

## AI-0317T

### Specifications

**AWS/ASME A5.14 ERNiCrCoMo-1**

### Description and Applications

Solid-solution strengthened, nickel-chromium-cobalt-molybdenum alloy with an exceptional combination of high-temperature strength and oxidation resistance. The alloy also has excellent resistance to a wide range of corrosive environments, and it is readily formed and welded by conventional techniques. The high nickel and chromium contents make the alloy resistant to a variety of both reducing and oxidising media.

The combination of high strength and oxidation resistance at temperatures over 980°C makes **AI-0317T** an attractive material for such components as ducting, combustion cans, and transition liners in both aircraft and land-based gas turbines. Because of its resistance to high-temperature corrosion, the alloy is used for catalyst-grid supports in the production of nitric acid, for heat-treating baskets, and for reduction boats in the refining of molybdenum. **AI-0317T** also offers attractive properties for components of power-generating plants, both fossil-fuelled and nuclear.

### Typical Weldmetal Analysis

C	Cr	Co	Mo	Al	Fe	Ni	Mn	Si	S	Ti	Cu	B
0.05-0.16	20.0-24.0	10.0-15.0	8.0-10.0	0.8-1.5	<3.0	44.5	<1.00	<1.0	<0.015	<0.6	<0.5	<0.006

### Mechanical Properties of Weldmetal

	As Welded
Tensile Strength:	>750MPa
Yield Strength (0.2%):	590MPa
Elongation:	>56% (5d)
Hardness	185BHN
Specific Heat	419J/kgDegC
Density	8.36g/cc

### Welding Instruction

The welding area must be free from impurities (oil, paint, markings). Minimise heat input. The interpass temperature should not exceed 150°C. Linear energy input <12kJ/cm. Shielding Gas: EN ISO 1475 R1

### Available Sizes

2.4mm Dia-Others by request **Other forms:** Electrode AI-0317, MIG Wire AI-1717

### 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](mailto:sales@alloysint.com.au)



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