

3.1 Employee Education and Training

- 3.1.1 The supervisor should be thoroughly familiar with the contents of this data sheet, the Occupational Safety and Health Administration Standard for Vinyl Chloride (29CFR §1910.1017) and the Environmental Protection Agency's National Emission Standard for Vinyl Chloride (Part 61 Chapter I Title 40 CFR Subpart F) before undertaking any training of the employees who are engaged in handling or processing of vinyl chloride. Vinyl chloride handling and use are strictly regulated by many governmental agencies but the regulations issued by OSHA and EPA directly affect the content of any training program for vinyl chloride workers. The supervisor should also seek supplementary information and assistance. One recommended reference is the MCA Case Histories to learn of accidents and injuries that have occurred while handling or processing vinyl chloride. If the services of a safety specialist are available, the supervisor should consult with him before finalizing a safety review of his operations involving vinyl chloride.
- 3.1.2 The Occupational Safety and Health Administration Standard for Vinyl Chloride requires that each employee engaged in vinyl chloride or polyvinyl chloride operations shall be provided training in a program including:
- (a) Nature of the health hazards of vinyl chloride exposure.
 - (b) Specific operations which could result in exposure to vinyl chloride in excess of the permissible exposure limit and necessary protective steps.
 - (c) Purpose, proper use and limitations of the respiratory protective devices.
 - (d) Fire hazard and acute toxicity of vinyl chloride and necessary protective steps.
 - (e) Purpose and description of the monitoring program.
 - (f) Purpose and description of the medical surveillance program.
 - (g) Emergency procedures.
 - (h) Specific information to aid the employee in recognition of conditions which may result in the release of vinyl chloride.

3.1 Employee Education and Training (continued)

3.1.2 (i) A review of the OSHA standard for vinyl chloride. This review must be undertaken annually as well as at the employee's first training period.

3.1.3 The Environmental Protection Agency National Emission Standard for Vinyl Chloride requires that Standard Operating Procedures be prepared and implemented for:

- (a) Loading and unloading line emission control.
- (b) Slip gauge emission control.
- (c) Manual venting of gases.
- (d) Opening equipment emission control.
- (e) Sample taking, handling and disposition.
- (f) Leak detection and elimination.

3.1.4 The employee training program should include the following:

- (a) Process chemistry and objectives.
- (b) Basic process equipment and operating techniques.
- (c) Properties and safe handling procedures for the materials involved.
- (d) Detailed study of the process and process operation.
- (e) Standard operating procedures for the various plant jobs.
- (f) Modifications and additions to meet the foregoing EPA and OSHA requirements.

3.2 The supervisor should periodically review equipment, materials and procedures in current use. For maximum effectiveness, this review should include the participation or input from selected representatives of operations, maintenance, technical and other related activities. The results and recommendations from this review should be incorporated into employee training programs, standard operating procedures and equipment changes or revisions. All chemical processes and plants, particularly those working with reactive hazardous materials should be updated based on changes in process, changes in materials, past experience and new information.

All significant hazards should be explained together with the precautions to be followed in the standard operating procedures. For example, if eye protection is required while taking a sample, the standard operating procedure should read "Wear splash goggles and sample still number 000". This type of instruction is preferable to requiring that a sample be taken in one part of the standard operating procedure and requiring that goggles be worn in another part.

If there are extremely critical steps in the process where, for example, overcharge of catalyst may cause an uncontrollable reaction, consideration should be given to making these supervisory checkpoints. In a similar vein, if certain process variables are not or cannot be maintained within prescribed limits then the plant or process step should immediately be shut down and the supervisor consulted.

Complete standard operating procedures with safety information are essential to train new employees, to provide guidance for older employees and to demonstrate compliance in certain regulatory agencies. An error by an untrained employee is often regarded as negligence on the employer's part by the courts and by regulatory agencies.