

EGG: JOL: MMS: RF
XF: OSHA-labeling

TO: Dan Plummer

FROM: T. G. Grumbles
DATE: October 15, 1985

Interoffice
Communication

SUBJ: TRACE CONTAMINANT ANALYSIS - OSHA CARCINOGEN PROJECT

VISTA

As a follow-up to your memo to J. E. Yates regarding the subject I would have the following suggestions.

1. When the method is developed, if a product sample contains greater than 0.1% of total PNA's we should do further analysis on those samples to identify specific, known carcinogenic PNA's. Your list in the Yates memo is a good list (minus benzene) to use for this.

There is a great deal of confusion among our customers regarding PNA's and carcinogens. Many seem to think all PNA's are identified carcinogens. This is not documented by any means and this second analytical step would be important if practicable to do.

2. We should screen for other non-PNA hydrocarbons based on their potential presence, dependent on the manufacturing process. Benzene is probably the predominant candidate here.
3. Based on the requests received to date the following products should be analyzed first.

LPA/ODC
MR Solvent/ODC 15
Specialty Alkylates
Detergent Alkylates
N-Paraffins
LC Hydrocarbon by-product streams (HAD, SSO, NPSO)

4. To assure we all have the same understanding of the standard's requirements I've enclosed the portions of the standard applicable to carcinogens, labeling and MSDS identification.

Please let me know if you have questions on the above.


Thomas G. Grumbles

ajo/8
Enclosure
cc Don Wharry
Carl Kerfoot

VVV 000017738

STANDARD

(9) The chemical manufacturer, importer or employer shall determine the hazards of mixtures of chemicals as follows:

(i) If a mixture has been tested as a whole to determine its hazards, the results of such testing shall be used to determine whether the mixture is hazardous:

(ii) If a mixture has not been tested as a whole to determine whether the mixture is a health hazard, the mixture shall be assumed to present the same health hazards as do the components which comprise one percent (by weight or volume) or greater of the mixture, except that the mixture shall be assumed to present a carcinogenic hazard if it contains a component in concentrations of 0.1 percent or greater which is considered to be a carcinogen under paragraph (d)(4) of this section:

(iii) If a mixture has not been tested as a whole to determine whether the mixture is a physical hazard, the chemical manufacturer, importer, or employer may use whatever scientifically valid data is available to evaluate the physical hazard potential of the mixture; and

(iv) If the employer has evidence to indicate that a component present in the mixture in concentrations of less than one percent (or in the case of carcinogens, less than 0.1 percent) could be released in concentrations which would exceed an established OSHA permissible exposure limit or ACGIH Threshold Limit Value, or could present a health hazard to employees in those concentrations, the mixture shall be assumed to present the same hazard.

(6) Chemical manufacturers, importers, or employers evaluating chemicals shall describe in writing the procedures they use to determine the hazards of the chemical they evaluate. The written procedures are to be made available, upon request, to employees, their designated representatives, the Assistant Secretary and the Director. The written description may be incorporated into the written hazard communication program required under paragraph (e) of this section.

COMMENTS

d(5) This provision should be read in conjunction with Sec. 1910.1200(g)(2)(i)(C)(1) (discussed below). In determining what hazards a mixture may present, a 3-step procedure is employed.

(1) If the mixture has itself been tested, the test results are used to determine what hazards (if any) the mixture presents.

(2) If the mixture itself has not been tested and:

a. One or more components present in a concentration of 1% or greater present a health hazard; or

b. One or more components present in a concentration of 0.1% or greater are IARC/NTP/OSHA-listed carcinogens,

then the mixture is presumed to have all the health hazards of those components.

(3) If the mixture itself has not been tested and the components of the mixture pose physical hazards (e.g., flammability) then the physical hazard potential of the mixture can be determined using scientific judgment.

This three step procedure is subject, however, to the provision [d(5)(iv)] set forth immediately below.

d(5)(iv) This requirement is "over and above" the preceding 1%/0.1% provision. If Du Pont knows that a component comprising less than 1%/0.1% may still pose a health hazard, the mixture is considered to pose that hazard.

d(6) Du Pont should prepare a written hazard determination procedure (see Appendix B) and make a copy of it available to employee representatives and OSHA on demand. A sample of such a procedure will be provided in the near future by the departmental OSH Coordinator.

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STANDARD

COMMENTS

(f) Labels and other forms of warning.

(1) The chemical manufacturer, importer, or distributor shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged or marked with the following information:

(i) Identity of the hazardous chemical(s);

(ii) Appropriate hazard warnings; and

(iii) Name and address of the chemical manufacturer, importer, or other responsible party.

(2) Chemical manufacturers, importers, or distributors shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged, or marked in accordance with this section in a manner which does not conflict with the requirements of the Hazardous Materials Transportation Act (18 U.S.C. 1801 et seq.) and regulations issued under that Act by the Department of Transportation.

(3) If the hazardous chemical is regulated by OSHA in a substance-specific health standard, the chemical manufacturer, importer, distributor or employer shall ensure that the labels or other forms of warning used are in accordance with the requirements of that standard.

(4) Except as provided in paragraphs (f)(5) and (f)(6) the employer shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged, or marked with the following information:

(i) Identity of the hazardous chemical(s) contained therein; and

(ii) Appropriate hazard warnings.

f(1) This labeling requirement applies to all shipments of hazardous chemicals from a workplace. A "workplace" is the entire plant. Sites should use product labels for products and intermediates where available. Where a product label is not available, a label must be developed for all intermediates and wastes not excluded under Sec.1200(b)(5) (discussed above) which leave the workplace. Determining what constitutes an "appropriate hazard warning" should be determined on a "case-by-case" basis. OSHA indicated in the preamble to the standard that labels prepared in accordance with the National Paint & Coatings Association's Hazardous Materials Information System (HMIS) or the ANSI Guideline Z 129.1-1982 would generally comply with the OSHA standard.

f(2) The standard's labeling requirements are not meant to displace DOT regulations, and thus where a conflict exists between them, the DOT regulations prevail.

f(3) Some OSHA standards regulating a particular chemical specify that certain labeling be used, and for those chemicals that specific standard controls. For example, the acrylonitrile standard requires that a specific precautionary label be used on all containers. See 29 CFR 1910.1045(p)(3). Thus labeling for containers with acrylonitrile is governed by the provisions of the acrylonitrile standard.

f(4) This provision specifies the content of each workplace label. The "identity" need not be the specific chemical name, but only some means of identification (including codes) that permits tracing to the appropriate MSDS. This provision must be read in conjunction with paragraphs (f)(5) and (f)(6), which give plants considerable freedom in satisfying this provision.

STANDARD

COMMENTS

(g) *Material safety data sheets.* (1) Chemical manufacturers and importers shall obtain or develop a material safety data sheet for each hazardous chemical they produce or import.

Employers shall have a material safety data sheet for each hazardous chemical which they use.

(2) Each material safety data sheet shall be in English and shall contain at least the following information:

(i) The identity used on the label, and, except as provided for in paragraph (f) of this section on trade secrets:

(A) If the hazardous chemical is a single substance, its chemical and common name(s);

(B) If the hazardous chemical is a mixture which has been tested as a whole to determine its hazards, the chemical and common name(s) of the ingredients which contribute to these known hazards, and the common name(s) of the mixture itself; or,

(C) If the hazardous chemical is a mixture which has not been tested as a whole:

(i) The chemical and common name(s) of all ingredients which have been determined to be health hazards, and which comprise 1% or greater of the composition, except that chemicals identified as carcinogens under paragraph (d)(4) of this section shall be listed if the concentrations are 0.1% or greater; and,

g(1) The standard requires that Du Pont develop an MSDS for each hazardous chemical it produces. For imported chemicals, Du Pont is obliged to obtain the MSDS from the foreign supplier or develop an MSDS of its own.

g(1) (cont'd) There must be an MSDS for each hazardous chemical used on Du Pont sites. This requirement is fairly straightforward for products and other isolated chemicals. For non-isolated process intermediates, plant sites have two options for complying with this requirement. The first is to prepare an MSDS for each intermediate. The second is to prepare an MSDS on the reaction mixture inside a process container. A discussion of mixture MSDSs is found below, but note particularly the flexibility granted to sites by subsec. (g)(4).

g(2) A sample MSDS format that identifies the components that must be addressed for compliance with the OSHA standard and Du Pont's own requirements is attached.

g(2)(i) The "identity" on the label must match that used on the MSDS to permit employee access to the MSDS corresponding to a labeled hazardous chemical.

g(2)(i)(A) Self-explanatory.

g(2)(i)(B) Self-explanatory.

g(2)(i)(C)(1) This is an important provision. Where a mixture has not been tested and one or more of the mixture's ingredients (present in the designated concentration) poses a health hazard by itself, the mixture is presumed to pose all of the health hazards of every one of those individual ingredients. The chemicals identified under paragraph (d)(4) are the IARC/NTP/OSHA carcinogens, a list of which is attached to this document.

Accordingly, the MSDS for an untested mixture must identify every health hazard of every ingredient present in a concentration of 1% or more. Further, the mixture MSDS must mention cancer as a hazard if one of the IARC/NTP/OSHA carcinogens is present in a concentration of 0.1% or more.