



Tailgate Safety Training for Landscaping and Horticultural Services

Agricultural Safety Program, 590 Woody Hayes Drive, Columbus, OH 43210

Material Safety Data Sheet

Objective: Identify the information provided on the Material Safety Data Sheet (MSDS).

How to Use This Module

Safety conditions increase when on the job hazards are known. The Material Safety Data Sheet (MSDS) is a good reference for information on hazardous substances. For this module:

- Ask your supervisor to provide a Material Data Safety Sheet (MSDS) for a substance you use.
- Review the information on the MSDS.
- Discuss the hazards identified in the MSDS with your supervisor.
- Ask your supervisor to explain your employer's training on hazardous chemicals.
- Review the important points.
- Take the True/False quiz to check your learning.

Background

The MSDS provides information on hazardous materials and wastes. Chemical makers must provide an MSDS for each product. Distributors must get the MSDS to employers. It must be available to workers exposed to hazardous substances. MSDSs should be kept at all greenhouses and nurseries. Keep at least one copy of the MSDS with the chemical.

What Is in an MSDS?

MSDSs provide vital information to different people on the job:

- Workers use, handle, and store hazardous substances.
- Employers must provide safe storage and appropriate personal protection equipment (PPE).
- Emergency personnel respond in case of a spill, accident, or physical injury. These can include fire fighters, hazardous material crews, and medical personnel.

MSDSs are not all the same. They can be organized in a number of different ways. Some MSDSs have only 8 or 9 sections; others may have 12 or 14. However, all MSDSs should include these types of information:

- Product identification

1. Formal chemical name and make-up.
 2. Trade name on the label.
 3. Name and locations of the manufacturer and distributor.
 4. Emergency telephone number(s).
- Hazard identification
 1. Amount of hazardous ingredient that causes ill effects.
 - Threshold Limit Value (TLV) — maximum average concentration recommended over an eight-hour work-day.
 - Permissible Exposure Limit (PEL) — exposure limit set by the Occupational Safety and Health Administration (OSHA); enforced by law.
 - Lethal Dose Concentration (LD50) — dose that kills 50% of test animals in experiments.
 1. Overview of information for emergency personnel.
 2. Ill effects of acute ocular, oral, dermal, or inhalation exposure.
 3. Chronic effects of long-term exposure.
 - First aid procedures.
 1. What to do in case of acute exposure.
 2. Instructions to medical personnel for emergency procedures.
 - Handling and storage procedures.
 1. Hygiene.
 2. Temperature control.
 3. Ventilation.
 - PPE.
 1. Personal eye protection to avoid ocular exposure.
 2. Rubber gloves, rubber boots, long-sleeve shirt, long pants, and face shields to avoid dermal exposure.
 3. Respiratory protection to avoid inhalation exposure.
 - Fire and explosion hazards and procedures.
 - Procedures for cleaning up spills and leaks.
 - Disposal information.

How to Use an MSDS

- Find out where MSDSs are kept in your workplace. Find out how they are filed so you can find the one you want.
- Look over the format of each MSDS to see how information is presented.
- Find out how to make the MSDS available to emergency personnel, if necessary.
- Find out what PPE is required to handle the substance.
- Find out what procedures are needed for safe handling — hygiene, temperature control, ventilation.
- Look for information on ill effects of acute exposure. Find out what symptoms you should look for when you handle the substance.
- Find out what first aid procedures to use for acute exposure.
- Find out how to handle a spill or leak.
- Find out how to store the substance safely when you finish the job.
- Ask your supervisor any questions you still have about how to handle the substance safely.

Employer Training

Employers must provide information and training to workers who might be exposed to hazardous chemicals. New workers must be trained before they first work with a hazardous chemical. And all workers must be trained when a new hazard is introduced to the workplace. All workers should find out what training their employer provides. They should also make sure they receive all the training they need.

Review These Important Points

- The MSDS provides critical details about the substance it describes.
- The MSDS lists hazardous ingredients and other health hazards.
- The MSDS identifies personal protection equipment required for the substance.
- Workers must receive training on hazardous chemicals.

About These Modules

The author team for the training modules in the landscape and horticultural tailgate training series includes Dee Jepsen, Program Director, Agricultural Safety and Health, Ohio State University Extension; Michael Wonacott, Research Specialist, Vocational Education; Peter Ling, Greenhouse Specialist; and Thomas Bean, Agricultural Safety Specialist. Modules were developed with funding from the Occupational Safety and Health Administration, U.S. Department of Labor, Grant Number 46E3-HT09.

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the U.S. Department of Agriculture or the U.S. Department of Labor.

Answer Key: 1 = T, 2 = T, 3 = T, 4 = T, 5 = T.

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Material Safety Data Sheet (MSDS)

Name _____

True or False?

1. Workers must be trained about chemical hazards on the job. T F
2. The MSDS helps to protect employees. T F
3. There is no standard form for an MSDS. T F
4. An MSDS contains information on hazardous materials and wastes. T F
5. An MSDS describes chemical hazards and how to work with the chemical safely. T F