SPI

THE SOCIETY OF THE PLASTICS INDUSTRY, INC.

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HOW THE NEW OSHA STANDARD AFFECTS POLYVINYL CHLORIDE RESIN FABRICATORS

At the outset, all recipients of this memorandum are urged to recognize that each individual fabricator must evaluate his own operations with respect to compliance with the OSHA Standard for occupational exposure to vinyl chloride since operations can vary significantly from company to company. Each plant has its own problems and no general statements can be applicable to all. For this reason, the comments which follow must be considered as nothing more than guidelines and not a set of directions or instructions. Another point to be borne in mind is that OSHA's action in adopting the Standard is now before the U.S. Court of Appeals for the Second Circuit for formal review. Thus, the effective date of the Standard could eventually be stayed, or the entire matter remanded to OSHA for reconsideration. For the immediate future, however, we hope that the following comments will be useful to you in indicating steps that should be taken by fabricators to bring themselves and their plants into compliance with OSHA Standard S1910.93q Vinyl Chloride, assuming it remains as is and becomes effective on January 1, 1975.

The first point to be noted is that the Standard applies (S1910.93q(a)(2)) to the manufacture, reaction, packaging, repackaging, storage, handling or use of vinyl chloride or polyvinyl chloride, but does not apply to the handling or use of fabricated products made of polyvinyl chloride. Still further, fabricated products is defined to mean ((b)(6)) a product made wholly or partly from polyvinyl chloride and which does not require further processing at temperatures, and for times, sufficient to cause mass melting of the polyvinyl chloride, resulting in the release of vinyl chloride. In other words, those who use polyvinyl chloride either in the form of powder for subsequent formulating, dry blend, or pellets and who melt the polyvinyl chloride so as to form it into useful shapes, must comply with the Standard. We believe, however, that those who only heat-seal polyvinyl chloride film and sheet or thermoform sheet such that mass melting does not occur need not be concerned with the Standard.

These may include changes such as improving ventilation in storage areas, or enclosing and ventilating mixing areas. In any event, if the controls which can be immediately instituted are not effective in reducing exposure levels, without regard to the use of respirators, to the permissible exposure limit or below, written plans for a program to reduce exposures to the greatest extent feasible must be developed. These plans will have to be furnished to OSHA if a written request is made. Still further, these plans must be updated every six months.

If exposures above the "action level" are found, a program for determining the exposure of every employee should be established. The program should be repeated at least monthly where an employee is exposed above the permissible exposure limit, and should be repeated quarterlywhere employees are exposed above the "action level" but within the permissible exposure limit. Finally, if two consecutive monitoring determinations made not less than five working days apart show exposures for an employee at or below the "action level", monitoring for that employee may be discontinued. In other words, if on the initial monitoring "go around" you find some employees exposed above the "action level" and you institute engineering controls or changes in work practices that reduce employee exposure to vinyl chloride so that the employees' exposure goes below and remains below the "action level", these employees then fall in the same class as those found below the "action level" on the first monitoring.

In addition to setting up Regulated Areas where exposures are above the permissible level and providing the required respiratory protection, fabricators must also institute a program of medical surveillance for employees exposed above the "action level". Employees exposed above the "action level" initially, but whose exposure level is reduced below the "action level" as a result of engineering changes, need not be subjected to medical follow-ups according to the current thinking most widely held; this is an ambiguous point, however, which may need further clarification.

The section of the Standard that deals with signs and labels requires careful attention. Many of the requirements set forth in this Standard may not be applicable to most fabricators but this will depend in part on the results found by monitoring and the nature of the operations being conducted. More specifically,

ENFORCEMENT CONSIDERATIONS RE EPA STANDARD FOR VINYL CHLORIDE

A. What is a leak? X ppm above background level? Where measured? Fence line, areas, rooms, etc. Suggest 200 ppm above background for starters.

B. 61.62 (b) Oxychlorination Reactor - How should production of Ethylene Dichloride to be determined?

C. 61.64 (a) (2) - Reactor Opening Losses - How should polyvinylchloride production be determined? Material balance? History for each grade and type? Over what period of time? Past year, quarter, month, running averages, etc.

D. 61.64 (a) (3) - Manual vent valve discharge - How should the Vinyl Chloride emitted be estimated? Duration of discharge, state of reaction (time, conversion, pressure, rate of rise of temperature, pressure, etc? Material balance on individual batch if segregatable?

E. 61.64 (e)(2)(i) - No strippers technology - How should production be determined for dispersion resins? Separation of weights by grades?

F. 61.64 (e)(2)(i) - No strippers technology - How should production be determined for suspension resins? Separation of weights by grades?

G. 61.65 (a) Relief valve discharge - How should vinyl chloride discharge be estimated?

H. 61.67 (g) (1) (iii) - Emission tests in terms of mass - How should production be determined? See equation, Z term.

I. 61.67 (g)(3) (iii) - Production for each stripper - How should production be determined?

J. 61.67 (g) (4) (ii) - In process water - How should production be determined? See equation, Z term.

K. 61.67 (g) (5) (i) - Reactor opening loss - How should production be determined? See equation, Z term.

L. 61.70 (c) (2)(i) - How should production be determined?

M. 61.70 (c)(2)(ii) - " " " " "

N. 61.70 (c)(2)(iii)- " " " " "

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