

Vinyl chloride



UNIROYAL, Inc.
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May 2, 1974

RE: EMERGENCY TEMPORARY STANDARD FOR EXPOSURE TO VINYL CHLORIDE -
RELATION TO PVC PROCESSING PLANTS

On April 5, 1974 an Emergency Temporary Standard for exposure to vinyl chloride was promulgated by the Occupational Safety and Health Administration, U.S. Department of Labor, a copy of which is attached. This standard was considered by OSHA to be necessary to provide immediate adequate protection for workers exposed to vinyl chloride, following receipt of information that vinyl chloride was carcinogenic to both test animals and humans. It is expected that a proposed permanent standard will be published in the Federal Register in the near future which, following a time period for comments, hearings, reconsideration and revision, will be promulgated as a permanent OSHA standard.

The essential features of the emergency temporary standard as applicable to PVC fabricating plants are as follows:

1. The standard applies to any areas or operations where vinyl chloride is manufactured, reacted, processed and handled up to that point where the polymer or copolymer is in the form of a fabricated product.
2. No employee shall be exposed to a vinyl chloride concentration in excess of 50 parts per million at any time.
3. Monitoring
 - (a) Both area and personnel monitoring are to be started by April 22, 1974.
 - (b) Area or operator monitoring shall be carried out where vinyl chloride is manufactured, reacted, processed, packaged or stored to determine whether concentrations exceed 50 ppm.
 - (c) Personnel monitoring is to be accomplished using a suitable collection device worn by the employee, and the samples collected analyzed by gas chromatography or other means of equivalent sensitivity.
 - (d) The frequency of personnel monitoring shall be such that employees exposure at all representative jobs are monitored not less frequently than weekly until results for each job for three

URL 18549

RE: EMERGENCY TEMPORARY STANDARD

consecutive weeks are below 50 ppm. Thereafter, monitoring shall be not less than monthly. If monthly monitoring reveals concentrations in excess of 50 ppm, weekly monitoring is resumed until results for three consecutive weeks are again below 50 ppm.

4. Monitoring results must be recorded in writing, with records kept for at least 5 years and available for inspection and copying by OSHA representatives.
5. Each employee shall have access to records indicating his exposure.
6. Each employee shall be informed when his exposure exceeds 50 ppm and of corrective measures being taken.
7. (a) Where monitoring indicates vinyl chloride concentrations are in excess of 50 ppm, or whenever there is the likelihood of greater than usual release of vinyl chloride into the ambient air, as for example equipment ruptures, or when the work may reasonably be expected to release vinyl chloride in excess of 50 ppm, employees are required to wear air-supplied respirators or self-contained breathing apparatus.
(b) At the same time, employers are required to apply feasible engineering or administrative controls to reduce airborne concentrations of vinyl chloride.

We have not as yet developed a formal program of personnel monitoring for the UNIROYAL Plants involved in the manufacture of PVC products, because of the lack of a reliable analytical method for the determination of any vinyl chloride released in the manufacturing processes. Personnel monitoring involves the use of activated charcoal tubes for collecting the sample, with vinyl chloride being absorbed on the charcoal. A problem has been encountered in desorbing or releasing the vinyl chloride from the charcoal, the desorbing solution then being analyzed by gas chromatographic means. The Analytical Laboratory at the Naugatuck Chemical Plant has been working on this problem, and feel they will have a suitable method in a very short time.

As soon as the Naugatuck Analytical Laboratory is satisfied as to the reliability of the method, we will be in contact with the plants involved in fabrication of PVC products, to assist in setting up a monitoring program for meeting compliance with the emergency temporary standard.

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DED/maz
Attachment

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UPL 18550