

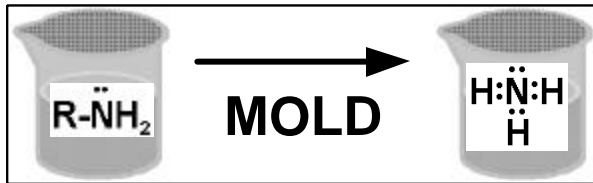
CIMCOOL[®]

Technical Report

Milacron Marketing Co. | Consumable Products Division | Cincinnati, Ohio 45209

AMMONIA ODOR AND METALWORKING FLUID MIXES

In CIMCOOL[®] metalworking fluid mixes, MOLD is the cause of ammonia odors.



There are several items with a central system mix which can be monitored and actions taken that will help prevent ammonia odors:

1. Maintain your CIMCOOL metalworking fluid mix concentration within the established parameters.
2. Except when using one of the few specialized products that are designed to operate at a pH of less than 8.8, maintain the pH of the CIMCOOL metalworking fluid mix between 8.8 and 9.2.
3. If you are using a CIMCOOL metalworking fluid that has an M-Time⁽¹⁾ or using Additive MC to control bacteria, maintain the mix M-Time at 90 seconds or less.
4. If the mix M-Time gets significantly longer, such as greater than 2.5 minutes, and no bacteria growth is identified by the Bacteria Counts, treat the system with a fungicide (BUSAN 30WB) or a broad-spectrum microbicide (Kathon 886) at the recommended dosage.
5. Submit samples to the CIMCOOL Laboratory or Regional Laboratory for a routine analysis at least every two weeks.
6. Identify the areas of the central system, trough lines, machines, ...etc. which are prime areas for mold growth. When identifying these areas, look for areas that have minimum fluid flow, high humidity, and warm temperature. These areas usually show mold

growth prior to mold and/or ammonia becoming significant problems.

Reaction to Ammonia Odor

If you experience ammonia odors in a CIMCOOL metalworking fluid central-system mix, the following actions are recommended.

A). Treat the system with a fungicide (BUSAN 30WB), or microbicide (Kathon 886) at the recommended concentration. When using Kathon 886, do not add anything to the system except for water for a period of four hours prior and after the dosing. This is to help maximize the effectiveness of the addition. This waiting period is not required with BUSAN 30WB.

B). If the mix pH is less than 8.5, adjust it to between 8.5 and 8.7 with Additive LC. Then adjust the mix's pH to between 8.8 and 9.0 with Additive 63.

IMPORTANT NOTES: Slowly adjust the mix pH over several hours. Several small doses of Additive LC at 1:10,000 are recommended over gross additions. Raising the mix pH can make the ammonia odor worse for a period because the ammonia is less soluble in the higher mix pH. To obtain the desired effects, ie. pH buffering, add Additive 63 at 1:1000.

C). Find the mold growth and physically remove it. Do not further contaminate the mix with mold as it is being removed.

D). If the mix pH drops below 8.7 by the next day, repeat Steps A through C.

E). Adjust the mix CIMCOOL mix concentration to within recommended parameters.

F). If the CIMCOOL metalworking fluid being used has a M-Time or Additive MC is being added to the mix to control bacteria, adjust the mix's M-Time to less than 90 seconds.

G). If you need additional assistance concerning ammonia odors, contact your local CIMCOOL Technical Sales Specialist or CIMCOOL Technical Services at 1-513-458-8199.

NOTE: An "Ammonia test" is also recommended to test for ammonia present in the fluid mix.

FOOTNOTE:

⁽¹⁾ M-Time: The M-Time test is designed to show the amount of Additive MC-type material in a CIMCOOL metalworking fluid mix. Typically, mixes with M-Time values between 60 and 90 seconds have good bacterial control. It is important to note that the time scale used on this test equates with exponential amounts of material present. It is not a straight-line correlation. ■