

**Kouper Lubricants Private Limited**



KOUPER Products are derived with innovative formulations and technology with the re-defined tribological solution to all industrial applications.

## Coolant Management Feb - 24



METAL WORKING FLUIDS



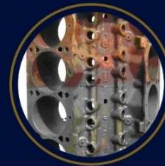
NEAT CUTTING OILS



GEAR OIL



HYDRAULIC OIL



RUST PREVENTION OIL



SPINDLE OIL



LUBE OIL



KNITTING OIL



CLEANERS



EDM OIL



DRAWING OIL

# Your ideal product collaborator.



Continuous monitoring of coolants is crucial to uphold their performance and quality. This practice not only extends machine and fluid lifespan but also enhances manufacturing efficiency, maximizes profitability, and contributes to improved safety. Despite these benefits, fluid condition monitoring doesn't have to be complex or costly.

Multiple monitoring techniques are available to measure a range of factors affecting coolants. While some tests may require laboratory analysis, others are relatively simple and cost-effective to conduct. This concise guide offers insights into establishing and implementing efficient condition-based analysis techniques for coolants.

Kouper lubricants come up with knowledge transfer magazines to improve our product partners to enhances their manufacturing efficiency, maximizes profitability, and contributes to improved safety.

## Technical Support Excellence

Benefit from our unparalleled expertise in lubrication and chemical processes at KOUPEL. We offer unmatched products and services with focused engineering, administrative, and technical support. Our comprehensive business support solutions encompass customer service team, customer account managers, and a team of experienced technical engineers and product specialists.

Every lubrication recommendation schedule and review are customized to the unique needs of your operation. Our goal is to extend service life and optimize operational efficiency. At KOUPEL, we are committed to providing exceptional support for your technical requirements.



# COOLANTS AND YOUR HEALTH



## MONITORING COOLANT CONCENTRATION

- Coolants comprise a complex blend of various chemicals, including emulsifiers, stabilizers, corrosion inhibitors, biocides, fragrances, and extreme pressure additives. The presence of these substances can contribute to health risks. The Health and Safety Executive (HSE) has emphasized the heightened risk of health issues associated with contaminated fluid that hasn't been adequately maintained and controlled.
- Manufacturers should be cognizant of their legal duty of care, particularly in safeguarding the workforce from health risks associated with the utilization of metalworking fluids.

## EMPLOYERS SHOULD:

- Conduct a comprehensive risk assessment of health hazards for workers and determine necessary precautions.
- Implement measures to prevent or control exposure to metalworking fluids; if prevention is not feasible, ensure exposure is effectively managed and minimized.
- Regularly monitor exposure levels and conduct necessary health surveillance.
- Refer any individual suspected of a work-related illness to an occupational health professional.
- Regularly inspect and maintain safety and control measures, ensuring adherence to all established procedures.
- Furnish workers with ample information, training, and instructions on using control measures and the required personal protective equipment (PPE).



## EMPLOYEES SHOULD:

- Collaborate with employers and adhere to all provided training and instructions.
- Utilize control measures and personal protective equipment (PPE) to the fullest extent.
- Promptly report any defective equipment to ensure timely repairs or replacements.
- Consistently follow fluid management procedures and contamination control measures.
- Measures to prevent or control exposure to metalworking fluids; if prevention is not feasible, ensure exposure is effectively managed and minimized.
- Regularly monitor exposure levels and conduct necessary health surveillance.
- Refer any individual suspected of a work-related illness to an occupational health professional.
- Regularly inspect and maintain safety and control measures, ensuring adherence to all established procedures.
- Furnish workers with ample information, training, and instructions on using control measures and the required personal protective equipment (PPE).
- Attend and actively participate in health surveillance programs as required.

# REDUCING INHALATION

The generation of oil mists and vapors occurs when high-speed machinery vaporizes coolant into the atmosphere. These substances are pervasive and can linger in the air for extended periods before settling on surfaces, walls, and floors. Mist, vapors, smoke, and fumes may contain respiratory sensitizers—substances that, when inhaled, have the potential to trigger allergic reactions in the respiratory system, leading to conditions like asthma.

## COOLANT CONTROL

Controlling the volume and flow rate of coolant to the tool is crucial in minimizing the production of mist or vapor, thereby reducing the risk of inhalation. To achieve this, coolant application should be at the lowest possible pressure and directed specifically at the tool/work piece interface. It's important to avoid coolant flowing over unprotected hands. Implementing automatic systems to stop or divert the delivery when not in use is also recommended. These measures not only enhance safety but also optimize fluid usage, contributing to cost reduction.



## VENTILATION

To mitigate the risk of exposure to oil mists and vapors, ensuring proper ventilation, extraction, and air filtration systems, including Local Exhaust Ventilation (LEV), is essential. These systems prevent the buildup and recirculation of airborne contaminants. Additionally, enhancing natural ventilation, such as opening doors or windows, can contribute to reducing vapor levels in the workspace. These measures collectively enhance air quality and create a safer working environment.



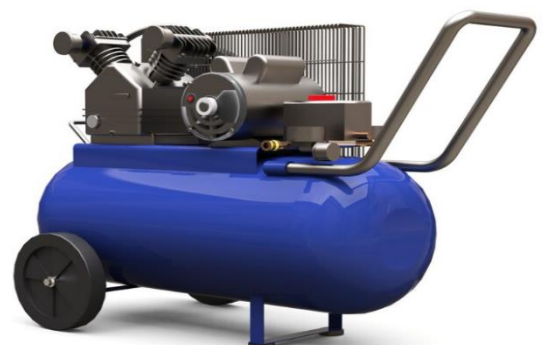
## SPLASH GUARDS

Implementing splash guards and enclosures is effective in shielding workers from accidental splashes and minimizing the contamination of nearby surfaces. However, it's important to note that even if machines are fully covered, operators can still be exposed to fluid when opening the cabinet door. To address this, incorporating a time delay on doors can allow mists and vapors to be removed through ventilation before exposure occurs. Regular checks, testing, and prompt replacement of defective equipment are essential to maintain the effectiveness of these control measures.



## USE OF COMPRESSED AIR

The use of compressed air to remove coolant and swarf from machined components has been demonstrated in studies to elevate the risk of fluid aerosolization and deposition onto clothes and the operator's skin. Whenever feasible, it is advisable to avoid employing compressed air and instead opt for alternative methods for component cleaning. If the use of compressed air is unavoidable, exercise caution by employing low pressure and implementing suitable controls to safeguard health.



# PROTECTION FOR SKIN

Coolants can come into contact with the skin, especially the hands and forearms, at various stages of the manufacturing process. These substances have the potential to cause skin irritation, and the presence of contaminants in the fluid can elevate the risk of developing skin problems. Therefore, implementing effective coolant management controls is crucial. Additionally, the sharp edges of swarf, filings, and other foreign particles suspended in the fluid can lead to abrasions and cuts, further contributing to skin irritation.

## PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment (PPE) is designed to minimize contact with coolants and can be effective in protecting workers from skin irritation. However, PPE should only be used as a last line of defense, as contact with the coolant can still occur when using PPE, such as touching the outside or contaminating the inside of clothing when putting on or removing it. All PPE should be used in accordance with risk assessments, regularly examined for any tears or holes, cleaned, tested, and replaced. Users should also be aware of the increased risk of finger entrapment in moving parts when wearing gloves, and suitable gloves should be used.



## HYGIENE

Good personal hygiene is essential for reducing the risk of developing dermatitis. A pre-work barrier cream can be used in conjunction with PPE. It should be applied before starting work, after washing hands, and every 24 hours to provide an additional layer of protection between the skin and contaminants. Avoid using oily rags to clean hands; instead, hands, forearms, and any other body parts that may have come into contact with metalworking fluids should be regularly washed with soap and hot water. After finishing work, a reconditioning after-work cream, Hand Care Conditioning, should be applied to help replace and restore the skin's natural oils.

Should you have any questions or require further assistance, please feel free to contact our technical support team at [info@kouper.in](mailto:info@kouper.in) / +91- 9611517922. Your satisfaction and the optimal performance of your metalworking fluids are our top priorities.

**“Your Right choice  
lubricant for Right  
application”**

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