



Tailgate Safety Training for Landscaping and Horticultural Services

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

Chemical Skin Irritants

Objective: Prevent and treat hazards from chemical skin irritants.

How to Use This Module

Skin is a valuable tissue — but chemical irritants can harm it. For this module:

- Read the information below on chemical irritants and their effects.
- Ask your supervisor to point out chemical irritants you use.
- Review the personal protection equipment (PPE) you should use.
- Review the important points.
- Take the True/False quiz to check your learning.

Background

Different chemicals can irritate the skin. Some chemicals remove fats and oils from the skin. When this occurs, the skin becomes cracked and dry. Irritants can also cause severe burns. Or irritants can cause oils and waxes to plug hair follicles and sweat ducts. That can cause dermatitis and acne.

Types of irritants are shown in the table on the next page. The table also lists examples and effects.

Dermatitis

With dermatitis, the skin is inflamed and irritated. There are two types:

- Primary irritation. Occurs from contact with a chemical irritant.
- Sensitization. Skin becomes more sensitive after exposure. Then, just a small amount can cause a severe allergic reaction.

Types and Effects of Chemical Irritants			
Chemical Irritant	Examples	Found In	Effects
Strong acids	Hydrochloric acid	Fertilizers Dyes Paint pigments	Severe burns Brief or prolonged effects
	Sulfuric acid	Battery acid Phosphate fertilizers	
	Nitric acid	Fertilizers Metal working	
Strong caustics	Sodium hydroxide	Soaps, detergents Cleaning products Adhesives Paint remover Disinfectants	
	Potassium hydroxide	Disinfectants Sterilizing agents	
Strong solvents	Dichloromethane	Paint remover	Prolonged dermatitis Prolonged acne
	N-methylpyrrolidine	Alcohol	

Chemical Irritant Safety Practices

- Identify hazards before working with chemicals.
- Read the Material Safety Data Sheet (MSDS) and labels on the containers.
- Identify emergency procedures in case an accident occurs.
- Avoid contact with strong chemical irritants.
- Use personal protection equipment.
 - ◆ Goggles
 - ◆ Gloves
 - ◆ Sleeves
 - ◆ Aprons
 - ◆ Shields
 - ◆ Footwear
- In case of exposure
 - ◆ Use showers, eyewash fountains, hand/face spray units, and other emergency equipment.
 - ◆ Call 911 if appropriate.
 - ◆ Report accidental exposures to hazardous substance.

Review These Important Points

- Be aware of all types of skin irritants.
- Know what substances you use that may be dangerous.

- Follow the correct procedures in an emergency.
- Wear protective equipment when on the job.
- Use emergency equipment and call 911 if appropriate.

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.

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

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Chemical Skin Irritants

Name _____

True or False?

- | | | |
|--|---|---|
| 1. Caustics can remove fats and oils from the skin. | T | F |
| 2. Skin is a valuable body tissue. | T | F |
| 3. It is not necessary to avoid direct contact with primary irritants. | T | F |
| 4. Strong acids can cause severe burns. | T | F |
| 5. An allergic reaction can be the result of exposure to solvents. | T | F |