

SoluMag® 1100 Magnesium Alloy

Luxfer MEL Technologies SoluMag® 1100 alloy

Luxfer MEL Technologies is the world leader in the development and supply of highly functional magnesium alloys. SoluMag® 1100 is a standard magnesium alloy that has a high corrosion rate in aqueous chloride environments. This lightweight alloy is available as balls, extruded rods, bars, tubes and profiles to produce components that have strength and ductility in demanding environments as well as a controlled corrosion rate that will effectively dissolve the component in a known time.

Product forms

- Balls/Spheres
- Seamless tubes and round bars
- Square/rectangular sections
- Solid profiles

Mechanical properties

Imperial units							Dissolution rate MCD (mg/cm ² /day)
Sizes OD bar and tube (in)	Longitudinal (ksi)		Elong. (%)	Transverse (ksi)		Elong. (%)	
	Yield	UTS		Yield	UTS		
<0.5	*	*	*	*	*	*	200 °F: 600 - 1600
0.5 ≤ to <2.5	29	44	15	+	+	+	
2.5 ≤ to <5	26	42	15	20	35	12	100 °F: 200 - 400
5 ≤ to <6	25	39	12	20	35	12	
>6	*	*	*	*	*	*	

* Contact Luxfer representative for additional information
+ Transverse data not available

Component sizes

- Machined balls from ½ inch to 5 inches diameter
- Extruded round rod from ½ inch to 5 inches diameter
- Tube and bar sizes available upon request

Typical applications

- Machined components for downhole completion tools in oil and gas applications
- Balls for hydraulic fracturing systems
- Time activated sub-sea devices
- Flooding plugs for IP protection

Specifications

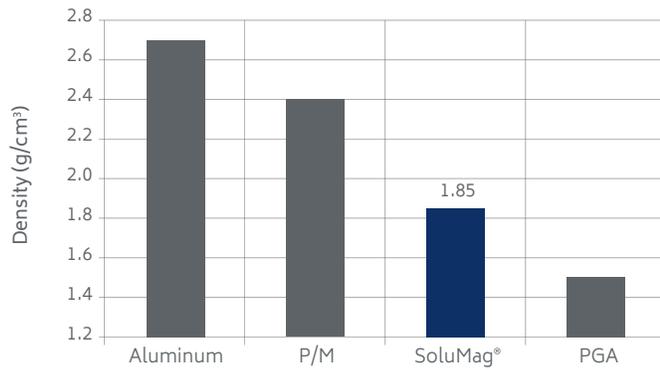
- ASTM B107 for extruded products, dimensions only
- Corrosion rate according to agreed testing protocol
- Manufactured to aerospace quality metal cleanliness standards

Metric units							Dissolution rate MCD (mg/cm ² /day)
Sizes OD bar and tubes (mm)	Longitudinal (MPa)		Elong. (%)	Transverse (MPa)		Elong. (%)	
	Yield	UTS		Yield	UTS		
<12.7	*	*	*	*	*	*	93 °C: 600 - 1600
12.7 ≤ to <63.5	200	300	15	+	+	+	
63.5 ≤ to <127	180	290	15	140	240	12	38 °C: 200 - 400
127 ≤ to <152.4	170	270	12	140	240	12	
>152.4	*	*	*	*	*	*	

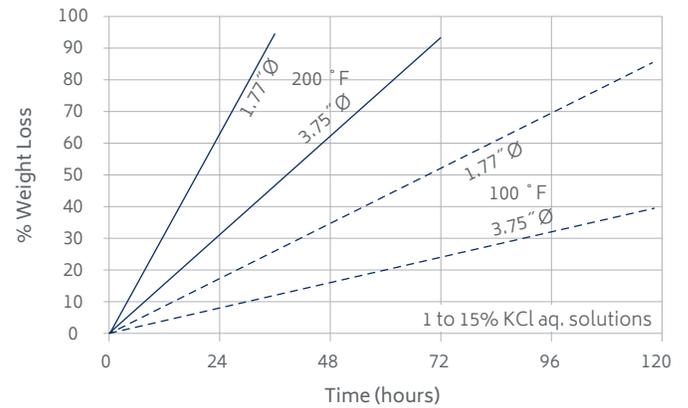
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SoluMag® Magnesium Alloy

SoluMag® density comparison



SoluMag® weight loss



Product details [LINK](#)

Discover more at

www.luxfermeltechnologies.com

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† The information contained within is meant as a guideline only

SoluMag®, UK Patent No 2529062B. July 2015.

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Certificate No. FM12677

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