



# Magnesium Elektron

SERVICE & INNOVATION IN MAGNESIUM

# Aluminium Alloy Welding Rod

Datasheet : 431

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A Luxfer Group Company

# Aluminium Alloy Welding Rod

Magnesium Elektron offer an extensive range of aluminium alloy welding rod for TIG (argon arc) welding repair of castings. The standard offer covers 11 chemical compositions, which have been given a 'W' designation in chronological order of introduction. The analysis ranges quoted do not necessarily conform exactly to any particular national, international or customer specification, but have been carefully selected to fall within the range of many specifications and to facilitate ease of welding, thus permitting a more efficient service to customers. Other alloys, additional to those shown, may also be available on request.

The specifications covered include:-

- UK – British Standard BSL, BS1490, MOD DTD series, Rolls Royce MSRR.
- USA – ASTM, AMS, QQ-M, AWS.
- Germany – Aircraft number, DIN 1725/2.
- France – Air 3380 and AFNOR.
- European – AECMA.

## MAGNESIUM ELEKTRON WELDING ROD DESIGNATIONS

WELDING ROD	CHEMICAL SYMBOL DESIGNATION	CHEMICAL COMPOSITION %						
		Cu	Mg	Si	Fe	Mn	Ni	Ti
W30	Al-Si2CuNiFeMg MIN	0.8	0.05	1.5	0.8		0.8	
	MAX	2.0	0.20	2.8	1.4		1.7	
W31	Al-Mg10 MIN		9.5					
	MAX		10.6					
W32	Al-Si5CuMg MIN	1.0	0.4	4.5				
	MAX	1.5	0.6	5.5				
W33	Al-Cu4 MIN	4.0						
	MAX	5.0						
W34	Al-Si7Mg MIN		0.25	6.5				
	MAX		0.4	7.5				
W35	Al-Cu5NiZr MIN	4.5				0.2	1.3	0.15
	MAX	5.5				0.3	1.7	0.25
W36	Al-Cu4SiTi MIN	3.8		1.0				0.05
	MAX	4.5		1.5				0.25
W37	Al-Si5Mg MIN		0.3	3.5				
	MAX		0.8	6.0				
W38	Al-Si5Cu3 MIN	2.0		4.0		0.2		
	MAX	4.0		6.0		0.6		
W40	Al-CU4Ni2Mg2 MIN	3.5	1.2				1.8	0.1
	MAX	4.5	1.7				2.3	0.2
W41	Al-Si7Mg MIN		0.5	6.5				0.1
	MAX		0.75	7.5				0.2

## Condition

As extruded. Smooth finish, free from surface grease or other foreign matter which would adversely affect the welding operation.

## Dimensions

Standard diameters: 1.6 mm, 2.4 mm, 3 mm, 4 mm, and 4.8 mm. Length approx. 1 metre.

## Packaging

Packed in tough plastic tubes with loose, taped end caps labelled with alloy, size, weight and melt number. Supplied in approx. 3 kg packages.

Welding rod will normally be supplied to the standard 'W' number composition shown below, unless special compositions relating to the parent material are agreed.



Certificate No. FM12677