

# Superlube 3.1 MHD

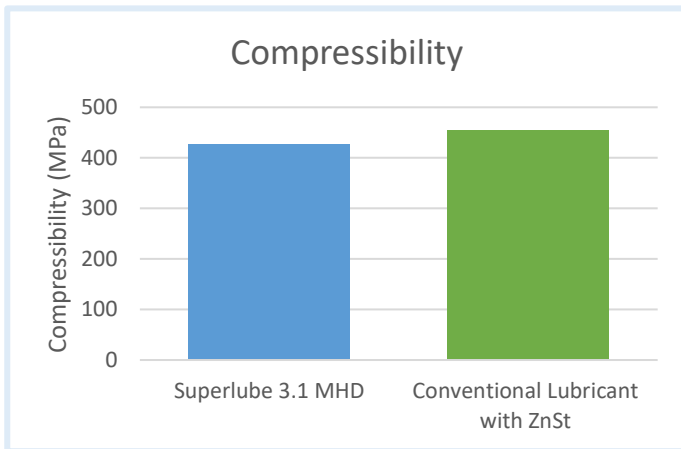
## A lubricant designed for materials with machining additives for medium-to-high density applications

Superlube 3.1 MHD is a zinc-free lubricant that provides excellent lubricity for medium-to-high density components that include machining additives. It is an ideal replacement for conventional lubricants with Zinc Stearate (ZnSt) and has almost identical properties.

Superlube 3.1 MHD has similar properties to conventional lubricants with improvements in green strength and ejection force.

	Superlube 3.1 MHD*	Conventional Lubricant with ZnSt*
<b>Apparent Density (g/cm<sup>3</sup>)</b>	2.90	3.19
<b>Flow Rate (Hall, s/50g)</b>	30	28
<b>Green Strength (MPa)</b>	15	13
<b>Tonnage (MPa) @ 6.90 g/cc</b>	427	455
<b>Slide Ejection Force (kN)</b>	4.3	4.9
<b>Total Size Change (%)</b>	0.34	0.35

\*Composition: Atomet 1001 + 1.9% Cu + 0.9% C + 0.5% MnS + 0.53% lubricant



Zinc-free Superlube 3.1 MHD and conventional lubricant with ZnSt have similar compressibility at 6.90 g/cc.

**Benefits**

- ✓ Does not contain Zinc Stearate
- ✓ Achieve target green densities of 6.9 – 7.3 g/cc

**Best Uses**

- ✓ Components with machining additives such as MnS
- ✓ Mid-to-high density applications

Superlube 3.1 MHD requires approximately 12% less slide ejection force than conventional lubricant with ZnSt.

