

April 12, 1996

Ms. Diane Manning NIOSH, Education & Information Division Mail Stop C34 4676 Columbia Parkway Cincinnati, Ohio 45226-1998

Dear Ms. Manning:

Enclosed are pages 132 and 133 from the draft document, "Criteria for a Recommended Standard: Occupational Exposures to Metalworking Fluids". Table 5-1 lists formaldehyde release biocides and the last 5 products listed here are not releasers of formaldehyde. The products marked should be moved to table 5-2, Non-formaldehyde release biocides. Also, please note the comments on the correct name of Sodium Omadine® 40% Aqueous Solution and the statement that "Studies suggest that exposure to biocides can cause either allergic or contact dermatitis." Not all biocide products cause this effect.

I can be reached at (203) 271-4154 if you have any questions.

Sincerely,

OLIN CORPORATION

Diane Petroccione

Senior Regulatory Specialist

cc: K. Delaney C. French

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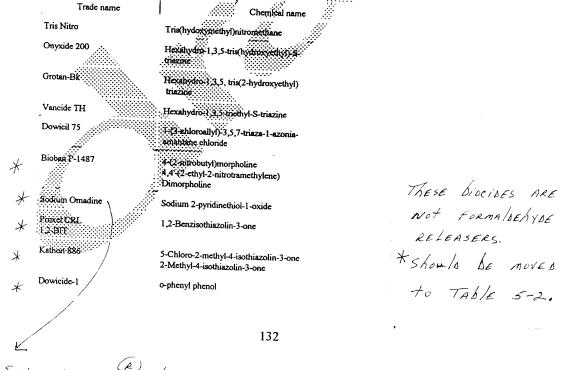
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5.3 Biocides

Biocides are incorporated as components in the formulated MWFs or added before and during use to MWFs to prevent microbial growth. Biocides are classified into two groups: formaldehyde release agents containing condensates of formaldehyde, and others. Formaldehyde releasers are usually soluble in water rather than oil and are more effective against bacteria than fungi. Examples of commonly used formaldehyde-releasing biocides are presented in Table 5-1, Formaldehyde release biocides.

Table 5-1, Formaldehyde release biocides



Sobium Comadine 40% Agreous Solution } Industrial Fungicioe AND Bactericise. Correct Trade Mark nome.

Non-formaldehyde releasers are generally more effective against fungi than formaldehyde releasers but are also effective against bacteria. The phenolic compounds are oil-soluble. The derivatives of morpholine and the dioxanes are partially solble in oil and water [Zugerman 1986]. Pryce et al. 1989]. Examples of commonly used non-formaldehyde releasing biocides are presented in Table 5-2, Non-formaldehyde release biocides.

Table 5-2, Non-formaldehyde release biocides

| | The state of the s |
|----------------------|--|
| Trade name | Chemical shape |
| Givgard DNX | 6-Acetoxy-2,4-dimethyl-tx-dioxane |
| XD-8254 DBNPA | 2,2-dibromo-3-nitrikipiropion |
| PCMX | p-chloro-m-coteriol |
| * | some extern (Notall biocides have this) |
| Studies suggest that | |

Studies suggest that exposure to biocides can cause either allergic or contact dermatitis

[Zugerman 1986]. There are concerns about the potential carcinogenicity of some biocides due to their formaldehyde release action, although the actual concentrations of formaldehyde released in MWFs have not been thoroughly studied. Formaldehyde is an OSHA-regulated carcinogen (29 CFR², 1910.1048). NIOSH has adopted a recommended exposure limit (REL) for formaldehyde as a carcinogen (Ca), with an 8-hr time-weighted-average (TWA) of 0.016 ppm, and a 15-min ceiling of 0.1 ppm [54 FR 2651 (1989) and NIOSH 1988b]. Formaldehyde aerosols from MWFs

² Code of Federal Regulations. See CFR in references.