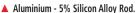
## **COMWELD AL4043**









- Suitable for Gas Welding and Gas Tungsten Arc (GTAW / TIG) Welding Applications.
- ▲ Embossed with AS / AWS Class '4043'
- ▲ 2.5 kg Cardboard Pack / 15kg Carton

# WELD DEPOSIT PROPERTIES:

Typical Weld Metal Tensile Strength 110 MPa.
Approximate Melting Point 630°C
Post Anodised colour tint Grey

#### ROD ANALYSIS LIMITS:

Single values are maximum allowable, unless otherwise stated.

Si: 4.5-6.0% Fe: 0.80% Cu: 0.30% Mn: 0.05% Mg: 0.05% Zn: 0.10% Ti: 0.20% Total others: 0.15%

Al: Balance

#### COMPARABLE CIGWELD PRODUCTS:

Autocraft AL4043 GMAW wire AWS A5.10: ER4043

# Classifications:

AS 1167.2: R4043. AWS/ASME-SFA A5.10: R4043.

## **Description and Applications:**

Comweld AL4043 is a premium quality Aluminium - nominal 5% Silicon alloy rod used extensively for the repair welding (fractures and blow holes ett) of selected\* aluminium alloy castings. Its lower weld deposit strength and excellent crack resistance make it suitable for the Gas or Gas Tungsten Arc (GTAW / TIG) welding of cast (mainly 4XX & 6XX series) alloys and vrought (selected 1XXX, SXXX & 6XXX series) aluminium alloys, except where an accurate colour match is required after anodising.

Packaging Data:			
Pack Weight/Type	Carton Size	Approx. Rods/kg	Part No
2.5kg Pack	15kg	210	321610
2.5kg Pack	15kg	90	321611
2.5kg Pack	15kg	51	321612
	Pack Weight/Type 2.5kg Pack 2.5kg Pack	Pack Weight/Type         Carton Size           2.5kg Pack         15kg           2.5kg Pack         15kg	Pack Weight/Type         Carton Size         Approx. Rods/kg           2.5kg Pack         15kg         210           2.5kg Pack         15kg         90

<sup>\*</sup>See CIGWELD Aluminium Alloy Selection Chart for detailed welding consumable selection criteria for a wide range of Aluminium alloy parent metals.

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

- Thoroughly clean all areas to be joined.
- 2. For the butt welding of thick plates, bevel edges to 65°-75° included angle.
- 3. Use a Zirconiated tungsten electrode, ground to a tapered blunt point (half the diameter of electrode) making sure the grinding lines run with the length (longitudinally) of the electrode's axis. The length of the point should be approximately 2-3 x the diameter of the tungsten electrode. For best results the tungsten electrode requires a radius or 'balled' end, this is done by heating the newly prepared tungsten at approximately 30 amps higher than the recommended wedling current under the welding are.
- 4. Use High Frequency stabilised Alternating Current (AC-HF) and Welding Grade Argon.
- Preheat thick sections before welding. Heat a spot on the base metal until it shows signs of melting and progressively add the filler rod to the weld pool.

## Procedure for the Gas (Fusion) Welding of a Fractured Aluminium Casting:

- Thoroughly clean all areas to be welded either mechanically or chemically.
- Apply Comweld Aluminium flux (Part Number: 321740) to the areas to be joined.
- Adjusting the flame to a soft neutral setting, or one with a slight haze at the tip of the cone, preheat the casting and tack weld the parts into position when the correct temperature is reached.
- Begin at the centre of the fracture completing one side and then the other. Welding speed should be increased towards the ends of the fracture.
- 5. Allow the repaired casting to cool slowly.
- The flux residue must be removed on completion by washing in hot water or immersion (for approximately 10 minutes) in a dilute solution (5 - 10%) or intric acid. The acid must be removed by washing with water after the flux has been removed.