

## AI-0621B

### Specifications

**AWS/ASME** II C SFA 5.21 ERCoCr-E

### Description and Applications

**AI-0621B** is a Cobalt Alloy 21 bare/TIG/oxy rod designed for surfacing parts subject to the single or combined effects of metal-to-metal wear at high temperatures with repeated thermal cycling, friction, abrasion, high impact oxidation and corrosion up to temperatures of 1150°C.

**Applications include:** Hot shear blades, Forging Bottom Dies, Cutting discs, Hot working tools, Wear Pads, Steam Valves, Seats and spindles, Ingot Bloom and Billet Holders. Deposit has the added benefit of being machineable.

### Typical Weldmetal Analysis

C	Mn	Si	Cr	Ni	Co	Mo
0.25	0.70	0.55	28	2.5	Bal	5.5

### Mechanical Properties of Weldmetal

	As Welded
Hardness	44-48HRc (after work hardened) 32HRc as welded
Metal-to-metal wear resistance	Very good
Shock resistance	Excellent
High temperature resistance	Excellent
Thermal Shock Resistance	Exceptional
Machineability	Good

### Nominal Hot Hardness (DPH) of undiluted weld deposit

20°C	100°C	200°C	300°C	400°C	500°C	600°C	700°C	800°C	900°C
347	279	248	228	208	197	181	153	123	92

### Welding Instructions

Shielding Gas: Argon 100% for TIG application or Oxy-Acetylene (with a carburising flame)

Gas Rate: 15-18 l/min



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#### Procedure for Gas Tungsten Arc (TIG) Welding

1. Thoroughly clean all areas to be joined.
2. Use a Thoriated or Ceriated tungsten electrode.
4. Use Direct Current Electrode Negative (DC-) and Welding Grade Argon.
5. Preheat thick sections

#### Available Sizes

2.5mm, 3.25mm, 4.00mm, 5.00mm and 6.4mm Diameter

Electrodes: **AI-0621E**

MIG wire: **AI-1721**

Arc spray wire: **AI-1821**

PTA/Laser cladding powder: **AI-2021**

HVOF powder: **AI-2621**

#### 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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