

Elgene's

GERMO-COOL 67M

A SUPERIOR METAL CUTTING COOLANT & LUBRICANT

NO RANCIDITY • NON-TOXIC • FIREPROOF • NO FUMES • INHIBITS RUST • DESTROYS BACTERIA

ELGENE'S GERMO-COOL is a NEW water soluble synthetic LUBRICANT especially formulated as an all-purpose METAL CUTTING COOLANT. It forms a transparent solution in water. GERMO-COOL contains no petroleum or oils of any kind. GERMO-COOL is itself (without additives) a powerful RUST INHIBITOR as well as a BACTERICIDE, thus offering unusual advantages to material and personnel.

APPLICATIONS:

GERMO-COOL has earned successful reports on all forms of machining, cutting and grinding, sawing and drilling. GERMO-COOL will lubricate, cool and protect the widest range of metals including: carbon steels, stainless steels, chrome-molybdenum steels, vanadium steels, Nitralloy steel, Inconel alloy, monel alloy, aluminum, aluminum alloys, phosphor, bronze, beryllium copper, copper, silicon brass, titanium, boron carbide, plastics and other mineral type compounds.

ADVANTAGES TO PERSONNEL:

1. Promotes healthier working conditions by destroying the usual bacteria common to stagnant lubricants (pseudomon contamination).
2. Fireproof — 100%.
3. Non-toxic.
4. No fumes.
5. Does not sensitize the skin.
6. Does not harm clothes.
7. Does not turn rancid.
8. No odors.

PRODUCTION ADVANTAGES:

1. Provides wear protection-extraordinary (Four Ball Machine Test).
2. Functions at extraordinarily high load pressure (Falex Extreme Pressure Test).
3. Increases machine speeds and production rates (20%-25%).
4. Cooler work pieces — reducing heat distortion and tool burning.
5. Increases tool life by 10 to 15 times.
6. Better finishes with fewer machining operations.
7. Reduces down-time.
8. Eliminates costly degreasing operations.
9. Transparency allows clear observation of delicate operations.
10. Very long fluid life — no spoilage or rancidity.
11. No gummy build-ups on machinery.
12. Floors do not become slippery.
13. Keeps circulation lines clean.
14. All-purpose coolant — reduces inventories of coolants.
15. Excellent in spray systems.
16. GERMO-COOL does not destroy lubrication oils and can easily be drained from gear boxes if leakages occur.
17. GERMO-COOL is harmless to gaskets or other sealants.

HOW TO LET GERMO-COOL WORK FOR YOU:

1. Remove previous coolant completely from tank, lines and pump.
2. Remove sludge and chips.
3. Clean the entire machine and flush the lines, tank and pump thoroughly with a 4-to-1 solution of Fabulene in hot water. (Fabulene is chemically compatible with Germo-Cool.) Drain and flush with 100-to-1 solution of Germo-Cool.
4. Drain completely. Repeat only if residues still appear.
5. Fill tank with appropriate solution of Germo-Cool.

(OVER)

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6. Circulate to see that flow is clear and uncontaminated.

7. If some contamination reappears in early usage (which occurs rarely), drain out for the last time and refill with fresh solution of Germo-Cool.

DILUTION RATIOS:

Normal Grinding: 1-to-25 up to 1-to-100 parts water.

Normal Machine Cutting Operations: 1-to-10 parts water up to 1-to-20 parts water.

Very Difficult Jobs: 1-to-2 or -3 parts water.

POINTERS FOR EFFICIENT USE OF GERMO-COOL

1. Good shop maintenance and cleanliness should be observed.
2. Never mix chemicals. Do not mix Germo-Cool with other coolants.
3. Skim off lubricating oils from surface of tank if they wash into the Germo-Cool tank.
4. Drain and change Germo-Cool solution every 30-60 days as needed.

SPECIFICATIONS:

Specific Gravity:	1.035 @ 20/20 °C.
Weight Per Gallon:	8.45
Flash Point:	None
PH-Concentrated:	8.5
Freezing Point:	Minus 20 °C
Viscosity:	Slightly less than plain water
Surface Tension:	Concentrate — 21 dynes/cm 20:1 solution — 40 dynes/cm (water = 72)

LOAD CARRYING CAPACITY

Falex Machine Test:	25% solution — 4500 lb. jaw load (limit of machine)
50% solution — 4500 lb. jaw load (limit of machine)	10% solution — 4000 lb. jaw load

PROTECTION AGAINST WEAR

Four Ball Machine Test: (extremely low coefficient of friction)

100 rpm, 1 hour, 150 °F., Kg. load = negligible scar and .09 coefficient

CORROSION RESISTANCE TESTS

A) 24-Hour Test in 50% humidity chamber:

25% — no rust on stainless steel chips

50% — no rust on cast iron chips

B) Under accelerated aging conditions for two weeks @ 125 °F.:

Results: Iron — no trace of corrosion

Aluminum — no trace of corrosion

Cold Rolled Steel — no trace of corrosion

TOOL LIFE AND CUTTING SPEED TEST CONDITIONS

Machine Tool: 16" box column Cincinnati Drill Press with variable speed drive

Machining Conditions: stub length 1/4" dia. high speed steel drills; a feed of .005 inch per revolution; 1/2 inch depth; three cutting speeds

Material: A/S/4340 steel quenched and tempered to 300 Brinell

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