

**LESSON 7: USING LABELS AND THE HAZARDOUS CHEMICAL
INVENTORY**

TRAINER'S NOTES: Introduction and Learning Objectives

Ask trainees to look at the Introduction and Learning Objectives of page 7-1 of their Student Workbook and emphasize the following:

- In addition to MSDSs, the Hazard Communication Standard requires hazard warning labels, a Hazardous Chemical Inventory, and a written Hazard Communication Program.
- In this lesson, you'll see —
 - what types of containers must be labeled;
 - what information warning labels and the Hazardous Chemical Inventory contain;
 - how you can use these documents to help protect your health and safety.

LESSON 7: USING LABELS AND THE HAZARDOUS CHEMICAL INVENTORY

INTRODUCTION

The Hazard Communication Standard requires the use of warning labels. It also requires a Hazardous Chemical Inventory that names all hazardous chemical materials in your workplace. In this lesson, you will see —

- what information these documents contain; and
- how to use the labels and Inventories available in your workplace.

LEARNING OBJECTIVES

When you have completed this lesson, you should be able to do the following:

- ___ Identify information that must be included on all warning labels.
- ___ Identify containers that do and do not require warning labels.
- ___ Use warning labels to identify information about chemical hazards and to find the right MSDSs for additional information.
- ___ Describe the Hazardous Chemical Inventory and its uses.
- ___ List four types of chemicals excluded from OSHA's labeling requirement.

STUDENT WORKBOOK PAGE: 7-1

TRAINER'S NOTES: Learning Resources

Videotape Segments 7, located on Tape 2

Note: *On VHS or BETA videotapes, all seven segments are on one videotape.*

TRAINER'S NOTES: Directions for Proceeding

Direct trainees to disregard page 7-2 and to proceed to page 7-3 in the Student Workbook.

LEARNING RESOURCES

- Videotape Segment 7: Labels and The Hazardous Chemical Inventory
- Workbook Application Exercise 7-1: Knowing About Labels and The Hazardous Chemical Inventory
- Workbook Application Exercise 7-2: Using Labels and The Hazardous Chemical Inventory
- Lesson Summary

DIRECTIONS FOR PROCEEDING

Complete the following steps in order. You might want to check off each step as you complete it.

- ___ 1) Read the workbook introduction to Videotape Segment 7.
- ___ 2) Watch Videotape Segment 7.
- ___ 3) Complete Application Exercise 7-1 in this workbook.
- ___ 4) Complete Application Exercise 7-2 in this workbook.
- ___ 5) Read the Lesson Summary.

TRAINER'S NOTES: Introduction to Videotape Segment 7

Note: *Ask trainees to look at the videotape introduction on page 7-3 of the Student Workbook.*

- **As we watch this videotape, you should learn —**
 - **how the written documents, the MSDS, the Hazardous Chemical Inventory, the Label, and the Written Hazard Communication Program work together; and**
 - **how you can use warning labels and the Inventory to help control chemical hazards in your facility.**

**INTRODUCTION TO VIDEOTAPE SEGMENT 7:
Labels and The Hazardous Chemical Inventory**

OSHA requires four written documents to help protect you from chemical hazards in the workplace.

- Warning labels
- Hazardous Chemical Inventory
- MSDSs
- Local Written Hazard Communication Program

As you watch this videotape segment, notice how these documents work together. Pay close attention to the information labels contain, and how you can use labels to help protect yourself from chemical hazards. Also watch for ways you can use the Hazardous Chemical Inventory in your workplace.

Now, watch Videotape Segment 7.

TRAINER'S NOTES: Application Exercise 7-1

Ask trainees to turn to page 7-5 of their Student Workbook. Either lead the class through Application Exercise 7-1 as a group activity, or provide time for students to complete the exercise individually or in small groups. The answers and additional information given below appear on pages 7-6 and 7-8 of the Student Workbook.

Answer	Additional Information
1) A, D	<p>The Hazard Communication Standard says that every warning label MUST include:</p> <ul style="list-style-type: none">• Name of the chemical material• All appropriate hazard warnings <p>Other information, such as a manufacturer's, importer's or other responsible party's name or address, may also be included, and usually is. But this information does not have to be on the label unless the container leaves the workplace.</p>
2) B	<p>The Hazard Communication Standard requires every employer to inform employees about the hazards of any chemicals contained in unlabeled pipes in their work area. The method used to do this must be described in the written Hazard Communication Program.</p> <p>Pipes do not have to be labeled because the Standard does not consider pipes to be containers. Containers that do require labels include bags, barrels, bottles, boxes, cans, cylinders, drums, reaction vessels, and storage tanks, or the like, that contain hazardous chemicals.</p> <p>The Hazardous Chemical Inventory is just that — an inventory or list of hazardous chemicals known to be present in the workplace. It does not contain specific hazard information.</p>

**APPLICATION EXERCISE 7-1:
Knowing About Labels and The Hazardous Chemical Inventory**

Directions: Check or circle your answer(s) to each question, or write your answer in the blank provided. Remember, there may be more than one correct choice for a question. When you complete the exercise, fold over the right side of the page to check your answers. Then turn the page to get more information about each question.

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- 1) What information **MUST** be included on **EVERY** warning label?
- A) Name of the chemical material
 - B) Chemical formula
 - C) Name and address of supplier or manufacturer
 - D) All appropriate hazard warnings
- 2) How can you find out about the hazards of chemicals traveling through your work area inside pipes?
- A) Read the warning label — all pipes carrying chemicals must be labeled.
 - B) I must be informed by my employer — the OSHA Standard requires this.
 - C) Find out the name of the chemical and look up its hazards on the Hazardous Chemical Inventory.
 - D) I have no right to know about the hazards of chemicals inside pipes because pipes are not considered containers.

STUDENT WORKBOOK PAGE: 7-5

- | Answer | Additional Information |
|---------------|---|
| 3) A | <p>This safety can must be labeled because more than one worker uses it. Only transfer containers that meet <i>BOTH</i> of the following requirements are exempt from the labeling requirement.</p> <ul style="list-style-type: none">• Container used by only <i>ONE</i> worker; <i>AND</i>• Container filled <i>AND</i> emptied during the same shift. |
| 4) B | <p>The <i>SAME</i> name must be used on the label, the Hazardous Chemical Inventory, and the MSDS. OSHA requires use of the same name to make it easier to use the label or Inventory to find the right MSDS.</p> |
| 5) A, B, C | <p>When a chemical <i>IS</i> included on the Hazardous Chemical Inventory, all of the following are true.</p> <ul style="list-style-type: none">• The chemical is found in your workplace.• The chemical is hazardous.• Containers of the chemical must be labeled.• An MSDS for the chemical must be readily accessible to you during your workshift, when you are in your work area. |

Note: *Direct trainees either to proceed to Application Exercise 7-2 when finished, or to wait for further instructions. If time allows, ask the Optional Questions that begin on page 7-12 of this guide.*

- 3) Scott fills a one-gallon safety can with solvent. A few minutes later, Ellen picks up the same safety can and empties it into a parts washer. Does this safety can require a label?
- A) Yes
 - B) No
- 4) Can the name used on a label differ from the name used on the Hazardous Chemical Inventory?
- A) Yes
 - B) No
- 5) Suppose paint thinner IS on the Hazardous Chemical Inventory for your workplace. Which of the following is/are true?
- A) Paint thinner is a chemical hazard.
 - B) Containers of paint thinner must be labeled.
 - C) An MSDS for paint thinner must be available.

Now go back to page 7-5, fold over the right side of the page, and check your answers. Look on the back of the question page for more information on each question. If you are taking this course as a self-study, continue to the Application Exercise 7-2, "Using Labels and The Hazardous Chemical Inventory," when you have finished. If you are taking this course in a classroom situation, wait for further instructions from your trainer when finished.

TRAINER'S OPTIONAL QUESTIONS: Application Exercise 7-1

O1) *List choices on chalkboard and ask:* Which containers can be labeled by using a wall placard?

- A) Stationary vats
- B) Transfer vessels
- C) Large solvent drums
- D) Any type of chemical container

Answer: A; Stationary Vats

Labels must be attached to most chemical containers, but not to stationary ones like vats or storage bins. Wall placards or bin labels can be used provided that —

- the stationary container(s) to which it applies are clearly identified.
- the placard(s) or bin labels convey the identity of the chemicals in the container and the appropriate hazard warnings for those chemicals.

Wall placards or bin labels must contain the same information as any other type of hazard warning label.

O2) *List choices on chalkboard and ask:* What is the fastest way to find out whether a hazardous chemical material called acetone is used in our facility?

- A) Find a container of acetone and see if it's labeled.
- B) See if acetone is on the Hazardous Chemical Inventory.
- C) Request a copy of the MSDS for acetone.

Answer: B

Looking for the name on the Hazardous Chemical Inventory is usually the fastest way to find out whether a hazardous chemical material is used in your workplace. If acetone *IS* used, it must be on the Inventory because it is flammable, and is a health hazard.

STUDENT WORKBOOK PAGE: No Reference

O3) What must the Hazardous Chemical Inventory include?

Answer: Names of all hazardous chemical materials used in the workplace

The Hazardous Chemical Inventory must include ALL hazardous chemical materials used in the workplace. This includes both physical hazards and health hazards.

O4) List choices on chalkboard and ask: if a chemical is NOT included on the Hazardous Chemical Inventory in your workplace, which of the following statements MUST be true?

- A) Chemical is not hazardous.
- B) Chemical is not used in the workplace.
- C) Either A or B.

Answer: C

If a chemical is NOT on the Inventory in your workplace, it means EITHER that it's not hazardous OR that it's not found in your workplace.

Just because a chemical is not included on the Hazardous Chemical Inventory does not mean that it's not hazardous. For example, methyl chloromethyl ether is one of the carcinogens regulated by OSHA. If this chemical does not appear on the Inventory, it means only that methyl chloromethyl ether is not used in the facility.

STUDENT WORKBOOK: No Reference

TRAINER'S NOTES: Application Exercise 7-2

Ask trainees to turn to page 7-9 of their Student Workbook. Either lead the class through Application Exercise 7-1 as a group activity, or provide time for students to complete the exercise individually or in small groups. The answers and additional information given below appear on pages 7-10 and 7-12 of the Student Workbook.

Do one of the following:

- *Refer trainees to the appropriate appendix of their workbook and ask each question as is.*
- *Tailor the activity to your facility.*
 - *Hand out copies of a portion of the Hazardous Chemical Inventory for your facility and write several questions similar to questions 1 through 3 on page 7-19 on the chalkboard.*
 - *Hand out or project copies of the hazard warning labels for several commonly used chemical materials in your facility and ask questions similar to questions 4 and 5 on page 7-21 (i.e., substitute the name of the chemical material on your warning labels for 1,1,1-trichloroethane and methanol).*

In either case, be sure to remind trainees about —

- *the availability of the Hazardous Chemical Inventory or list of hazardous chemicals in your facility;*
 - *locations where warning placards or bin labels are used; and*
 - *hazards associated with any unlabeled pipes that carry chemical materials through your facility.*
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If using the sample Hazardous Chemical Inventory in Appendix C of this guide, make a handout, or ask trainees to locate the sample Hazardous Chemical Inventory in Appendix C of their workbook. Use this sample Inventory to answer questions 1 to 3.

STUDENT WORKBOOK: No Reference

- | Answer | Additional Information |
|---------------|--|
| 1) B D E | <p>Stop-Rust, Black; Tight Seal; and Clear Spray are included in the sample Hazardous Chemical Inventory in Appendix C.</p> <p>Make sure the name you are looking for matches the name on the Inventory exactly. Epoxy Paint - Blue 207 is on this Inventory, but Epoxy Paint - Blue <i>Prime 107</i> is not. Similarly, AC Dark Blue and AC <i>Light Blue Gloss</i> are on the Inventory, but AC <i>Dark Blue Gloss</i> is not.</p> |
| 2) B | <p>Only Texas Oil Co. Anti-Freeze is listed for the 239th Street Maintenance Shop. When the Hazardous Chemical Inventory covers several different facilities, individual inventories may be available for each facility. Similarly, specific Inventories may be put together for individual work areas.</p> |
| 3) B | <p>Blue spray paint is used in five of the facilities covered by this Hazardous Chemical Inventory, but the Pitkin Shop is not listed as a "USE POINT."</p> |

APPLICATION EXERCISE 7-2:
Using Labels and The Hazardous Chemical Inventory

Directions: Check or circle your answer(s) to each question, or write your answer in the blank provided. Remember, there may be more than one correct choice for a question. When you complete the exercise, fold over the right side of the page to check your answers. Then turn the page to get more information about each question.

Appendix C contains a sample Hazardous Chemical Inventory. Use it to answer the following questions.

- 1) Which of the following chemical hazards are used in the workplace to which this Hazardous Chemical Inventory applies?
 - A) Epoxy Paint - Blue Prime 107
 - B) Stop Rust, Black
 - C) AC Dark Blue Gloss
 - D) Tight Seal
 - E) Clear Spray

- 2) Which brand of Anti-Freeze is used in the 239th Street Maintenance Shop?
 - A) Pioneer Oil
 - B) Texas Oil Co.
 - C) Titan Research

- 3) Is Blue Spray Paint used in the Pitkin Shop?
 - A) Yes
 - B) No

STUDENT WORKBOOK PAGE: 7-9

Refer trainees to the DoD warning label for 1,1,1-trichloroethane in Appendix B (page B-3) of their Student Workbook and ask question 4.

Answer Additional Information

The warning label for 1,1,1 trichloroethane is located on page B-3 of Appendix B.

4) B The label tells you that 1,1,1 trichloroethane *IS NOT* a fire hazard.

Refer trainees to the DoD warning label for methanol in Appendix B (page B-2) of their Student Workbook and ask question 5.

The warning label for methanol is located on page B-2 of Appendix B.

5) A B C The label for methanol warns you to protect your eyes, skin, and respiratory tract. You need to protect yourself against eye contact by wearing eye protection. The proper gloves can protect against skin contact, and a respirator or ventilation system protects against breathing hazardous airborne forms of the chemical.

Note: *Direct trainees proceed to the Lesson Summary when finished or to wait for further instructions. If time allows, ask the Optional Questions that begin on page 7-22 of this guide.*

Locate the DoD Hazard Warning Label for 1,1,1-trichloroethane in Appendix B and use it to answer the following question.

4) Can 1,1,1 trichloroethane cause a fire?

A) Yes

B) No

Locate the DoD Hazard Warning Label for methanol in Appendix B and use it to answer the following question.

5) What kind(s) of protection do you need when working with methanol?

A) Eyewear

B) Gloves

C) Respirator or ventilation system

Now go back to page 7-9, fold over the right side of the page, and check your answers. Look on the back of the question page for more information on each question. If you are taking this course as a self-study, proceed to the Lesson Summary when you have finished. If you are taking this course in a classroom situation, wait for further instructions from your trainer when finished.

TRAINER'S OPTIONAL QUESTIONS: Application Exercise 7-2

Refer trainees to the warning label for 1,1,1-trichloroethane (page B-3 of Appendix B in their student workbook). Use it to answer questions O1 through O3 about this chemical material.

O1) Is 1,1,1-trichloroethane a physical hazard, a health hazard, or both?

Answer: Both

1,1,1-Trichloroethane is a health hazard because exposure can cause adverse health effects. The label indicates moderate health hazards and immediate health effects of dizziness, rapid heartbeat, and headache. Liver damage is noted as a delayed effect. It is a physical hazard because it is chemically reactive. It produces highly toxic gases when exposed to hot metal surfaces or strong ultraviolet light.

O2) What parts of your body require protection when working with 1,1,1-trichloroethane?

Answer: Skin, eyes, respiratory tract

The written *HAZARD WARNING* on the label warns you to protect your skin, eyes and respiratory system. The contact hazard is marked as moderate, and the label states contact will irritate the eyes and skin.

O3) List choices and ask: What symptoms might alert you to a leak in a container of 1,1,1-trichloroethane?

A) Eye irritation B) Nausea C) Dizziness D) Lung damage

Answer: A, C

Immediate effects (those felt right away) can alert workers to an exposure hazard that should be controlled. Breathing vapors that form when 1,1,1-trichloroethane leaks can cause the immediate health effects of eye irritation, dizziness, rapid heartbeat and headaches.

Recognizing and reporting these symptoms helps to get the hazard controlled. By controlling the hazard, workers can help prevent the more serious, delayed health effects that can develop slowly if someone is continuously or repeatedly exposed to this or another hazardous material.

STUDENT WORKBOOK: No Reference

TRAINER'S OPTIONAL QUESTIONS: Application Exercise 7-2 Continued

Refer trainees to the warning label for methanol in Appendix B (page B-2) of their student workbook. Use this label to answer questions O4 and O5 about this chemical material.

- O4) What might happen over time if you are repeatedly exposed to methanol vapors?**

Answer: Damage to central nervous system, eyesight, liver

Delayed health effects develop slowly over time rather than during or immediately following exposure. Often, but not always, such delayed effects are associated with repeated exposures.

This label warns you that exposure to methanol can lead to **CENTRAL NERVOUS SYSTEM DAMAGE** or **BLINDNESS**. Repeated exposure can also lead to **LIVER DAMAGE**. The dizziness and irritation go away when exposure stops.

- O5) What materials must be kept away from methanol?**

Answer: Strong acids, oxidizers

Like many chemical materials, methanol reacts violently with certain other chemicals. This label warns you to avoid contact with **STRONG ACIDS**, as well as **OXIDIZERS**. Heeding this warning prevents a hazardous or emergency situation that could seriously injure you or someone else.

STUDENT WORKBOOK: No Reference

TRAINER'S NOTES: Lesson 7 Review

Note: *Briefly mention or refer students to the following types of chemicals, which are exempt from the labeling requirement of the Hazard Communication Standard. Explain that these chemicals are exempt because they are already subject to labeling under other Federal Regulations.*

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- **PESTICIDES** covered by the Federal Insecticide, Fungicide, and Rodenticide Act (MSDSs must be available for pesticides).
 - **FOOD, FOOD ADDITIVES, COLOR ADDITIVES, DRUGS, COSMETICS, AND INGREDIENTS IN THESE PRODUCTS** covered by the Federal Food, Drug, and Cosmetic Act.
 - **DISTILLED SPIRITS, WINE, OR MALT BEVERAGES** not intended for industrial use covered by the Federal Alcohol Administration Act.
 - **CONSUMER PRODUCTS AND HAZARDOUS SUBSTANCES** covered by the Consumer Product Safety and Federal Hazardous Substances Acts. MSDSs must be available where the use of these products results in worker exposures significantly greater than those of consumers.

If time permits, review and reinforce the learning objectives by asking the following open-ended questions answered in the summary. Refer trainees to the Summary in the student workbook for future reference.

Note: *Make sure that you actually provide practice using an inventory and warning labels.*

Q1) What information must all warning labels contain?

Answer: Chemical name/identity, all appropriate hazard warnings

The Hazard Communication Standard requires the use of hazard warning labels that include —

- the name and identity of the chemical that matches the name and identity on the MSDS and Hazardous Chemical Inventory; **AND**
- **ALL** appropriate hazard warnings, including target organ health effects.

Labels on containers that leave the workplace must also contain the name and address of the responsible party. The warning label is often the first source of information about chemical hazards. The name and identity on the label can be used to locate the MSDS, where additional information can be found.

LESSON 7 SUMMARY

The Hazard Communication Standard requires the use of hazard warning labels that include —

- The name and identity of the chemical that matches the name and identity on the MSDS and Hazardous Chemical Inventory; *AND*
- *ALL* appropriate hazard warnings.

Labels on containers that leave the workplace must also contain the name and address of the responsible party. The warning label is often your first source of information about chemical hazards. The name and identity on the label can be used to find the right MSDS, where you will find additional information.

Warning labels must be affixed to bags, barrels, bottles, boxes, cans, cylinders, drums, reaction vessels, storage tanks, and other chemical containers. Placards or bin labels can be used for stationary containers as long as the placard clearly identifies the containers to which it applies, and provides the same information required for any other type of hazard warning label.

Pipes carrying chemicals do not have to be labeled, but you must be informed about the hazards of any chemicals carried through your work area in unlabeled pipes. A transfer container does not have to be labeled provided that only one person handles the container and the container is filled and emptied in the same shift.

The following types of chemicals are exempt from the OSHA labeling requirement because labeling is required by other federal laws.

- Pesticides covered by the Federal Insecticide, Fungicide, and Rodenticide Act (MSDSs must be available for pesticides).
- Food, food additives, color additives, drugs, cosmetics, and ingredients in these products covered by the Federal Food, Drug, and Cosmetic Act.
- Distilled spirits, wine, or malt beverages not intended for industrial use covered by the Federal Alcohol Administration Act. MSDSs must be available if the use of these products results in worker exposures significantly greater than those of consumers.
- Consumer products and hazardous substances covered by the Consumer Product Safety and Federal Hazardous Substances Acts. MSDSs must be available, if the use of these products results in worker exposures significantly greater than those of consumers.

STUDENT WORKBOOK PAGE: 7-13

Q2) What types of containers must be labeled?

Answer:

Warning labels must be affixed to bags, barrels, bottles, boxes, cans, cylinders, drums, reaction vessels, storage tanks, and other chemical containers.

Q3) What are the two types of containers that do not require individual labels? (Define labeling requirements for stationary and transfer containers.)

Answer: Stationary and transfer containers

Placards or bin labels can be used for stationary containers as long as the placard clearly identifies the containers to which it applies and provides the same information required for any other type of hazard warning label. A transfer container does not have to be labeled provided that only one person handles the container, and that the container is filled and emptied in the same shift.

Q4) Do pipes carrying chemicals have to be labeled?

Answer: No

Pipes carrying chemicals do not have to be labeled, but workers must be informed about the hazards of, and control measures for any chemicals carried through their work area in unlabeled pipes. Although these pipes do not require labeling, MSDSs must still be made available to workers for the chemicals in those pipes.

Q5) What is the Hazardous Chemical Inventory and how can you use it?

Answer:

The **HAZARDOUS CHEMICAL INVENTORY** must name all hazardous chemical materials currently found in your workplace. Containers of materials on the Hazardous Chemical Inventory must be labeled, tagged, or placarded and MSDSs must be available for every material on the Inventory.

The Inventory can be used to find out whether a hazardous chemical material is found in the workplace. It can also be used to see if a material found in the workplace is considered hazardous.

The Hazardous Chemical Inventory must name all hazardous chemical materials currently found in your workplace. Containers of materials on the Hazardous Chemical Inventory must be labeled, tagged, or placarded, and MSDSs must be available for every material on the Inventory. You can use the Inventory to find out whether a hazardous chemical material is used in your workplace. You can also use the Inventory to see if a material you work with is considered hazardous. If it is hazardous, it must be on the Hazardous Chemical Inventory.

Congratulations! You have now completed this course. It's time to put what you've learned to work. But remember to keep this workbook handy — it's your personal reference on working safely with chemical materials.

If you desire further information about the Hazard Communication Standard or about the information you've been studying in this course, contact:

Name

Title

at

Telephone

STUDENT WORKBOOK PAGE: 7-14ST