



OAK INTERNATIONAL
Global Metalforming Fluids

OAK[®] SUMP KLEEN

MACHINE TOOL SUMP CLEANER

APPLICATIONS	<p>OAK SUMP KLEEN is a liquid, water-based alkaline machine tool cleaner developed to deliver maximum detergency in a one-step product. OAK SUMP KLEEN “splits out” rancid lubricants, coolants, tramp oils, hydraulic fluids and other oil-based soils from machine tool sumps and surfaces.</p> <p>OAK SUMP KLEEN is ideally suited for efficient clean outs of presses, lathes, mills, broaches, grinders and machining centers. Flexible Machining Systems (FMS) and other central systems benefit as well from OAK SUMP KLEEN's ability to rapidly and thoroughly clean troughs, feed lines, machine tables, sumps and filtration/reclamation support equipment.</p>
COMPETITIVE ADVANTAGES	<p>NO OTHER PRODUCT NEEDED TO CLEAN SUMPS</p> <p>BUILT IN CORROSION INHIBITION TO PROTECT MACHINE SURFACES</p> <p>ELIMINATES FIRE HAZARDS ASSOCIATED WITH SOLVENT CLEANERS</p> <p>CONCENTRATED PRODUCT – allows excellent cleaning at low level concentrations</p> <p>CONTAINS NO HEAVY METALS, PHOSPHATES, NITRATES, PHENOLS OR HALOGENS TO FURTHER POLLUTE WASTE STREAMS</p> <p>CLEANS IN HARD WATER - up to 600 PPM without the use of softening agents, is non-foaming in all waters and cleans effectively at room temperature</p> <p>EXCEPTIONAL RINSABILITY – reduces machine down time which saves on labor costs</p> <p>REJECTS TRAMP OILS – will not emulsify tramp oils, thereby, reducing chemical treatment costs to remove these soils, plus “splits out” oils for easy removal by oil skimmers or oil absorbents</p>

GETTING STARTED

FOR INDUSTRIAL USE ONLY.

DIRECTIONS FOR USE OF OAK SUMP KLEEN IN INDIVIDUAL MACHINE SUMPS:

Step 1: Drain machine tool of old coolant or lubricant with sump sucker or pump.

Step 2: Remove all solid materials (fines, chips, sludge) from sumps sides and bottom.

Step 3: Fill sump with water (leave room for Oak Sump Kleen) and circulate through entire coolant system.

Step 4: Add **OAK SUMP KLEEN** at 4-6% by sump volume or 2-3 gallons per 50 gallons water depending on machine condition and circulate 1-3 hours. Expose cleaner to all machine surfaces.

Step 5: Drain sump and eliminate any solids.

Step 6: Charge sump with fresh water and rinse all machine surfaces for 20 minutes. Drain rinse water.

Step 7: Charge machine tool immediately with appropriate **OAK** lubricant.

DIRECTIONS FOR USE OF OAK SUMP KLEEN IN CENTRAL SYSTEM:

Step 1 – 3: Identical to INDIVIDUAL MACHINE SUMP.

Step 4: Add **OAK SUMP KLEEN** at 4-6% and circulate at least 24 hours. Expose solution to all filters, troughs, centrifuges, skimmers, hydrocyclones and drag conveyors.

Step 5: Drain system and eliminate any solids.

Step 6: Charge system with fresh water and flush for 2 hours. Drain rinse water.

Step 7: Charge system immediately with appropriate **OAK** lubricant.

Add no other substances to the concentrate or mix unless approved by your OAK Representative.

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES	Physical state: Liquid Appearance and odor: Transparent, characteristic Color available: Straw Solubility in water: 100% miscible Weight, lb/gal, 60°F (15.6°C): 9.0 Specific gravity, (H₂O = 1): 1.08 Boiling point, °F (°C): >212 (100) Flash point, COC, °F (°C): NA Fire point, COC, °F (°C): NA Extinguishing media: NA Unusual fire & explosion hazards: None Freezing point (or pour point), °F, (°C): 26 (-3) If frozen, product separates. Thaw completely at room temperature and stir thoroughly. pH, concentrate: 13 pH, 5.0% mix, typical operating conditions: 12 Total chlorine, wt%, calculated: 0.00 Total sulfur, wt%, calculated: 0.00 Silicones: No
PACKAGING	Available in 5-gallon pails, 55-gallon drums and bulk containers.

For additional information concerning **OAK SUMP KLEEN**, refer to its OSHA MSDS or contact OAK INTERNATIONAL at 1-269-651-9790.

WARRANTY: Oak International, Inc. will grant credit on any product which proves defective in material or workmanship as determined by us subject to the following conditions: all material is subject to our inspection prior to issuing credit; any refund will be adjusted based on the volume of product used; no credit will be granted for used or unused product(s) over one year old as determined by the batch number. The terms in this warranty do not in any way extend to any product thereof covered by this agreement, which has a life, under normal usage, inherently shorter than the one year period indicated above. Except as set forth expressly in writing herein, there are no other warranties express or implied in respect of any product. No warranty of merchantability or fitness for purpose shall apply.

LIMITATION OF LIABILITY: Under no circumstances shall we or any affiliate of ours have any liability whatsoever for loss of use or for any indirect or consequential damages.

Minor formulation changes or normal variations in the manufacture of this product may cause slight variances in the data presented on this sheet. 2/22/07 REV