without notice. Batch analysis is available for all products sold. Should you require any further information, please contact us at sales@alloysint.com.au

