

Interoffice Communication

To Keith Fogg
 From Tom Grumbles
 Date June 2, 1980
 Subject PCB WORK PRACTICES

PCB's have been shown to cause liver damage and chloracne as a result of penetration through the skin. This penetration is seen with repeated or prolonged contact, however, dermatitis effects can be caused with shorter exposures. Thus, it is recommended that skin contact be prevented by the use of proper protective clothing and equipment.

Animal studies have shown PCB's to be carcinogenic and teratogenic, emphasising the need to minimize all exposures to PCB. Following are general guidelines for working with PCB's.

1. The NIOSH recommended exposure limit for PCB's is $1\mu\text{g}/\text{m}^3$ as an eight-hour TWA. Exposures should be controlled to this level. From my understanding of your operations, it is not likely that you would approach this limit. We can get sampling equipment to quantify exposures if you see a need.
2. In any operation where workers may come into direct contact with PCB's, protective clothing impervious to PCB's, should be worn. This should include gloves and goggles at a minimum, with face shields included where feasible.

Depending on the amounts being handled or the potential for PCB spill, boots or boot covers and bib-type aprons should be worn.

Gloves made of Polyvinyl Alcohol are the most impervious to PCB's. However any glove made for aromatic solvent use will provide adequate protection if they are inspected frequently for wear (cracking, discoloration, etc.).

Intact skin, as well as protective equipment is more permeable to hot PCB. Where feasible work should be done after the PCB's have had time to cool.

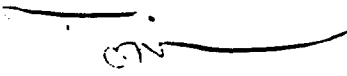
3. If PCB's come in contact with the skin, it should be washed thoroughly with soap and water as soon as possible.
4. Contaminated or soaked clothing should be removed as soon as possible and disposed of properly.

A clearly marked receptacle should be provided for disposal of PCB contaminated clothing and protective equipment. This material must be disposed of in accordance with EPA regulations.

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5. If PCB's contact the eyes, the eyes should be flushed immediately with large amounts of water. Medical examination of the eyes should follow the first aid treatment. (A drop of vegetable oil can be used to decrease irritation in the eyes.)
6. For respiratory protection, NIOSH recommends supplied air with a full facepiece for any exposure exceeding $1 \mu\text{g}/\text{m}^3$ or any environment where the concentration is unknown. It is my feeling that this is somewhat impractical and that for our type of work with PCB's, if respiratory protection is needed for short-term exposures, the organic vapor/acid mist respirator would be sufficient. This determination would have to be done on a job to job basis.

We should consider educating those potentially in contact with PCB's to the hazards and precautions necessary in handling PCB's. Please let me know if you need more information. Once the procedures are drafted, I would like to review them. I have enclosed an OSHA Field Memorandum on PCB exposure standards. As you can see there are no specific OSHA standards, as yet, on PCB exposures.


Thomas G. Grumbles

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Attachment