Technical Bulletin

Health, Safety and Environmental Affairs – The Tank Side Use of Biocides and Fungicides

It is important to understand that while everyone in the metalworking fluids (MWF) industry calls these products biocides and/or fungicides, the U.S. Department of Agriculture in charge of biocides under FIFRA [Federal Insecticide, Fungicide and Rodenticide Act 7 U.S.C. s/s 136 et seq. (1996), which controls farm and garden pesticides, etc.] calls these materials "antimicrobial pesticides." It is also critical to understand that while there are a great many chemicals that would kill bacteria and fungus in metalworking fluids, the only chemicals that can be used to kill bacteria or fungus are those registered by the U.S. Department of Agriculture for use in metalworking fluids. It is also important to know that how these fluids are used is controlled by the FIPRA with conditions noted on the label.

When properly used, these chemicals are very safe. However, **these chemicals are designed to kill living organisms, so they need to be treated with respect; be sure to:**

1. **Not over or under dose** – use the proper amount of material for the system in question.
2. **Know the actual volume of the system**, including all the "flowing" fluid.
3. **Add biocide as far up-stream of the supply pump as possible** to prevent dispensing a "slug" of biocide in circulation.
4. **Consult with your fluid supplier before selecting your biocide** – not all biocides are compatible with all fluids and some biocides are more effective in some situations than others.
5. **Understand the importance of order of addition** – if materials other than the antimicrobial pesticide, such as emulsion stabilizers, pH adjusters, or copper, are added into the system the order of addition may make a significant difference in the performance of the biocide.
6. **Sample in accordance with the plan established with your fluid supplier.** Typically, a "before" add sample is followed by one or more after samples at a specific time sequence and are used to measure the effect of the add.

If you have any questions about the proper use of the biocide or fungicide, contact either the technical support department of your fluid supplier or the technical support department of the manufacturer. They should be able to help you.



Hobbing

The tank side addition of chemistry is an established and very effective way of managing fluid, particularly in central systems or very large individual sumps. But like everything else in manufacturing, it needs to be approached with a plan based on product and system knowledge, then balanced with a large amount of common sense.

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