



**LUXFER**  
MEL TECHNOLOGIES

## SoluMag<sup>®</sup> High Strength Magnesium Alloy

### Luxfer MEL Technologies SoluMag<sup>®</sup> HS™ alloy

Luxfer MEL Technologies is the world leader in the development and supply of highly functional magnesium alloys. SoluMag<sup>®</sup> HS is a ultra-high strength magnesium alloy that has a high corrosion rate in aqueous chloride environments. This light weight alloy is available as balls, extruded rods, bars, tubes and profiles to produce components that have high 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
- Tubes and bars
- Square/rectangular sections
- Solid profiles
- Tube

### Typical applications

- Machined components for downhole completion tools in oil and gas
- Balls for hydraulic fracturing systems
- Time activated underwater 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 and metal cleanliness standards

### 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.

### Corrosion properties (3% KCl)

- 200 ° F: 300 - 500 mg/cm<sup>2</sup>/day (MCD)

**Mechanical properties (minimum)**

F-Condition (as extruded)	Bar		Tube	
	Longitudinal	Transverse	Longitudinal	Transverse*
Tensile yield strength (ksi/MPa)	34.1/235	26.1/180	31.2/215	NA
Ultimate tensile strength (ksi/MPa)	49.3/340	39.1/270	47.9/330	NA
Elongation (%)	4	2	4	NA

T5 Heat Treat	Bar		Tube	
	Longitudinal	Transverse	Longitudinal	Transverse*
Tensile yield strength (ksi/MPa)	40.6/280	33.6/230	38.4/265	NA
Ultimate tensile strength (ksi/MPa)	57.3/395	37.0/255	57.3/395	NA
Elongation (%)	2	1	2	NA

T6 Heat Treat	Bar		Tube	
	Longitudinal	Transverse	Longitudinal	Transverse*
Tensile yield strength (ksi/MPa)	47.1/325	33.6/230	45.7/315	NA
Ultimate tensile strength (ksi/MPa)	60.9/420	45.7/315	60.9/420	NA
Elongation (%)	1	1	1	NA

\* Contact the Luxfer SoluMag representative for additional information

**Product details** [LINK](#)

Discover more at

[www.luxfermeltechnologies.com](http://www.luxfermeltechnologies.com)

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† The information contained within is meant as a guideline only

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