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SAFETY **PRINCIPLES**

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CHEMICAL SAFETY TALKING POINTS

Importance of Chemical Safety

Chemicals can be found in every workplace and range from common cleaning supplies, to compounds used for industrial processes, to inks and toners found in office environments. Chemicals exist as dusts, fibers, powders, liquids, gasses and vapors.

Misuse of chemicals can result in severe injuries, long-term damage to one's health, or death. Immediate harm to the worker is possible, but in other instances damage may not be noticed for days, weeks, or even years. The risk is not only to the employee working directly with the chemicals, but to workers who may be exposed to the chemical's hazards.

Any chemical with the capability to cause harm is known as a hazardous chemical.

The harmful effects of chemicals vary. For example, corrosives burn and irritate the skin and eyes; other chemicals are highly flammable and may be volatile; some are toxic and poisonous.

Chemical Safety Management

A complete list (inventory) of the chemicals in your workplace must be available. Employees should know where chemicals are located, where the inventory is kept, how to safely use the chemicals, and who may be exposed to them. Workers should know the risks chemicals pose and ensure the necessary safety controls are in place. Corrective action must be instituted when controls are lacking. Training must be provided when employees are first hired and when a new hazardous chemical is introduced into the work environment. Refresher training should also be provided on chemical safety.

What are physical hazards?

Certain chemicals present physical hazards. These hazards include flammability, corrosion, and potential for explosion. Examples include flammable liquids, compressed gasses, explosives, and oxidizers.

What are health hazards?

Chemicals that may cause acute or chronic health effects after exposure are said to have a health hazard. An acute effect occurs rapidly after exposure, such as a chemical burn. A chronic effect is long-term and typically follows continuous exposure. Lung cancer resulting from prolonged exposure to asbestos is an example of a long-term health effect.

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What can be found on the manufacturer's or supplier's label?

OSHA's Hazard Communication Standard requires that each container of hazardous chemical be labeled with the following information:

- Product Identifier – the name of the product.
- Signal Word – indicates the relative level of severity of the hazard and alerts the reader to a potential hazard.
- Hazard Statement (s) – describe the nature of the hazard (s) of the chemical, including when applicable, the degree of the hazard.
- Precautionary Statement(s) – recommended measures that should be taken to prevent or minimize harmful effects resulting from exposure to hazardous chemicals. There are four types of precautionary statements – prevention, emergency response/ first aid, storage and disposal.
- Pictogram(s) – graphic symbols that convey specific information about the hazards of a chemical. For example, a skull and crossbones pictogram indicates that a chemical is toxic.
- Name, Address and Telephone Number of the Chemical Manufacturer, Importer, or Other Responsible Party.

Do secondary containers require labels?

When you transfer a chemical from its original container to another container, the container you transfer it into is called a "secondary" or "portable" container. With few exceptions, secondary containers must be appropriately labeled.

What must appear on an employer's secondary container label? What information might you also include?

OSHA requires, at a minimum, that secondary container labels have the identity of the hazardous chemical and the hazards present. This means the "product identifier" and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals.

Additional data such as storage requirements and PPE that may be necessary for safe use could also be included.

What is a Safety Data Sheet and what information does it provide?

The purpose of a Safety Data Sheet (SDS) is to provide more comprehensive information than that found on the label. It would include, among other information, the hazards of working with a chemical and procedures that should be used to ensure safety. It ensures

the product is being used as the manufacturer or importer intended. Since the SDS contains detailed hazard information, is an important resource for risk assessment.

Safety Data Sheets are presented in a consistent 16-section format. They provide the identification and properties of the chemical, and physical, health and environmental hazards. The SDS details safe handling and storage procedures, including recommended personal protective equipment.

As with labels, the SDS must contain signal words, and symbols and pictograms to warn users of hazards posed by the chemical. Safety Data Sheets contain occupational exposure limits and they also include first-aid procedures and emergency response measures.

What are some safety tips when handling chemicals?

- Never sniff a chemical to determine its properties.
- Never place chemicals in beverage containers.
- Never eat or drink in areas near hazardous chemicals.
- Never mix two unlike chemicals without knowing the hazards involved or knowing it is safe to do so.
- When in doubt about the hazard of a chemical or its proper use, ask a knowledgeable coworker or supervisor.