

CWRU
WRITTEN PROGRAM
FOR VINYL CHLORIDE
29 CFR 1910.1017

Written 3/1999
Revised 08/2011

3. Monitoring may be discontinued if 2 consecutive samples collected

C. Containers of Polyvinyl Chloride Resin Waste

D. Containers of Polyvinyl Chloride

E. Containers of Vinyl Chloride

-OR

F. Signs can be obtained from EHS free of charge.

XI. Medical Surveillance

A. Employees

1. Prior to working with vinyl chloride, each employee potentially

1. Initial assignment: When beginning work, the employee has a physical with specific focus on the kidneys, liver, spleen, skin, connective tissues, and pulmonary system (see Ap. A).
2. Medical history: The employee's medical history is also examined with reference to his alcohol intake, history of hepatitis, work history and exposure to hepatotoxins including chemicals and drugs, past blood transfusions and hospitalizations.
3. Serum specimen: A serum specimen is obtained from the employee to determine total bilirubin, alkaline phosphatase, serum glutamic oxalacetic transaminase (SGOT), serum glutamic pyruvic transaminase (SGPT), and

VINYL CHLORIDE STANDARD
OSHA 29 CFR 1910.1017

Standard Number: 1910.1017

Standard Title: Vinyl chloride.

SubPart Number: Z

SubPart Title: Toxic and Hazardous Substances

(a) Scope and application.

(a)(1) This section includes requirements for the control of employee exposure to vinyl chloride (chloroethene), Chemical Abstracts Service Registry No. 75014.

(a)(2) This section applies to the manufacture, reaction, packaging, repackaging,

- (d)(2)(i) Must be repeated at least quarterly for any employee exposed, without regard to the use of respirators, in excess of the permissible exposure limit.
- (d)(2)(ii) Must be repeated not less than every 6 months for any employee exposed without regard to the use of respirators, at or above the action level.
- (d)(2)(iii) May be discontinued for any employee only when at least two consecutive monitoring determinations, made not less than 5 working days apart, show exposures for that employee at or below the action level.
- (d)(3) Whenever there has been a production, process or control change which may result in an increase in the release of vinyl chloride, or the employer has any other reason to suspect that any employee may be exposed in excess of the action level, a determination of employee exposure under paragraph (d)(1) of this section shall be performed.
- (d)(4) The method of monitoring and measurement shall have an accuracy (with a confidence level of 95 percent) of not less than plus or minus 50 percent from 0.25 through 0.5 ppm, plus or minus 35 percent from over 0.5 ppm through 1.0 ppm, and plus or minus 25 percent over 1.0 ppm. (Methods meeting these accuracy requirements are available in the "NIOSH Manual of Analytical Methods").
- (d)(5) Employees or their designated representatives shall be afforded reasonable opportunity to observe the monitoring and measuring required by this paragraph.
- (e) Regulated area.
 - (e)(1) A regulated area shall be established where:
 - (e)(1)(i) Vinyl chloride or polyvinyl chloride is manufactured, reacted, repackaged, stored, handled or used; and
 - (e)(1)(ii) Vinyl chloride concentrations are in excess of the permissible exposure limit.
 - (e)(2) Access to regulated areas shall be limited to authorized persons.

- (f) Methods of compliance. Employee exposures to vinyl chloride shall be controlled at or below the permissible exposure limit provided in paragraph (c) of this section by engineering, work practice, and personal protective controls as follows:
 - (f)(1) Feasible engineering and work practice controls shall immediately be used to reduce exposures to at or below the permissible exposure limit.
 - (f)(2) Wherever feasible engineering and work practice controls which can be instituted immediately are not sufficient to reduce exposures to at or below the permissible exposure limit, they shall nonetheless be used to reduce exposures to the lowest practicable level, and shall be supplemented by respiratory protection in accordance with paragraph (g) of this section. A program shall be established and implemented to reduce exposures to at or below the permissible exposure limit, or to the greatest extent feasible, solely by means of engineering and work practice controls, as soon as feasible.
 - (f)(3) Such plans shall be updated at least annually.

(g) **Respiratory protection.**

- (g)(1) **General.** For employees who use respirators required by this section, the employer must provide respirators that comply with the requirements of this paragraph.
- (g)(2) **Respirator program.** The employer must implement a respiratory protection program in accordance § 1910.134 (b) through (d) (except (d)(1)(iii), and (d)(3)(iii)(B)(1) and (2)), and (f) through (m) which covers each employee required by this section to use a respirator.
- (g)(3) **Respirator selection.**

(g)(3)(i) Employers must:

- (g)(3)(i)(A) Select, and provide to employees, the appropriate respirators specified in paragraph (d)(3)(i)(A) of 29 CFR 1910.134.
- (g)(3)(i)(B) Provide an organic vapor cartridge that has a service life of at least one hour when using a chemical cartridge respirator at vinyl chloride concentrations up to 10 ppm.
- (g)(3)(i)(C) Select a canister that has a service life of at least four hours when using a powered air-

CWRU has a separate Respirator Program. Please call the EHS Office for information.

purifying respirator having a hood, helmet, or full or half facepiece, or a gas mask with a front-or back-mounted canister, at vinyl

(k)(1)(ii)(D) Past history of blood transfusions; and

(k)(1)(ii)(E) Past history of hospitalizations.

(k)(1)(iii) A serum specimen shall be obtained and determinations made of:

(k)(1)(iii)(A)

(k)(7) If the examining physician determines that alternative medical examinations to those required by paragraph (k)(1) of this section will provide at least equal assurance of detecting medical conditions pertinent to the exposure to vinyl chloride, the employer may accept such alternative examinations as meeting the requirements of paragraph (k)(1) of this section, if the employer obtains a statement from the examining physician setting forth the alternative examinations and the rationale for substitution. This statement shall be available upon request for examination and copying to authorized representatives of the Assistant Secretary and the Director.

(l) Signs and labels

(l)(1) Entrances to regulated areas shall be posted with legible signs bearing the legend:

CANCER-SUSPECT AGENT AREA
AUTHORIZED PERSONNEL ONLY

(l)(2) Areas containing hazardous operations or where an emergency currently exists shall be posted with legible signs bearing the legend:

CANCER-SUSPECT AGENT IN THIS AREA
PROTECTIVE EQUIPMENT REQUIRED
AUTHORIZED PERSONNEL ONLY

(l)(3)

CANCER SUSPECT AGENT

or,

- (l)(5)(ii) In accordance with 49 CFR Parts 170-189, with the additional legend:

CANCER-SUSPECT AGENT

applied near the label or placard.

- (l)(6) No statement shall appear on or near any required sign, label or instruction which contradicts or detracts from the effect of, any required warning, information or instruction.

(m) Records.

- (m)(1) All records maintained in accordance with this section shall include the name and social security number of each employee where relevant.

- (m)(2) Records of required monitoring and measuring and medical records shall be provided upon request to employees, designated representatives, and the Assistant Secretary in accordance with 29 CFR 1910.1020(a)-(e) and (g) through (i). These records shall be provided upon request to the Director. Authorized personnel rosters shall also be provided upon request to the Assistant Secretary and the Director.

(m)(2)(i) Monitoring and measuring records shall:

(m)(2)(i)(A) State the date of such monitoring and measuring and the concentrations determined and identify the instruments and methods used;

(m)(2)(i)(B) Include any additional information necessary to determine individual employee exposures where such exposures are determined by means other than individual monitoring of employees; and

(m)(2)(i)(C) Be maintained for not less than 30 years.

(m)(2)(ii) [Reserved]

(m)(2)(iii) Medical records shall be maintained for the duration of the employment of each employee plus 20 years, or 30 years, whichever is longer.

(n) Employee notification of monitoring results. The employer must, within 15 working days after the receipt of the results of any monitoring performed under this section, notify each affected employee of these results and the steps being taken to reduce exposures within the permissible exposure limit either individually in writing or by posting the results in an appropriate location that is accessible to affected employees.

[58 FR 35310, June 30, 1993; 61 FR 5507, Feb. 13, 1996; 63 FR 1152, Jan. 8, 1998; 63 FR 33450, June 18, 1998; 70 FR 1141, Jan. 5, 2005; 71 FR 16672 and 16673, April 3, 2006; 71 FR 50188, August 24, 2006; 73 FR 75585, Dec. 12, 2008; 76 FR 33608, June 8, 2011]

OSHA Regulations (Standards - 29 CFR)
Supplemental medical information - 1910.1017 App A
Standard Number: 1910.1017 App A
Standard Title: Supplemental medical information
SubPart Number: Z
SubPart Title: Toxic and Hazardous Substances

When required tests under paragraph (k)(1) of this section show abnormalities, the tests should be repeated as soon as practicable, preferably within 3 to 4 weeks. If tests remain abnormal, consideration should be given to withdrawal of the employee from contact with vinyl chloride, while a more comprehensive examination is made.

Additional tests which may be useful:

A.