



## Macson 2000 Series Straight Cutting Oils

MACSON 2000 series oils carry a high percentage of sulfur Chlorinated extreme pressure additives that eliminate chip welding and provide fine finishes on alloy steel. They should generally be used without dilution with mineral oil, but because they contain such a high percentage of base lubricants and polar additives, on some operations they can be cut back with paraffin oil or used as an additive to increase the performance of inferior tool lubricants. The superior anti-weld qualities of these lubricants are readily shown by the ease with which they handle tapping, gear shaping and other difficult operations on alloy steels.

FOR:

- \* Broaching
- \* Thread Grinding
- \* Tapping
- \* Machining Hard Steels
- \* Threading
- \* Additive for Screw Machine Oils
- \* Gear Shaping
- \* Honing
- \* Form Grinding

Not all operations require the high percentage of extreme pressure additives present in the MACSON 2000 series oils. On some operations, dilution may be more practical. For instance, this oil gives outstanding performance on gear shaping, but on gear hobbing 3 parts of paraffin oil to 1 part of MACSON 2000 will greatly improve hob life.

1. CUTTING SPEED – The low speed operations of broaching, tapping, threading and gear shaping will benefit most from the chemical lubricants in MACSON 2000 series oils. As machine speeds increase, the need for this chemical lubrication will decrease. On higher speed operations, try reducing 2000 oils with paraffin oil.
2. CONTROLLING CHIP WELDING – The anti-weld additives present in MACSON 2000 oils eliminate tool pick up and chip welding. MACSON 2000 series oils will help in obtaining low micro inch finishes, free of tearing. These additives are particularly necessary when working with the harder alloy steels.
3. THREAD AND FORM GRINDING – For thread and form grinding operations, use the heavy viscosity MACSON 2222. The superior heat exchange characteristics of MACSON 2000 oils ensures freedom from burning and provides longer wheel life.
4. HONING OPERATIONS – The low viscosity of MACSON 2060 provides the same chemical activity and insures a fast rate of stock removal and fine finish on honing operations. Superior heat exchange and lubrication qualities give longer stone life.

5. METALS – High carbon alloy steels, stainless steels and hard to machine alloys will especially benefit from the chemical lubrication provided by MACSON 2000 oils. MACSON 2000 oils contain a high amount of active sulfur, which will darken copper, brass or silver parts unless they are immediately degreased following machining operations. EXERCISE CAUTION ON BRASS, BRONZE OR COPPER PARTS.
6. INVENTORY CONTROL – The wide range of difficult machining and grinding operations handled by the MACSON 2000 oils plus their ability to fortify conventional cutting oils makes these ideal from the viewpoint of simplifying inventory and easing the handling problems in a plant.
7. OPERATOR SATISFACTION – The non-gumming, good cleaning characteristics of MACSON 2000 oils provides clean working areas and safe conditions for the operators. These compounds contain no kerosene and are non-irritating to the skin and the pleasant working conditions they provide improve operator efficiency. Considerable reduction in smoke will also enhance operation throughout the facility.

**SPECIFICATIONS**

GRADE	2060	2112	2222	2332
Viscosity @ 100° F., SUS	60-65	100-110	160-170	290-310
Flash Point, COC	280° F.	320° F.	340° F.	350° F.
WT/Gal.	7.44	7.65	7.89	7.75
Sulfur, Total, % wt.			1.82	
Sulfur, active, % wt.			1.26	
Chlorine, % wt.			1.6	
Recovered Fatty Acids, % wt			6.5	
Neutralization No. of F.A.			195.198	

NOTE: The suffix “AM” after the product number denotes Anti-Mist.