



SoluMag® High Ductility Magnesium Alloy

Luxfer MEL Technologies SoluMag® HD™ alloy

Luxfer MEL Technologies is the world leader in the development and supply of highly functional magnesium alloys. SoluMag® HD is a highly ductile magnesium alloy that has a high corrosion rate in aqueous chloride environments. This lightweight alloy is available as extruded tube, rods, bars and profiles as well as machined components. SoluMag® HD offers a new solution to downhole problems, having superior ductility to conventional dissolvable magnesium alloys as well as a well-controlled corrosion rate.

Product forms

- Tube
- Round rod
- Machined components
- Square/rectangular sections
- Complex profiles
- Formable sheet

Typical applications

- Machined components for downhole completion tools in oil and gas
- Downhole tools requiring deformation of material
- Flooding plugs for IP protection
- Time activated underwater devices

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

- Tube – ID from 1.75 inches to 3 inches, OD from 1 inch to 5 inches
- Extruded round rod from ½ inch to 4 inches diameter
- Standard bar length 3 ft / 1 m
- Other sizes and machined parts on request

Mechanical properties (typical)

Longitudinal	Heavy Wall Tube Up To 5" OD
Tensile yield strength (ksi/MPa)	24/166
Ultimate tensile strength (ksi/MPa)	35/244
Elongation (%)	23

Transverse	Heavy Wall Tube Up To 5" OD
Tensile yield strength (ksi/MPa)	18/123
Ultimate tensile strength (ksi/MPa)	32/221
Elongation (%)	23

Corrosion properties (3% KCl aq)

- 200 ° F: 400 - 700 mg/cm²/day (MCD)

Product details [LINK](#)

Further information

For more detailed information, please contact:

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† The information contained within is meant as a guideline only

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