



SoluMag® High Strength Magnesium Alloy

Luxfer MEL Technologies SoluMag® HS™ alloy

Luxfer MEL Technologies is the world leader in the development and supply of highly functional magnesium alloys. SoluMag® HS is a new 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
- Machined components
- Round rod
- Square/rectangular sections
- Solid profiles
- Tube

Typical applications

- Balls for hydraulic fracturing systems
- Machined components for downhole completion tools in oil and gas
- 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
- Standard bar length 3 ft / 1 m
- Other sizes, lengths and machined parts upon request

Mechanical properties (typical)

-F As Extruded	Diameter	
	≤4"	>4"
Tensile yield strength (ksi/MPa)	41/285	40/275
Ultimate tensile strength (ksi/MPa)	55/380	54/370
Elongation (%)	6	5

T5 Heat Treatment	Diameter	
	≤4"	>4"
Tensile yield strength (ksi/MPa)	49/340	48/330
Ultimate tensile strength (ksi/MPa)	65/450	63/435
Elongation (%)	4	3

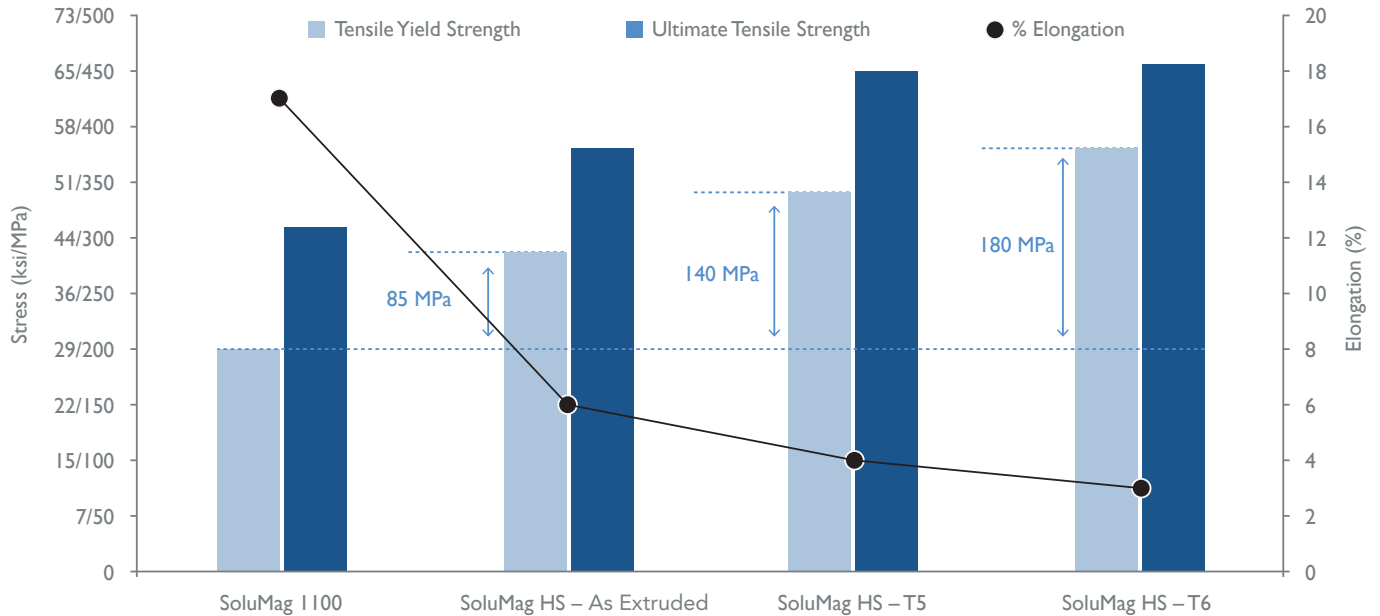
T6 Heat Treatment	Diameter	
	≤4"	>4"
Tensile yield strength (ksi/MPa)	55/380	53/365
Ultimate tensile strength (ksi/MPa)	66/455	64/440
Elongation (%)	3	2

Corrosion properties (3% KCl)

- 200 ° F: 300 - 500 mg/cm²/day (MCD)

SoluMag® High Strength Magnesium Alloy

SoluMag® Property Comparison, <4" Diameter



Product details [LINK](#)

Discover more at

www.luxfermeltechnologies.com

 @LuxferMELTech

† The information contained within is meant as a guideline only

Copyright © Luxfer MEL Technologies 2019. The information provided within this document is aimed to assist manufacturers and other interested parties in the use of Luxfer MEL Technologies products. Luxfer MEL Technologies accepts no liability in whole or in part from use and interpretation of the data herein. All information is given in good faith but without warranty. Freedom from patent rights must not be assumed. Health and Safety information is available for all Luxfer MEL Technologies products. **DS-1004-0219**



Certificate No. FM12677

Luxfer MEL Technologies
Elektron Technology Centre
Lumns Lane, Manchester, M27 8LN, UK
T +44 (0) 161 911 1000

Luxfer MEL Technologies
500 Barbertown Point Breeze Road
Flemington, NJ 08822, USA
T +1 908 782 5800

Luxfer MEL Technologies
4601 Westown Parkway Suite 130
West Des Moines, IA 50266
T +1 515 421 4100