Hazard Communication Standard

Objectives

- Know what an SDS is and the importance of an SDS
- Understand the changes to the Globally Harmonized System (GHS)
- Become familiar with the elements of a GHS label and SDS

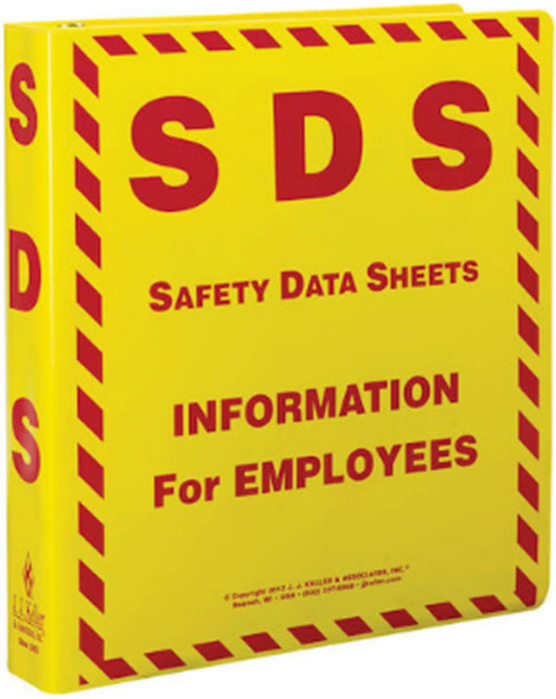
Why is this important?

Many JOI employees handle hazardous material every day. Being knowledgeable of these materials, knowing how to handle them, and knowing what to do in case of an accident involving chemicals is crucial to your health and safety on the job.

WHAT IS A SAFETY DATA SHEET (SDS)?

An SDS is a document that provides detailed information about a hazardous chemical, including:

- The identity of the chemical product and its ingredients
- The hazards of the chemical including health hazards, physical hazards and environmental hazards
- Physical properties of the chemical, like boiling point, flash point and incompatibilities with other chemicals
- Workplace exposure standards for airborne contaminants
- Safe handling and storage procedures for the chemical
- What to do in the event of an emergency or spill
- First aid information
- Transport information



The information in an SDS is arranged under 16 headings to allow relevant information to be easily located by the person using the chemical. The 16 sections of an SDS are described in further detail later.

Fact: SDS sheets must be located in a central location known to all employees. This also provides quick access for government agencies or emergency response teams.

WHY SHOULD I READ THE SDS?

The SDS is a key information resource for workers and businesses in managing the risks of a hazardous chemical being used in a workplace. It is important that workers read the SDS carefully and understand its contents before working with a hazardous chemical so that it can be safely stored, handled or used in the workplace.

Not all information about the hazards of a chemical or instructions for safe storage, handling and use may be provided on labels. In most cases, the SDS will contain much more information about a hazardous chemical than appears on the label.

The SDS can be used to assist in assessing specific risks associated with a chemical and in training workers on how to use a chemical safely.

WHAT ARE THE MAJOR ELEMENTS OF GHS SDS AND GHS LABELS?

The three major elements that the GHS implements are:

- **Classification of chemicals** by establishing specific GHS pictograms and labeling criteria for the evaluation and classification of chemicals.

- **Standardization of GHS Safety Data Sheets** (SDSs), formerly called Material Safety Data Sheets (MSDSs), into a 16-section format with standardized and mandatory information for each section, including the new GHS pictograms.

- **Formatting of GHS labels** to include signal words and a combination from the nine transport GHS pictograms, as well as hazard and precautionary statements for each hazard class and category.

GHS LABEL ELEMENTS

Take some time to learn the elements of a GHS label as well as the new content and format of Safety Data Sheets (SDS).

GHS label elements – GHS labels are standardized with no variation and include the following elements:

- **Symbols** (Hazard Pictograms): Convey health, physical and environmental hazard, and information.

- **Signal words: "DANGER"** (more severe hazard) or **"WARNING"** (less severe hazard) is used to emphasize hazards and indicate the relative level of severity of the hazard.

- **Hazard Statements:** Standard phrases assigned to a hazard class and category that describe the nature of the hazard (example: "Highly flammable liquid and vapor", "Causes skin irritation". All applicable hazard statements must appear on a label.

- **Product Identifier** (ingredient disclosure): How the chemical is identified. Name or number used for a hazardous product on a label or in the SDS. The information on the label and SDS must be the same.

- **Supplier Identification:** The name, address and telephone number should be provided on the label.

- **Precautionary Statements:** A phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure or improper storage. There are 4 types of precautionary statements: 1) **prevention** (to minimize exposure); 2) **response** (in case of accidental spillage or exposure emergency response, and first aid); 3) **storage**, and 4) **disposal.**

PICTOGRAMS

GHS - Hazard Pictograms and Related Hazard Classes

Exploding Bomb
- Explosives
- Self-reactives
- Organic Peroxides

Corrosion
- Skin corrosion/burns
- Eye damage
- Corrosive to metals

Flame Over Circle
- Oxidizing gases
- Oxidizing liquids
- Oxidizing solids

Gas Cylinder
- Gases under pressure

Enviroment
- Aquatic toxicity

Skull & Crossbones
- Acute toxicity (fatal or toxic)

Exclamation Mark
- Irritant (eye & skin)
- Skin sensitizer
- Acute toxicity
- Narcotic effects
- Respiratory tract irritant
- Hazardous to ozone layer (non-mandatory)

Health Hazard
- Carcinogen
- Mutagenicity
- Reprodcutive toxicity
- Respiratory sensitizer
- Target organ toxicity
- Aspiration toxicity

Flame
- Flammables
- Pyrophorics
- Self-heating
- Emits flammable gas
- Self-reactives
- Organic peroxides

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SAFETY DATA SHEET SECTION

Section 1, Identification: includes product identifier; manufacturer or distributor name, address, phone number; emergency phone number; recommended use; restrictions on use.

Section 2, Hazard(s) Identification: includes all hazards regarding the chemical; required label elements.

Section 3, Composition/Information on Ingredients: includes information on chemical ingredients; trade secret claims.

Section 4, First-Aid Measures: includes important symptoms/effects, acute, delayed; required treatment.

Section 5, Fire-Fighting Measures: lists suitable extinguishing techniques, equipment; chemical hazards from fire.

Section 6, Accidental Release Measures: lists emergency procedures; protective equipment; proper methods of containment & cleanup.

Section 7, Handling and Storage: lists precautions for safe handling and storage, including incompatibilities.

Section 8, Exposure Controls/Personal Protection: lists OSHA's Permissible Exposure Limits (PELs); Threshold Limit Values (TLVs); appropriate engineering controls; personal protective equipment (PPE).

Section 9, Physical and Chemical Properties: lists the chemical's characteristics.

Section 10, Stability & Reactivity: lists chemical stability & possibility of hazardous reactions.

Section 11, Toxicological Information: includes routes of exposure; related symptoms, acute & chronic effects; numerical measures of toxicity.

Section 12, Ecological Information: provides information to evaluate the environmental impact of the chemical(s) if it were released to the environment.

Section 13, Disposal Considerations: provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, & safe handling practices.

Section 14, Transport Information: provides guidance on classification information for shipping & transporting of hazardous chemical(s) by road, air, rail, or sea.

Section 15, Regulatory Information: identifies the safety, health, and environmental regulations specific for the product that is not indicated anywhere else on the SDS.

Section 16, Other Information: includes the date of preparation or last revision.

TEST YOUR KNOWLEDGE

1.	An SDS is divided into 14 different headings.	T	F
2.	SDS sheets must be located in a central location.	T	F
3.	The chemical labels don't always contain all the hazard information.	T	F
4.	GHS stands for Global Hazard System.	T	F
5.	GHS labels are standardized and have no variation.	T	F
6.	The signal word "Warning" is for less severe hazards.	T	F
7.	The signal word "Danger" is for more severe hazards.	T	F
8.	Section 4 of the SDS contains First Aid Measures.	T	F

Name:_____ Site: _____