A BRIEF LOOK AT -

CHEMICALS IN THE WORKPLACE

In the home or in the office, you might be exposed to injury from hazardous chemicals or gases that are used. It is your responsibility to be aware of this risk by attending all in-services on Hazardous Communication, by knowing where the Safety Data Sheets (SDS) (formerly called the Material Safety Data Sheets or MSDS) are kept, and by reading the labels on the materials you use. Even then, if you are ever in doubt about the potential hazard, talk to your Supervisor!

General safety tips:

- ☐ Never mix chemicals. For example, never mix ammonia and bleach for cleaning.
- ☐ Report even the faintest smell of a gas leak.
- ☐ Only use chemicals if it is clearly stated in your job description and your Supervisor has given permission.
- ☐ Read labels carefully and follow the safety warnings and instructions.

The Occupational Safety and Health Administration (OSHA) has published revised rules for the use of a standardized format for the SDS and new labeling elements, which it is phasing in over time. This revision is to align with the United Nation's publication "Globally Harmonized System of Classification and Labeling of Chemicals" (GHS), also called "The Purple Book." The first compliance date was December 1, 2013 and focused on the new SDS format, label elements, and employee training.

The OSHA rule mandates the information that is to be included in the sections on the new SDS includes:

1. **Identification** includes product identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended use; restrictions on use.
2. **Hazard(s) identification** includes all hazards regarding the chemical; required label elements.
3. **Composition/information on ingredients** includes information on chemical ingredients; trade secret claims.
4. **First-aid measures** includes important symptoms/effects, acute, delayed; required treatment.
5. **Fire-fighting measures** lists suitable extinguishing techniques, equipment; chemical hazards from fire.
6. **Accidental release measures** lists emergency procedures; protective equipment; proper methods of containment and cleanup.
7. **Handling and storage** lists precautions for safe handling and storage, including incompatibilities.
8. **Exposure controls/personal protection** lists OSHA's Permissible Exposure Limits (PELs); Threshold Limit Values (TLVs); appropriate engineering controls; and personal protective equipment (PPE).
9. **Physical and chemical properties** lists the chemical's characteristics.
10. **Stability and reactivity** lists chemical stability and possibility of hazardous reactions.

11. **Toxicological information** includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity.
12. Ecological information, 13. Disposal considerations, 14. Transport information, and 15. Regulatory information are regulated by other Agencies and not enforced by OSHA.
16. **Other information** includes the date of preparation or last revision.

The SDS follow(s) the American National Standards Institute (ANSI) Z400.1 - 2004 format.

An example of information on the SDS: With the new format of the SDS, Section 8 on "Exposure Controls/Personal Protection" will contain information about exposure limits, engineering controls, and ways to protect yourself, including using personal protective equipment.

These precautionary statements would be the same as those on the material's labels.

DIFFERENCES BETWEEN THE OLD MSDS AND THE NEW SDS:

The MSDS has eight non-mandatory sections; the SDS is a standardized 16 section format.

The MSDS is being replaced by the SDS by June 1, 2015.

In addition to the new SDS standards, the new label elements you will see include:

- ☐ **Product identifier** - how the hazardous chemical is identified.
- ☐ **Signal word (is now standardized)** - used to indicate the relative level of severity of the hazard. DANGER is used for the more severe hazards and WARNING is used for the less severe hazards.
- ☐ **Pictogram (is now standardized)** - Consists of a red square set at a point and includes a black hazard symbol on a white background. If there is not a hazard symbol, it is not an OSHA approved pictogram.
- ☐ **Hazard statement(s) (is/are now standardized)** - describe(s) the nature of the hazard(s) of a chemical, including, where appropriate, the degree of the hazard.
- ☐ **Precautionary statement(s)** - means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical or improper storage or handling.
- ☐ **Name, address and phone number of the chemical manufacturer, distributor or importer.**

PICTOGRAMS AND HAZARDS

HEALTH HAZARD - Carcinogen, Mutagenicity, Reproductive Toxicity, Respiratory Sensitizer, Target Organ Toxicity, Aspiration

FLAME - Flammables, Pyrophorics, Self-Heating, Emits Flammable Gas, Self-Reactives, Organic Peroxides

PICTOGRAMS AND HAZARDS - Continued

EXCLAMATION MARK - Irritant (skin and eye), Skin Sensitizer, Acute Toxicity, Narcotic Effects, Respiratory Tract Irritant, Hazardous to Ozone Layer (Non-Mandatory)

GAS CYLINDER - Gases Under Pressure

CORROSION - Skin Corrosion/Burns, Eye Damage, Corrosive to Metals

EXPLODING BOMB - Explosives, Self-Reactives, Organic Peroxides

FLAME OVER CIRCLE - Oxidizers

ENVIRONMENT **(Non-Mandatory)** - Aquatic Toxicity

SKULL AND CROSSBONES - Acute Toxicity (fatal or toxic)

The information on the labels is important so you can store hazardous chemical safely and so you can locate first aid information quickly.

When a chemical has multiple hazards, different pictograms are used to identify the various hazards.

If there are similar precautionary statements on the SDS, the one providing the most protective information will be on the label.

INFORMATION WAS TAKEN FROM AND YOU CAN FIND MORE AT:

https://www.osha.gov/dsg/hazcom/

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QUIZ

1. It is not important for me to attend in-services on Hazardous Communication because I need the time to care for patients.
   - ☐ True
   - ☐ False

2. I've been using cleaning products for years so I don't have to read the label of a new product since cleaning products are all basically the same.
   - ☐ True
   - ☐ False

3. Since the new Safety Data Sheets (SDS) will be revised by June 1, 2015, I don't need to know anything about them now and this inservice is not mandatory.
   - ☐ True
   - ☐ False

4. Safety Data Sheets (SDS) give first aid information.
   - ☐ True
   - ☐ False

5. It doesn't matter where products are stored.
   - ☐ True
   - ☐ False

6. The new labels must contain the word "Danger" or the word "Warning."
   - ☐ True
   - ☐ False

7. A pictogram is a red square on point (diamond), with a white background, and a black picture.
   - ☐ True
   - ☐ False

8. This is the pictogram for a Health Hazard such as causing respiratory problems.
   - ☐ True
   - ☐ False

9. This is the pictogram that means something is flammable.
   - ☐ True
   - ☐ False

10. This is the pictogram that means something can irritate my skin or eyes.
    - ☐ True
    - ☐ False

_____ _____

Signature Date

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ANSWER KEY

1. FALSE
2. FALSE
3. FALSE
4. TRUE
5. FALSE
6. TRUE
7. TRUE
8. TRUE
9. TRUE
10. TRUE