

Simply more lubricity.

A new lubricity additive is here—
AltaLUB™ 5300
offering high
mixed-film
boundary
lubrication.

In the metalworking world, precision is essential when state-of-the-art parts are cut from high-performance steel. When precision is of utmost importance, AltaLUB 5300 is the lubricant of choice. AltaLUB 5300, built on our Tall Oil Fatty Acid (TOFA) chemistry, is designed for the future. This patent-pending technology offers exceptional lubricity. It promotes high mixed-film boundary lubrication and a low foaming profile in semi-synthetic, synthetic, soluble, and neat oil formulations. On top of that, it's easy to formulate with because of its low molecular weight. Your customers—and their tools—will thank you.

Hydrolytic stability

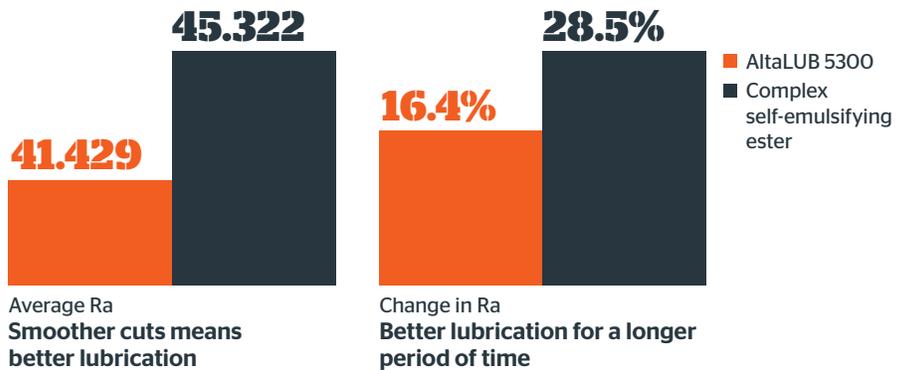
Esters often have low hydrolytic stability. AltaLUB 5300 was tested versus a competitive self emulsifying ester, and a methyl ester standard for benchmarking.

Samples were mixed with 2000ppm DI water and placed in an oven for 14 days at 80°C. Acid number was tested periodically. An increase in acid number indicates hydrolysis.

Product	Starting AN	Final AN	Change
AltaLUB 5300	110.8	110.6	-0.2
Competitive SEE	31.1	31.0	-0.1
TOFA methyl ester	4.3	14.2	+9.9

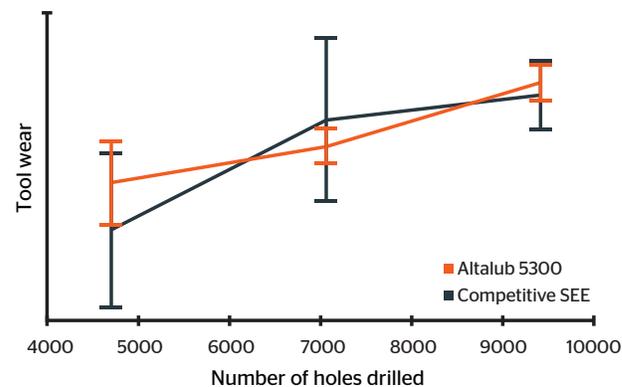
AltaLUB 5300 showed no significant hydrolysis after 14 days.

Machine shop trial roughness average (Ra) values



Higher precision cutting for longer

For each fluid, 29,412 holes were drilled. The Ra was measured on the cutting surface inside the hole after every 9,804 holes.



Less variability means smoother cuts which means better lubrication.

More precision

AltaLUB 5300 was tested in an industrial setting versus a complex self-emulsifying ester (SEE). Concentrates (see table on reverse) were diluted to 2% and nearly 10,000 holes in T-6061 aluminum were drilled. The semi-synthetic test formulation containing AltaLUB 5300 demonstrated equivalent drill wear with more predictability.

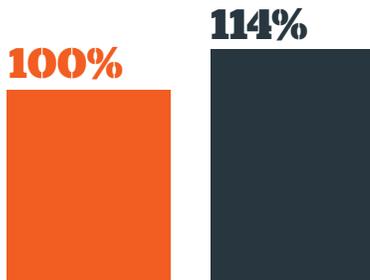
AltaLUB—simply doing more

Lubricity, emulsification, and corrosion inhibition form the foundation of the Alta-family—our new series of high performance metalworking fluid additives. AltaLUB 5300 is the first additive in this series, and it has set the bar high for what is to come. With AltaLUB 5300, you'll experience:

- high mixed-film boundary lubricity
- low foaming profile
- ease of formulation

Improve lubrication

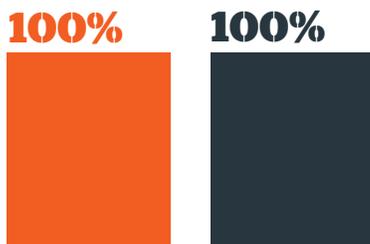
In Microtap torque testing, AltaLUB 5300 and a complex SEE were tested in a semi-synthetic formulation (see table at right). The concentrates were diluted to 5% with DI water, and four sample holes were tapped using each fluid. The formulation containing AltaLUB 5300 showed superior performance on aluminum and equivalent performance on steel.



Mean average torque

Test material #1: T-6061 aluminum

■ AltaLUB 5300 ■ Complex self-emulsifying ester

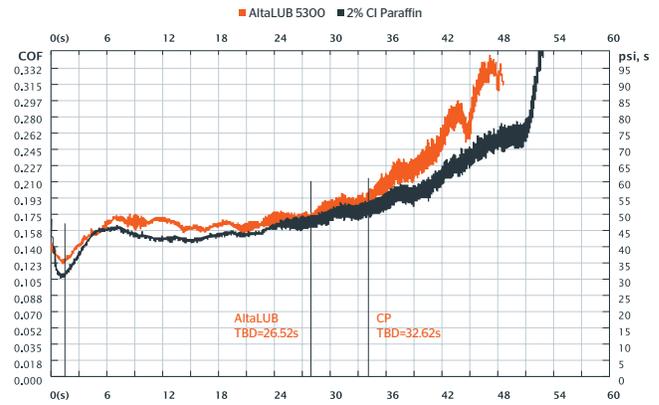


Mean average torque

Test material #2: 1018 steel

Ingevity
5255 Virginia Avenue
North Charleston, SC 29406
800 458 4034
ingevity.com

Performance in twist compression testing



TCT @ 10,000 PSI vs. 42% chlorinated paraffin

Good mixed-film boundary lubricant.

At a glance:

- hydrolytically stable ester
- higher precision cutting for longer
- less lubricant breakdown over the course of the field trial
- less variability means more precise cuts
- excellent performance on multiple metal surfaces
- excellent boundary lubrication even at elevated pressures

Give it a try

Want a sample? Contact our Global Business Manager, Shana McCabe, at shana.mccabe@ingevity.com.

Technical questions? Contact our Lubricants Technical Lead, Eric Olivier, at eric.olivier@ingevity.com.

For more information regarding our formulation method refer to our formulation method guide.

