



TROUBLESHOOTING THE MOST COMMON PROBLEMS IN METALWORKING FLUIDS

Dermal irritation



Dermatitis is an inflammatory response of the skin. Redness, swelling, itching and tiny pimple-like eruptions on the skin surface are signs at the onset of dermatitis. In more severe cases, deep cracks and open sores may develop. Fortunately, the condition is usually readily reversible when exposure to the causative agent(s) is ceased. Medical attention may be necessary for more severe cases.

Dermal irritation can be caused by any combination of chemical (acidic or basic), petroleum (lubricants or solvents) or metals-based (nickel, chrome, cobalt or zinc) exposure. Poor housekeeping and fluid- management practices that lead to high concentrations and/or contaminant-laden fluid are leading culprits for dermal irritation. With remedy comes the reduction of this risk.

Although cutting fluids are designed with operator health and safety in mind, operators can experience varying degrees of dermal irritation up to and including dermatitis.

Dermal irritation risks can be reduced through the following activities:

- Control cutting fluid concentration, upgrade to a high-performance product if higher concentrations are needed to achieve satisfactory performance.
- Control system contaminants, if this is not possible, it is usually best to dump, clean and recharge contaminated sumps.
- Keep the cutting fluid free of oil and dirt contamination, maintain separators and filters in good working order, and keep harsh chemicals, solvents and abrasives away from the skin.
- Promote proper skin care, the use of skin creams and resistant gloves that cover the entire forearm.