

The American National Standards Institute (ANSI) developed a new standard (Z400.1-1993) to assist with the format and preparation of Material Safety Data Sheets (MSDS). The purpose of this standard is to provide information in a consistent manner and to make it easier to find information regardless of the supplier of the MSDS. The following list indicates the 16 sections of the new MSDS standardized format.

### **Section 1: Chemical Product and Company Identification**

This section links the chemical name on the label to the MSDS. The MSDS also lists the name, address and the phone number of the company, manufacturer or distributor who provides the chemical.

### **Section 2: Composition, Information or Ingredients**

This section must identify all the hazardous ingredients of the material. This section may also include OSHA Permissible Exposure Limits (PELs) and ACGIH (American Conference of Governmental Industrial Hygienists) Threshold Limit Values (TLVs).

### **Section 3: Hazard Identification**

This section discusses the health effects one may encounter when exposed to the material. The section will describe the appearance of the material, the potential health effects and symptoms associated with exposure, routes of entry, target organs that could be affected, and so on.

### **Section 4: First Aid Measures**

This section will describe possible first aid procedures for each route of entry. The procedures will be written so that untrained individuals can understand the information.

### **Section 5: Fire-Fighting Measures**

This section will describe information on the fire and explosive properties of the material, extinguishing items, and general fire-fighting instructions.

### **Section 6: Accidental Release Measures**

This section gives information on how to respond when a material spills, leaks or is released into the air. This information may include how to contain a spill or the types of equipment that may be needed for protection.

### **Section 7: Handling and Storage**

This section discusses information on handling and storage of the material. Topics that could be described are: general warnings to prevent overexposure, handling procedures, and hygiene instructions to prevent continued exposure.

### **Section 8: Exposure Controls and Personal Protection**

This section discusses engineering controls and personal protective equipment that would help reduce exposure to

the material. The necessary personal protective equipment should be considered for eye/face protection, skin protection and respiratory protection.

### **Section 9: Physical and Chemical Properties**

This section will include information about the physical and chemical properties of the material. The following characteristics should be detailed: appearance, odor, physical state, pH, vapor pressure, vapor density, boiling point, freezing/melting point, solubility in water and specific gravity or density. Indicate if these characteristics do not apply to your material.

### **Section 10: Stability and Reactivity**

This section requires that potentially hazardous chemical reactions be identified. It addresses chemical stability, conditions to avoid, incompatibility with other materials, hazardous decomposition and hazardous polymerization.

### **Section 11: Toxicological Information**

This section discusses data used to determine the hazards that are given in Section 3, "Hazard Identification." The following information can be addressed: acute data, carcinogenicity, reproductive effects, target organ effects, etc.

### **Section 12: Ecological Information**

This section will help determine the environmental impact should the material ever be released into the environment.

### **Section 13: Disposal Considerations**

This section gives important information that may be helpful in the proper disposal of the material. The information can cover disposal, recycling and reclamation.

### **Section 14: Transport Information**

This section is designed to give basic shipping information. The basic shipping information could include: the hazardous materials description, hazard class and the identification number (UN or NA numbers).

### **Section 15: Regulatory Information**

This section discusses information on the regulations under which the material falls. Examples of a few regulatory agencies are: OSHA, TSCA (Toxic Substance Control Act), CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act), SARA Title III (Superfund Amendments and Reauthorization Act).

### **Section 16: Other Information**

This section should include any other important information concerning the material. This information can include: hazard ratings, preparation and revisions of the MSDS, and label information.

This is a general overview of the ANSI Z400.1-1993 stan-

ard. The standard is intended to help develop consistent, understandable MSDSs that will provide useful information to a cross-section of education levels, from the average person to the chemist. The MSDS sections were prioritized according to the usefulness of the information. If you wish to obtain a copy of this standard, please contact:

**American National Standards Institute**  
11 West 42nd Street  
New York, NY 10036

### Common Questions

**Q.** Does OSHA require you to comply with this standard?

**A.** No, it is a voluntary standard. OSHA allows any format as long as it includes the information stated in 1910.1200 (g).

### Bibliography

*American National Standard, Z400.1-1993*

### **FREE Technical Support**

When you have a question, you can rely on our team of technical experts. They'll answer your questions about product specifications, chemical compatibility, regulatory issues, and general worker safety and health.

Call our Technical Support line toll-free:

**1-800-241-6401**

7 a.m. to 7 p.m. CT, Monday-Friday

### **FREE Catalog**

When the outdoors is your office, turn to a Ben Meadows Catalog. In it you'll find thousands of products and our 100% guarantee to stand behind them.

Call today to reserve your free copy:

**1-800-241-6401**

7 a.m. to 7 p.m. CT, Monday-Friday

**Please note:** The information contained in this publication is intended for general information purposes only. This publication is not a substitute for review of the applicable government regulations and standards, and should not be construed as legal advice or opinion. Readers with specific questions should refer to the cited regulation(s), or consult with an attorney.