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Standard Practice for Preparing Material Safety Data Sheets to Include Transportation and Disposal Data for the General Services Administration[1]

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INTRODUCTION

There is a need to provide information about hazardous materials in a systematic way. A guide is required to direct those who manufacture, distribute, and use such materials on how to present the necessary information for a bid or proposal to the General Services Administration.

1. Scope

1.1 This practice describes how to prepare the information on hazardous materials as required for employee safety and health programs. This practice also provides information on what data are required for the safe handling, storage, use, transportation, and environmentally acceptable disposal of these materials.

2. Referenced Documents

2.1 In all cases the current edition of the document in effect on the data of invitation for bids or request for a proposal shall apply.

2.2 *ANSI Standards:*[2]

Z400.1 Guideline for the Preparation of Material Safety Data Sheets

Z129.1 Hazardous Industrial Chemicals-Precautionary Labeling

2.3 *U.S. Code of Federal Regulation:*[3]

10 CFR Energy

29 CFR 1910.1200 Hazard Communication

29 CFR 1926 Construction Safety and Health Standards

39 CFR Postal Service

40 CFR Protection of Environment

49 CFR 172.101 Hazardous Materials Regulations

49 CFR 172.102 Hazardous Materials Regulations

49 CFR 171.8 Hazardous Materials Regulations

2.4 *Other Standards:*

Hazardous Products Act (Schedule II)-WHMIS-Controlled Product Regulations[4]

DOT-HM-181 Regulations[5]

Dangerous Goods Regulations[6]

International Maritime Dangerous Goods Code[7]

AFR 71-4 Packaging and Materials Handling-Preparation of Hazardous Materials for Military Air Shipment[8]

EEC Preparation Directive[9]

EEC Hazardous Substances Directive[9]

EEC Classification and Labeling of Dangerous Substance[9]

3. Terminology

3.1 *Definitions:*

3.1.1 *exclusions*—articles, as defined by 29 CFR 1910.1200 (c), which are not known to pose any physical or health hazards under normal conditions of use. These definitions do not apply to environmental agents or conditions such as: radiation, noise, heat, cold, etc.

3.1.2 *hazardous chemical*—any chemical which is a physical hazard or a health hazard. Definitions 29 CFR 1910.1200 (c).

3.1.3 *health hazard*—a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term health hazard includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants,

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[2] Available from American National Standards Institute, 11 W. 42nd St., 13th Floor, New York, NY, 10036.

[3] Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

[4] Available from WHMIS Div., Products Safety Branch, Consumer and Corporate Affairs Canada, Place de Portage Phase, 50 Victoria St., Hull, QC K1A OC9.

[5] Available from Department of Transportation, Research and Special Programs Admin., Office of Hazardous Materials Transportation (DHM 51), Washington, DC 20590-0001.

[6] Available from International Air Transportation Assn., 200 Peel St., Montreal, Quebec, Canada H3A 2R4.

[7] Available from International Maritime Organization, Intergovernmental Maritime Organization, 4 Albert Embankment, London, SE1, 75R England.

[8] Available from U.S. Air Force Regulations NTIS, Springfield, VA 22161.

[9] Available from Office for Publications of the European Communities, 2 Rue Mercier, L-2985, Luxembourg.

corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the haematopoietic systems and agents which damage the lungs, skin, eyes, or mucous membranes.

3.1.4 *physical hazard*—a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, and organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

4. Summary of Practice

4.1 This practice indicates what information is required to prepare a General Services Administration bid or proposal. The information to be provided includes material safety data sheet, transportation, and disposal data.

5. Significance and Use

5.1 This practice was developed at the request of the General Services Administration of the United States government. It is intended to provide guidance and assistance to anyone charged with the responsibility of creating or reviewing material safety data sheets (MSDS) for accuracy. Such sheets are required of any vendor who provides goods or services which may be hazardous in any way. This guide is not a legal document and does not purport to officially represent the requirements of the Occupational Safety and Health Administration Hazard Communication Standard, requirements of EPA (Environmental Protection Agency's Emergency Planning and Community Right-To-Know Act), the laws of any state or municipality, or the laws of any foreign nation.

6. Composition of MSDS

6.1 The current version of 29 CFR 1910.1200 shall be used to determine the appropriate information that is required in MSDS for the United States.

6.2 ANSI Z400.1 should be used where appropriate. It is recommended that the proposed phrases contained therein be used where possible.

6.3 When new information is available through recognized sources, then a revision to a MSDS shall be done within three months. (Some jurisdictions require shorter notification periods.)

6.4 The information provided in a MSDS shall meet all the requirements of 29 CFR 1910.1200 and shall be as complete as possible. Where information cannot be found through recognized sources then the words "not available" or an equivalent shall be used. An abbreviation is not recommended. If an abbreviation is used, it should be clearly defined in the MSDS.

6.5 Where information is required that does not pertain to a substance for which a MSDS is being prepared, the words "not applicable" or an equivalent shall be used. An abbreviation is not recommended. If an abbreviation is used, it should be clearly defined in the MSDS.

6.6 The preparation of MSDS for countries other than the United States often requires additional information. Appropriate regulations of the countries must be reviewed to identify what additional information must be supplied. For Canada, the Hazardous Products Act and Controlled Products Regulations should be consulted. For Europe (EEC) the Classification and Labelling of Dangerous substances should be consulted.

7. Handling and Storage

7.1 The MSDS shall indicate when special care must be taken in the handling of materials.

7.2 The MSDS shall indicate how materials should be stored to prevent any spills from contaminating the environment or presenting a hazard to employees (that is, dikes, under a roof (cover), in an enclosure, sufficient ventilation, etc.)

7.3 For reactive substances, MSDS shall indicate how materials should be stored so that incompatible substances are not placed next to each other either vertically or horizontally; that is, oxidizers beside reducers, acids beside bases, etc.

7.4 If the material is affected by an environmental condition, MSDS shall indicate how materials should be safely stored so that environmental conditions (sunlight, heat, cold, etc.) do not create health and safety hazards.

8. Transportation

8.1 The MSDS shall be combined with the necessary transportation documents prepared according to the regulations given by DOT in HM-181.

8.2 The following information is required by General Services Administration in addition to the MSDS:

8.2.1 The mode of transportation for the substance,

8.2.2 The proper shipping name of the substance.

8.2.3 The identification number specified for the shipping name in 49 CFR 172.101.

8.2.4 The reportable quantity (RQ), if the substance is listed in the appendix to 49 CFR 172.101.

8.2.5 The hazard class of the material,

8.2.6 Information for the inner container label should use, where appropriate, the wording specified in ANSI Z129.1.

8.2.7 The material of construction of the inner container (the one in direct contact with the substance) and the capacity of the inner container.

8.3 In addition when applicable, General Services Administration also requires the following be provided:

8.3.1 The number of the DOT specification container,

8.3.2 The DOT exemption number or Department of Defense (DOD) certification control number,

8.3.3 Indication of limited quantity as defined by 49 CFR 171.8,

8.3.4 The chemical name of any aerosol propellants used with the substance (should appear in the ingredients section of the MSDS), and

8.3.5 The total weight of all active Class A and B components of an explosive that includes primary explosives, secondary explosives, pyrotechnics, and propellants.

8.4 Preparation of these additional documents will require the use of 10 CFR, 29 CFR 1926, 39 CFR, 40 CFR, 49 CFR 172.102, Dangerous Goods Regulations, International Maritime Dangerous Goods Code, AFR 71–4, and EEC Preparation Directive and the list of materials in Appendix X1.

8.5 The preparation of transportation and hazard communication labels for countries other than the United States often requires additional or different information. HM-181 and foreign hazard communications regulations, such as Canada's

WHMIS regulations and EEC's Dangerous substances directive, must be reviewed for appropriate requirements. Appropriate regulations of other countries should also be reviewed as necessary.

9. Spill/Disposal Information

9.1 The MSDS shall provide sufficient information to determine what course of action must be taken in the case of product spillage.

9.2 The MSDS shall indicate that materials shall be disposed of in accordance with all local, state, or federal regulations.

9.3 The MSDS shall indicate the appropriate actions for disposal. Actions should also include information about personal protective equipment that must be worn while the product is being handled.

9.3.1 If a material is combined with others material(s) to form a waste, then further precautions might have to be taken.

10. Keywords

10.1 disposal; hazardous materials; information; material safety data sheet; preparation; transportation; writing

APPENDIX

(Nonmandatory Information)

X1. RESOURCES

X1.1 The following are additional sources of information for preparing documents for the General Services Administration:

X1.1.1 Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices[10]

X1.1.2 Encyclopedia of Occupational Health and Safety[11]

X1.1.3 Registry of Toxic Effects of Chemical Substances (RTECS)[12]

X1.1.4 Hazardous Materials Identification System (HMIS)[13]

X1.1.5 UN-Recommendations on the Transportation of Dangerous Goods[14]

[10] Available from Conference of Governmental and Industrial Hygienists (ACGIH), 1014 Broadway, Cincinnati, OH 45202.

[11] Available from International Labour Agency Organization (ILO), 4 Rue Des Morillons, CH-1211, Geneva 22, Switzerland.

[12] Available from National Institute for Occupational Safety and Health (NIOSH), Division of Physical Sciences and Engineering, Cincinnati, OH.

[13] Available from National Paint and Coating Assn. (NPCA), 1500 Rhode Island Ave., Washington, DC 20005.

[14] Available from United Nations, United Nations Bldg., New York, NY 10017.