Chemetall

METALWORKING FLUIDS GROUP

TECH COOL 35052

Premium, EP Activated, Semi-Synthetic Metalworking Fluid Concentrate

Tech Cool 35052 is a high oil, EP activated, heavy duty semi-synthetic metalworking fluid. If you are looking for a truly versatile coolant, one that can do the toughest of machining applications and yet also grind without sacrificing non-cutting functional characteristics, this is the fluid for your shop.

FROM THE FIELD…….

- A nationally known appliance manufacturer is successfully using TECH COOL 35052 in tough worm rolling and roll tapping operations on cold formed steel and experiencing tool life extension over previous competitive fluid.
- A large maker of lighting products utilizes TECH COOL 35052 in a central system supplying fluid to creep feed grinders. The company grinds 6061 aluminum alloy tubing to a specified fine finish. The product is running with no foaming or stability issues.
- A manufacturer of pipe and pipe fittings uses TECH COOL 35052 to ream and thread up to 2 inch diameter pipe. Product consumption is down significantly from the competitive fluid and the material has exhibited no microbiological activity or foul odors even after extended solution idle time. Substrates used include high nickel alloys such as stainless steel and Hastalloy.
- An international manufacturer of parts for the aerospace industry uses TECH COOL 35052 in a wide variety of machining operations on aluminum, Inconel, stainless steel and titanium. This company reports that the product produces extremely dry chips resulting in minimal carry-out and less product usage. Extremely low foam and mist levels have been noted as well.

CUT IT, CLEAN IT, COAT IT

www.naltic.com/metaltreatment.html

Contact: David Eldrege
(435) 503-4972
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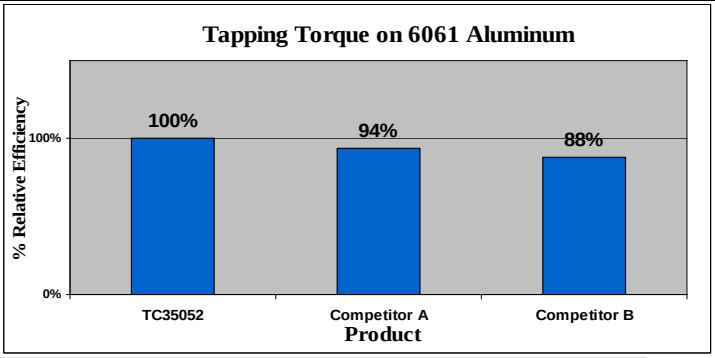
Order 5 , 52 or 275 Gallon Units

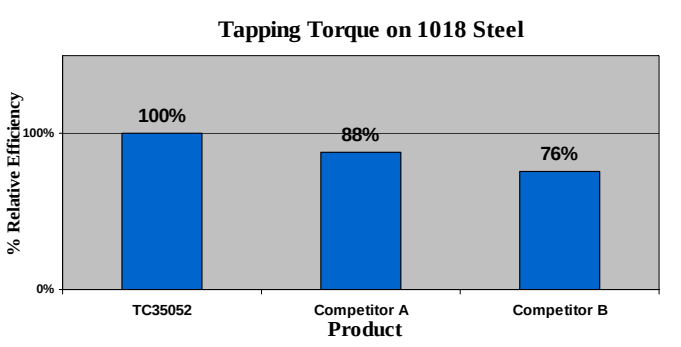
FROM THE LABORATORY

TECH COOL 35052 offers superior lubricity and performs at extremely high levels in the non-cutting functions. This is illustrated by a sampling of data collected in the laboratory and summarized below.

LUBRICITY

The Tapping torque test is a quantitative measure of the lubricity performance of metalworking fluids. It has an ASTM standard method designation of D5619.
The data is presented in graphical form and is depicted as % Relative Efficiency. The higher the % Relative Efficiency the better the lubricity and therefore the better the machining performance.





FOAMING TENDENCY

Samples are placed in a blender to create air entrainment and foam. When the blender is turned off, the time required for the foam to break is measured. Samples with fastest break times exhibit the best foam control. Foam profiles can also examined in different water conditions to determine compatibility.

	TC35052	Comp. A	Comp. B
Foam Height (5% v/v in DI H2O)	750 mls	750mls	800 mls
Foam Break Time	22 seconds	30 seconds	300 seconds

CAST IRON CHIP CORROSION

ASTM D 4629 Cast Iron Chip test is a measure of the corrosion protection of MWF products and sumps. The test consists of placing chips atop a filter paper inside a covered Petri dish, followed by flooding the chips with the test fluid. The chips are given 24 hours to corrode. Any corrosion is seen as the rust bleeds into the filter paper. The final data is usually presented with a rating scale of 0-5. A "0" value represents no rust present and 1-5 values have increasing degrees of rust noted.

H2OHardness (ppm)	TC35052 5% v/v	COMP A 5% v/v	COMP B 5% v/v
0	0	0	0
150	0	0	0
300	0	1	0
600	2	3	2.5
1200	3.5	4	4

EMULSION STABILITY in HARD WATER

Emulsion stability is negatively affected by the cycle up of hard water ions. In this test a 5% v/v emulsion is mixed with varying degrees of water hardness and placed in a graduated cylinder. These solutions are examined for any sign of emulsion creaming or splitting over time. The results shown here are after seven days time.

H2O Hardness (ppm)	TC35052	COMP A	COMP B
300	Stable	Stable	Stable
600	Stable	Stable	Light Creaming
1200	Stable	Moderate Creaming	Light Oil Split

NOTE: MORE PRODUCT DATA AVAILABLE UPON REQUEST

TECH COOL 35052 represents a quantum leap forward in the technology of chlorine EP activated semi-synthetic metalworking fluids. The product is designed to be successful in the most difficult of machining operations. It is recommended for use on aluminum alloys (cast and wrought), stainless steels, titanium, and high nickel alloys such as Inconel and Hastalloy. It can also be used on ferrous alloys. It is not recommended for use on hardened steel alloys.
TECH COOL 35052 has been successful in a wide variety of operations including, roll threading, thread tapping, drilling, milling, and creep feed grinding.

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