



Training Solutions, Delivered!

HAZWOPER: Safety Data Sheets in HAZWOPER Environments

**Leader's Guide, Fact Sheet
& Quiz**

Item Number: 5135
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This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation.

PREPARING FOR THE MEETING

Here are a few suggestions for using this program:

- a) Review the contents of the Fact Sheet that immediately follows this page to familiarize yourself with the program topic and the training points discussed in the program. The Fact Sheet also includes a list of Program Objectives that details the information that participants should learn from watching the program.
- b) If required by your organization, make an attendance record to be signed by each participant to document the training to be conducted.
- c) Prepare the area and equipment to be used for the training. Make sure the watching environment is comfortable and free from outside distractions. Also, ensure that participants can see and hear the TV screen or computer monitor without obstructions.
- d) Make copies of the Review Quiz included at the end of this Leader's Guide to be completed by participants at the conclusion of the presentation. Be aware that the page containing the answers to the quiz comes before the quiz itself, which is on the final page.

CONDUCTING THE PRESENTATION

- a) Begin the meeting by welcoming the participants. Introduce yourself and give each person an opportunity to become acquainted if there are new people joining the training session.
- b) Introduce the program by its title and explain to participants what they are expected to learn as stated in the Program Objectives of the Fact Sheet.
- c) Play the program without interruption. Upon completion, lead discussions about your organization's specific policies regarding the subject matter. Make sure to note any unique hazards associated with the program's topic that participants may encounter while performing their job duties at your facility.
- d) Hand out copies of the review quiz to all of the participants and make sure each one completes it before concluding the training session.

5135 HAZWOPER: Safety Data Sheets in HAZWOPER Environments FACT SHEET

LENGTH: 16 MINUTES

PROGRAM SYNOPSIS:

Hazardous materials and waste are a part of many work situations and can be found in many types of facilities and job sites. It is very important for employees to know how to recognize these potentially dangerous substances, and how to handle and dispose of them properly. In 1976, the EPA issued the Resource Conservation and Recovery Act (RCRA) to regulate the handling of hazardous waste "from cradle to grave". Since then, other regulations have followed, including OSHA's Interim Final Rule for Hazardous Waste Operations and Emergency Response (HAZWOPER) that gave OSHA the task of protecting HAZMAT workers. To help these employees identify and deal with the hazards presented by hazardous chemicals, OSHA requires employers to provide Safety Data Sheets for each hazardous substance on site. This program provides viewers with a detailed explanation of the information they can find in the 16 sections of a Safety Data Sheet.

Topics include the importance of Safety Data Sheets, the role SDS's play in hazard communication, what four basic questions an SDS is designed to answer and information found in each of the 16 sections of an SDS.

PROGRAM OBJECTIVES:

After watching the program, the viewer should:

- Understand the importance of the Safety Data Sheet in determining how to work safely with potentially hazardous chemicals.
- Know the advantages of the SDS format.
- Be able to use an SDS to determine what hazards a material they are working with may have.
- Know how to use an SDS to find out what precautions they should take when working with a potentially hazardous chemical.
- Be able to use an SDS to determine what to do if a problem occurs when working with a hazardous chemical.

PROGRAM OUTLINE

THE IMPORTANCE OF SAFETY DATA SHEETS

- **There are many types of potentially hazardous chemicals: flammables, corrosives, irritants, sensitizers, poisons, even carcinogens (which can cause cancer).**
 - Each individual chemical product has its own set of hazards, required safety precautions and recommended emergency procedures.
- **So, how can we work with hazardous chemicals safely?**
 - How should we handle and store them?
 - What personal protective equipment should we use?
 - What should we do in an emergency?
- **Fortunately, the answers to these questions can be found on a hazardous chemical's "SDS", its "Safety Data Sheet."**
- **The SDS is the most valuable tool we have for identifying and dealing with the hazards presented by a chemical.**
 - But like any other tool, we need to understand what it's designed to accomplish and know how to use it properly.
- **In 1983, OSHA instituted the Hazard Communication Standard.**
 - Its purpose is to ensure that workers have access to the information and equipment they need to work safely with hazardous chemicals.

THE ROLE OF SAFETY DATA SHEETS IN HAZARD COMMUNICATION & THE GLOBALLY HARMONIZED SYSTEM

- **The Standard requires chemical manufacturers and importers to give their customers Safety Data Sheets for any potentially hazardous products that they supply.**
 - In turn, employers are required to give their employees' access to SDS's for the hazardous materials that are present in their workplace.
- **Originally, OSHA allowed manufacturers to provide hazard information in any format they wanted.**
 - But with the adoption of the "Globally Harmonized System" ("GHS" for short), the information in an SDS must now appear in a specified order.
 - This makes it easier for people to find what they are looking for, which is especially valuable in an emergency situation.
- **Another goal of the Globally Harmonized System is to make Safety Data Sheets as easy to read as possible. The new format does this by presenting information in an "as needed" order:**
 - The chemical's identity, its hazards and some emergency instructions are provided up front for quick and easy access.

- Basic safety information is presented next, in "easy-to-understand" language.
- Supporting technical data for health and safety professionals is provided later in the SDS.
- **Safety Data Sheets are designed to answer four basic questions that anyone who encounters a chemical might have:**
 - "What is the material and what are its hazards?"
 - "What should I do if a problem occurs when I'm working with this material?"
 - "What precautions should I take to prevent problems from occurring when I work with this material?"
 - "Is there anything else I should know about this material?"

SECTIONS 1-3: What is the material and what are its hazards?

- **Each of the questions you will have when you are working with a chemical is "answered" by one or more sections of the Safety Data Sheet. For example, Sections 1, 2, and 3 provide answers to the first question:**
 - "What is the material and what are its hazards?"
- **"Section 1" of the SDS identifies the material, using the standard GHS "Product Identifier".**
 - You'll find this Product Identifier on the chemical's container label as well.
- **"Section 1" also lists the name, address, and telephone number of the chemical's manufacturer, importer or distributor.**
 - This is provided in case you have questions about the SDS or the material itself.
 - An emergency telephone number may also be listed for quick access to needed information.
- **"Section 2" of the SDS describes the hazards that are associated with the chemical, including the information that's provided on the chemical's label, such as:**
 - The Signal Word.
 - "Hazard Statements".
 - "Precautionary Statements".
 - It may also contain copies of the GHS pictograms that appear on the label.
- **"Section 3" discusses the ingredients in the chemical and its composition. It also provides additional "identifying" information such as the material's:**
 - Chemical identity.
 - Its "common name".
 - CAS and EC numbers.
- **So, as you can see, once you've reviewed Sections 1, 2, and 3 of an SDS you've answered the first of our basic questions:**
 - "What is the material and what are its hazards?"

SECTIONS 4-6: What should I do if a problem occurs when I'm working with this material?

- **The next important question that a Safety Data Sheet answers is, "What should I do if a problem occurs when I'm working with this material?"**
 - Sections 4, 5 and 6 provide this information.
- **"Section 4" of the SDS outlines the basic First Aid Measures that an untrained individual should use before professional medical assistance is available.**
 - **Simple instructions are provided according to the route of exposure. For example:**
 - First aid instructions for skin contact might be "Remove contaminated clothing. Wash skin with soap and water. Get medical attention."
 - If the material gets into your eyes, you might be instructed to "Flush eyes with a steady stream of water for at least 15 minutes. Get immediate medical attention."
- **You can see that it's important to know the appropriate first aid measures before you work with a hazardous material.**
 - So be sure to read Section 4 of the SDS for any chemical that you're going to use.
 - You should also know the location of first aid kits, safety showers and eyewashes in your work area.
- **"Section 5" of the SDS provides information, precautions and instructions for fighting fires that involve the material.**
 - This section includes information on any hazards that the material could present if it burns.
 - For instance, a fire could release poisonous fumes that are more dangerous than the material itself.
- **When putting out a fire, it's important to use the correct "extinguishing media."**
 - These can include water, water fog, foam, carbon dioxide and dry chemicals.
 - Using the wrong type could make a bad situation even worse.
 - This part of the SDS tells you what media are appropriate for the material.
- **"Firefighting Instructions" describing basic firefighting strategies that minimize the hazards the material may present in a fire are also provided here.**
 - **The personal protective equipment necessary for firefighting will be listed in this section as well.**
 - This usually includes full firefighting gear and an SCBA (Self-Contained Breathing Apparatus).
 - Even more protection may be necessary for particularly hazardous chemicals.

- **"Section 6" tells you what to do in case of spills, leaks and other accidental releases of the material. Included in this section are general procedures for:**
 - Containing a spill or other accidental release.
 - Cleaning up the hazardous material.
 - Decontaminating clothing and equipment that comes into contact with the material.
- **Other useful information may also be given, such as any requirements to report a spill of the material to federal or state agencies.**
- **To review, Sections 4, 5 and 6 of the SDS provide information on what to do if a hazardous situation occurs.**

SECTIONS 7-10: What precautions should I take to prevent problems from occurring when I work with this material?

- **The next question the SDS addresses is, "What precautions can I take to prevent problems when I work with this material?"**
 - For answers we turn to Sections 7, 8, 9 and 10.
- **"Section 7" covers Handling and Storage practices that will minimize the physical and health hazards of the material, as well as preserve its quality.**
 - **As you would expect, the handling instructions on an SDS are often the same as those that are listed on the chemical's container label.**
 - For example, in this section you might see the caution "Avoid contact with eyes, skin, and clothing. Ensure that containers are properly secured before moving."
 - **This section also provides information on the appropriate storage conditions for the material and its container, including:**
 - Temperature.
 - Humidity.
 - Atmospheric pressure.
 - Ventilation.
 - Vibration in the area.
 - Exposure to light.
 - Depending on the material, these may all be factors for safe storage and maintaining the chemical's product quality.
- **Engineering Controls, Personal Protective Equipment and Exposure Guidelines are addressed in "Section 8" of the SDS.**
- **"Engineering Controls" might include things such as the use of local exhaust ventilation systems when working with a material.**
 - **Recommendations regarding Personal Protective Equipment focus on minimizing the risk of exposure to the material.**
 - For example, to provide respiratory protection an SDS may instruct you to "Wear a NIOSH approved air-purifying respirator equipped with organic vapor cartridges or canisters."
 - For eye protection, you may be directed to "Wear either safety glasses with side-shields, or safety goggles."
 - To defend against skin contact, rubber gloves and other protective clothing might be specified.
- **"Section 8" of the Safety Data Sheet will also list any:**
 - TLVs (Threshold Limit Values)
 - PELs (Permissible Exposure Limits)
 - Other established exposure guidelines for the material or its hazardous ingredients.
 - This information is used by your employer to determine the engineering controls and personal protection that is appropriate for the work you are doing.
- **"Section 9" of the SDS describes the physical and chemical properties of the material.**
 - This information is important for evaluating the use of a material for a specific purpose and can help to determine what precautions should be taken when working with the chemical.
- **Your employer will also use the chemical and physical characteristics listed in this section to help determine the safest work practices for your facility.**
 - This information can be helpful in identifying a chemical when its container label has been damaged or destroyed as well.
- **Information about a material's "Stability and Reactivity" is needed to determine safe handling, storage, transportation and disposal procedures.**
 - For this data we turn to Section 10 of the Safety Data Sheet.
- **This section will indicate whether the material is chemically stable, or dangerously unstable, under normal conditions.**
 - It will also describe conditions to avoid when working with the material, such as heat, pressure, shock or other physical stresses that might result in a hazardous situation.
 - If a hazardous situation could occur by the material reacting with another substance such as a fire, explosion or the generation of poisonous vapors, this incompatibility will be listed as well.
- **This section of the SDS also addresses any hazards that could be produced as a result of:**
 - Oxidation.
 - Heating.
 - Decomposition.

- Polymerization.
- Other chemical reactions.
- **Remember, Sections 7, 8, 9, and 10 of the SDS provide the information necessary to prevent hazardous situations from occurring.**

SECTIONS 11-16: Is there anything else I should know about this material?

- **This brings us to the fourth question a Safety Data Sheet is designed to answer, "Is there anything else I should know about this material?"**
- This information can be found in Section 11 through Section 16.
- **Most workers use this information under the guidance of health and safety professionals, such as industrial hygienists, environmental managers and safety directors.**
- However, your employer may also use these sections as a reference when setting up your company's Standard Operating Procedures:
- So, you might want to take a quick look at this information.
- **Section 11: "Toxicological Information" provides background toxicity information on the health hazards of the material. This includes:**
- Likely routes of exposure.
- Symptoms related to the chemical's toxicological characteristics.
- Immediate and delayed effects of exposure.
- **Section 12: "Ecological Information" addresses the effects that the material may have on plants, wildlife and other parts of the environment.**
- **Section 13: "Disposal Considerations" provides information on safe and appropriate waste management options.**
- **Section 14: "Transport Information" includes the chemical's:**
- UN number.
- Proper Shipping Name.
- Transport Hazard Classes.
- Packing Group.
- Any special precautions that should be taken when transporting the chemical.
- **Section 15: "Regulatory Information" addresses other Federal, State, and International regulations that may apply to the material.**
- **"Section 16" contains relevant information that doesn't belong in any of the previous sections, as well as information on preparing and revising an SDS.**

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ANSWERS TO THE REVIEW QUIZ

1. b

2. a

3. d

4. a

5. a

6. b

7. a

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REVIEW QUIZ

Name _____ Date _____

The following questions are provided to determine how well you understand the information presented in this program.

1. The purpose of a Safety Data Sheet is to _____.
 - a. Tell you where PPE is kept in your facility
 - b. Provide a guide for the safe use of a hazardous chemical
 - c. List standard safety practices that are used in your facility

2. All SDS's use the same format, with information arranged in the same way.
 - a. True
 - b. False

3. Which of the following questions does an SDS answer?
 - a. What is the material and what are its hazards?
 - b. What should I do if a problem occurs while working with this material?
 - c. What precautions should I take to prevent problems when using this chemical?
 - d. All of the above

4. You will find the name, address and telephone number of the chemical's manufacturer in an SDS.
 - a. True
 - b. False

5. The SDS section on "extinguishing media" tells you what type of fire extinguisher to use for fires involving the chemical.
 - a. True
 - b. False

6. All hazardous chemicals require you to wear the same PPE when working with them.
 - a. True
 - b. False

7. Safety goggles are an example of a form of protection that might be specified in Section 8 of the SDS.
 - a. True
 - b. False