

### SPECIFICATIONS

Commercial	4925
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Aluminium alloy 4925 is the Pechiney equivalent of Alloy 4015 - A high quality general purpose alloy featuring good ductility coupled with mechanical strength. A close relation to 3103 Al Mn alloy, but with higher Silicon content, this alloy can be welded, anodized\* or painted. It should be noted that the anodized finish of alloy 4925 will be much darker and less reflective than on alloys 1050 or 3103 so this is not recommended for decorative applications. Many users now prefer to use alloy 4925 having switched from other alloys such as 1050 and 3103.

The corrosion resistance of alloy 4925 is similar to the 3000 series alloys. Suitable for most applications in mill finish or painted, it is not recommended for use in aggressive environments.

Please note that the mechanical properties quoted are for H12 temper - Mechanical Properties for other tempers are shown on page 2.

### CHEMICAL COMPOSITION

Manufacturer's Data	
Element	% Present
Silicon (Si)	1.4 - 2.2
Manganese (Mn)	0.6 - 1.2
Iron (Fe)	0.7 typical
Magnesium (Mg)	0.1 - 0.5
Copper (Cu)	0.2 typical
Zinc (Zn)	0.2 typical
Aluminium (Al)	Balance

### ALLOY DESIGNATIONS

Aluminium alloy 4925 has similarities to Alloy 4015 **but may not be a direct equivalent**

### TEMPER TYPES

The most common tempers for 4925 aluminium are:

- H14 - Work hardened by rolling to half hard, not annealed after rolling
- H16 - Work hardened by rolling to three-quarter hard, not annealed after rolling
- H12 - Work hardened by rolling to quarter hard, not annealed after rolling
- H18 - Work hardened by rolling to fully hard, not annealed after rolling
- O - Soft

### SUPPLIED FORMS

Alloy 4015 is only available as sheet

- Sheet

### GENERIC PHYSICAL PROPERTIES

Property	Value
Density	2.72 g/cm <sup>3</sup>
Melting Point	600 °C
Thermal Expansion	24 x10 <sup>-6</sup> /K
Modulus of Elasticity	70 GPa
Thermal Conductivity	150-200 W/m.K

### MECHANICAL PROPERTIES

Manufacturer's Data	
Property	Value
Proof Stress	110 min MPa
Tensile Strength	135-175 MPa
Elongation A50 mm	4 Min %

## CONTACT

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## REVISION HISTORY

Datasheet Updated	13 November 2018
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This Data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

Please note that the 'Datasheet Update' date shown above is no guarantee of accuracy or whether the datasheet is up to date.

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### Mechanical Properties

Temper	Rp0.2% MPa	UTS MPa	A Min %
0	45 Min	110-150	20
H12	110 Min	135-175	4
H14	135 Min	160-200	3
H16	155 Min	185-225	2
H18	180 Min	210-250	2

### Physical Properties

Density	2.72 g mm <sup>-3</sup>
Melting Point	600°C
Modulus of Elasticity	Approx 70 GPa
Electrical Resistivity	23-29x10 <sup>8</sup> Ωm
Thermal Conductivity	150-200 W/mK
Thermal Expansion	24x10 <sup>-6</sup> /K

### Welding

Suitable for MIG and TIG welding using normal aluminium welding conditions Recommended welding wire is 4043 (Al Si5)

Typical welding conditions are shown below

Parameter	MIG	TIG
Current	120A	150A
Voltage	20V	14V
Travel Speed	0.65m/min	0.22m/min
Wire Feed rate	5.2m/min	-
Gas Flow Rate	25l/min	9l/min

### Formability

Equivalent to alloy 3103 in same temper.  
r/t performance dependent upon thickness –  
Approx figures for H12 are shown below

Thickness mm	r/t min bend radius for 180° bend
0.5-0.8	0.0
0.8-1.5	1.0
1.5-3.0	2.0

### Drawability

Typical properties for 0.8mm thick sheet

Temper	r/t	r value <sup>1</sup>	Erichsen Value <sup>2</sup> (mm)
0	45 Min	110-150	20
H12	110 Min	135-175	4
H14	135 Min	160-200	3
H16	155 Min	185-225	2
H18	180 Min	210-250	2

<sup>1</sup> An indication of drawability

<sup>2</sup> An indication of limit of biaxial stretching