NOTE: Reading this PDF course book is not a substitute for completing the Self-Paced Online training portion of this course. This PDF course book is a resource that accompanies the online training.

P HAZARD COMMUNICATION

ESSENTIALS OF WORKPLACE CHEMICAL SAFETY

Slide 1 - Welcome

Welcome to Course P, *Hazard Communication -- Essentials of Workplace Chemical Safety.*

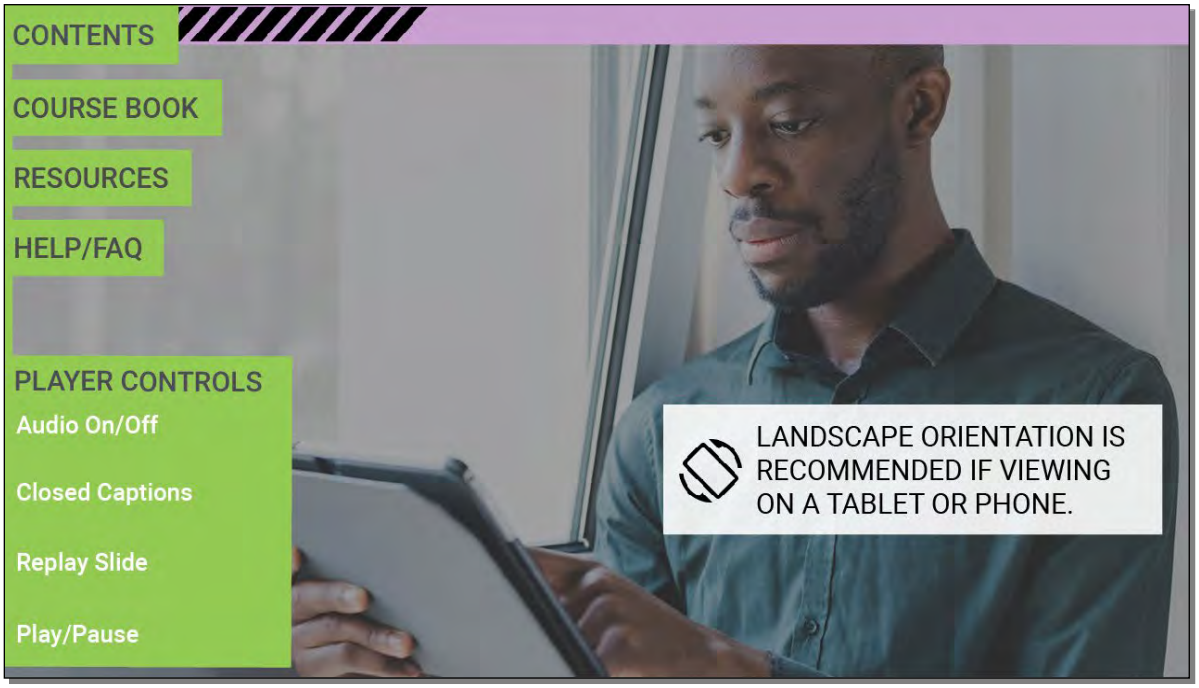
This 60-minute course is part of the Safety Pass training program for the motion picture and television industry.

It is presented to you by Contract Services.

At the end of the presentation, there will be a test. You must score at least 70 percent on the test to pass the course.

Click START to begin.

Slide 2 - Navigation and Resources



At any time during the presentation, you can use the buttons on the side of the player window to view the Table of Contents, open the course book PDF, link to course references and resources, get technical support or help from an instructor about course content, and control the player.

When you're ready to continue, select the NEXT arrow.

Slide 3 - IIPP

This course is part of your employer's safety program.

In the state of California, this is known as an Injury and Illness Prevention Program (or IIPP). The IIPP and Safety Pass training courses are part of your employer's safety program.

There are three reasons to get safety training.

First, you are personally responsible for your safety. You owe it to yourself and your coworkers to avoid accidents and injuries. The way you make a living and your quality of life depend on it.

Second, it is the law. Occupational safety and health standards guarantee the right to a safe workplace and require employers to train their employees in safety.

And third, the industry requires it. This course is part of a cooperative commitment between major motion picture and television studios and industry labor unions to deliver safety training.

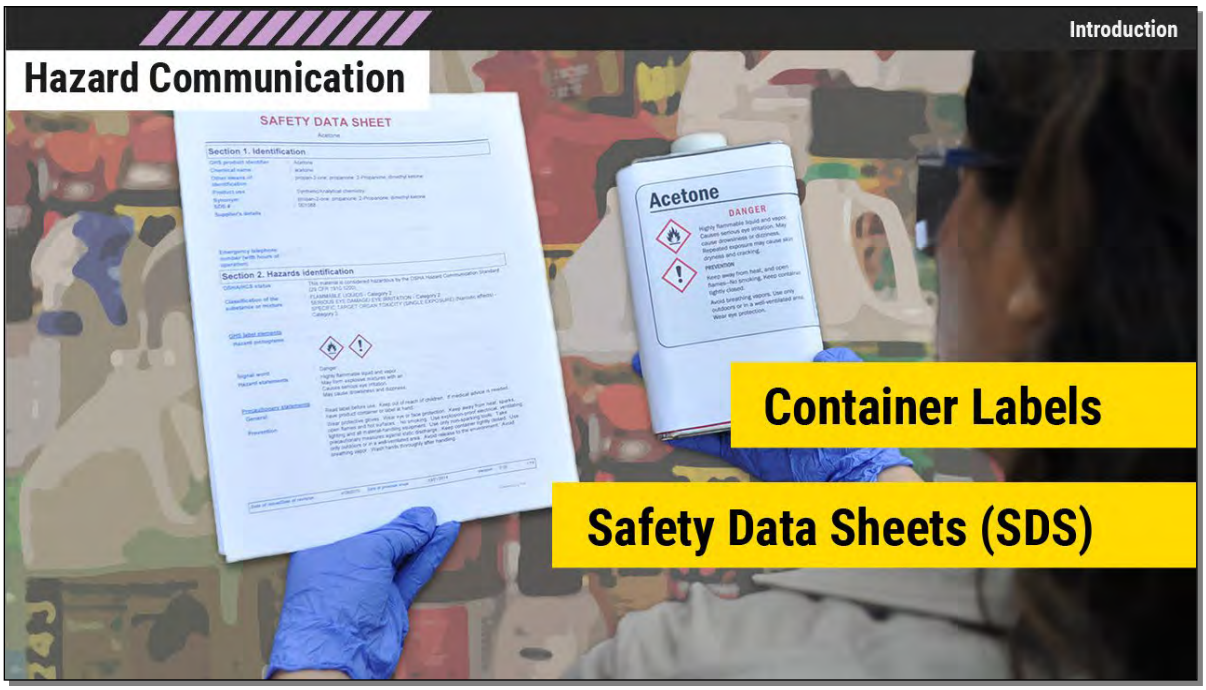
Slide 4 - Hazardous Substances

Many common workplace chemicals and substances, from gasoline to nail polish remover, are classified as hazardous.

A hazardous chemical is one that poses a physical hazard or could harm your health. Physical hazards include chemicals that are flammable or corrosive for example. Health hazards include chemicals that are toxic or could cause long-term health problems like cancer or short-term harm, like skin irritation or dizziness.

Thinking about the products you use at work, how many items do you use that could pose chemical hazards?

Slide 5 - Hazard Communication



The purpose of this training is to ensure you know where to find safety information about chemicals that you or others may use your work area. Knowing this information will help you avoid harmful exposure, and, in the case of an accident, will help protect employees and emergency responders.

Slide 6 - Today We'll Cover

The course is divided into three scenes.

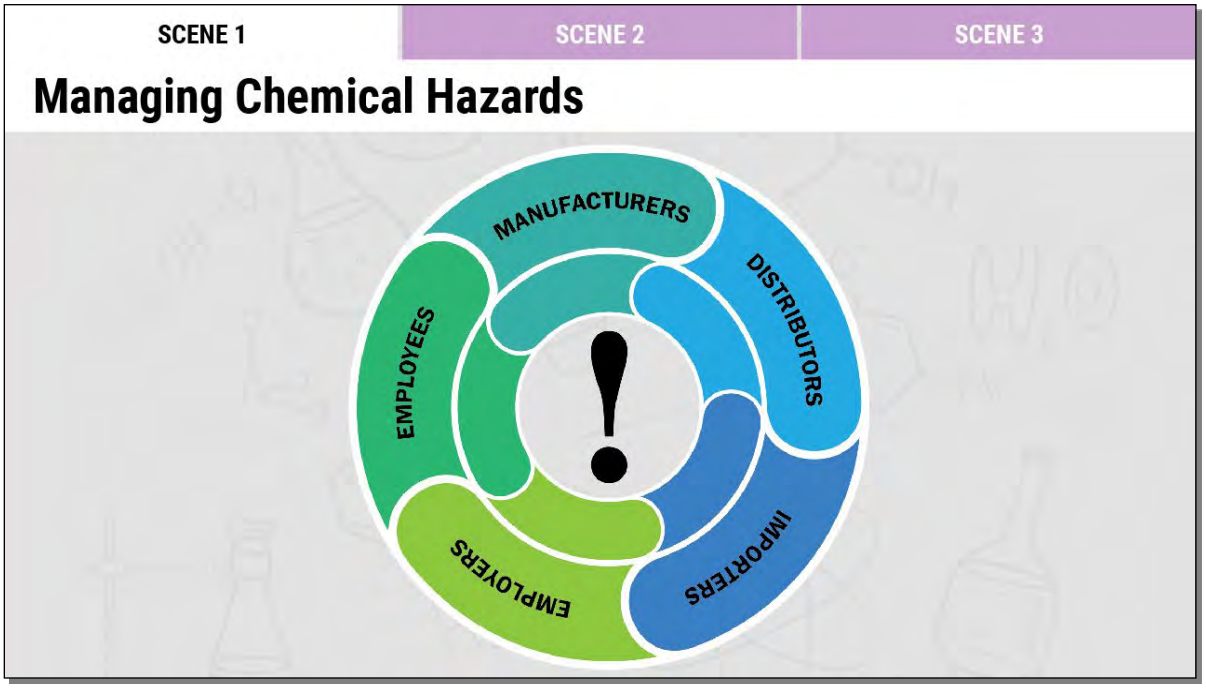
Scene One covers the roles of OSHA, employers, and workers in implementing a hazard communication program.

Scene Two describes your first source of information about potential hazards: container labels.

Scene Three describes the wealth of additional information provided by manufacturers in safety data sheets, commonly called SDSs.

Let's get started.

Slide 7 - Scene1 Managing Chemical Hazards



Scene One, Managing Chemical Hazards.

Slide 8 - Scene1 In This Scene

This scene gives an overview of the system used to communicate hazards of chemicals to you.

Your objectives for this scene are to **understand the responsibilities** of employers and employees for communicating hazards and maintaining safety.

You will learn how the classification system for chemicals helps communicate safety information.

Finally, you should understand how to approach hazards using the hierarchy of controls and be able to put the five control methods in order by effectiveness.

Slide 9 - OSHA Hazard Communication Standard

The section of OSHA regulations covering this topic is titled “Hazard Communication,” commonly called HazCom.

When do HazCom requirements apply? First, they only apply to chemicals and substances identified as hazardous. They apply to all such substances employees may be exposed to under normal conditions of use or in a reasonably foreseeable emergency based on workplace operations.

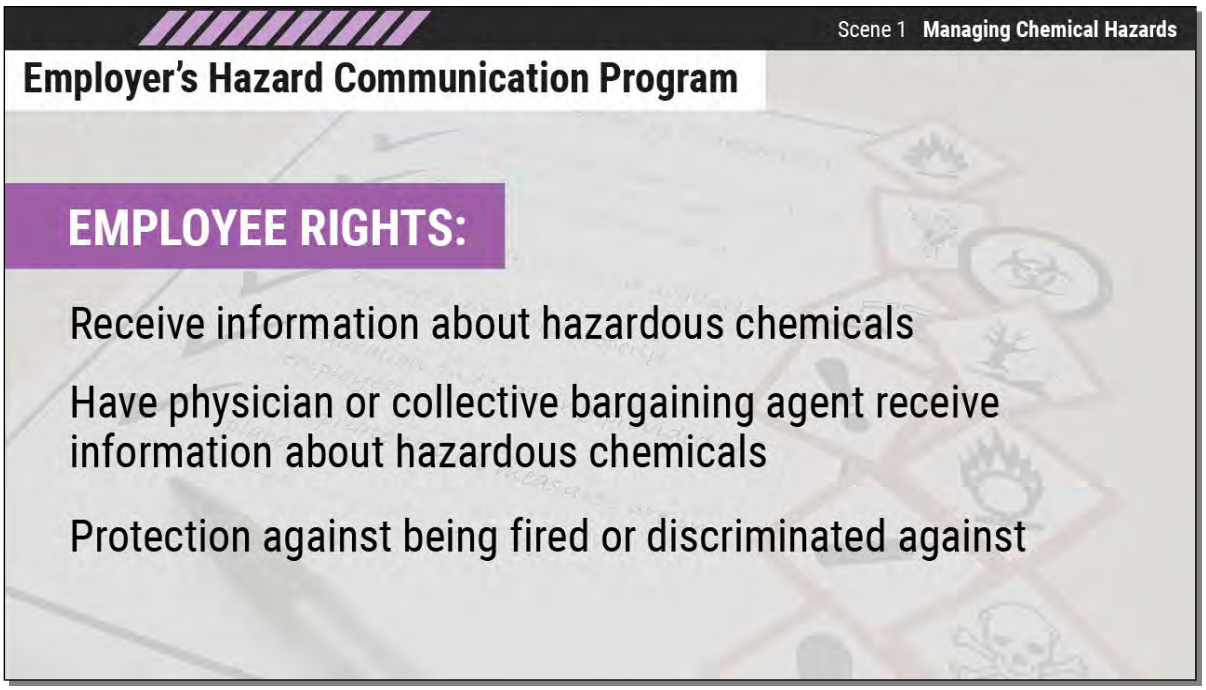
Slide 10 - Globally Harmonized System (GHS)

State and Federal OSHA HazCom regulations incorporate the Globally Harmonized System of Classification and Labeling of Chemicals, or GHS for short.

The GHS is a United Nations standard used by participating countries around the world, including the United States.

This course explains the GHS system for labeling and the GHS format for Safety Data Sheets.

Slide 11 - Employer's Hazard Communication Program



As an employee, you have the right to receive information regarding any hazardous chemicals to which you could be exposed. You have the right for a physician or a collective bargaining agent to receive this information as well, and you cannot be fired or discriminated against for exercising these rights. The employer's hazard communication program helps preserve these rights.

Slide 12 - Employer Responsibilities 1

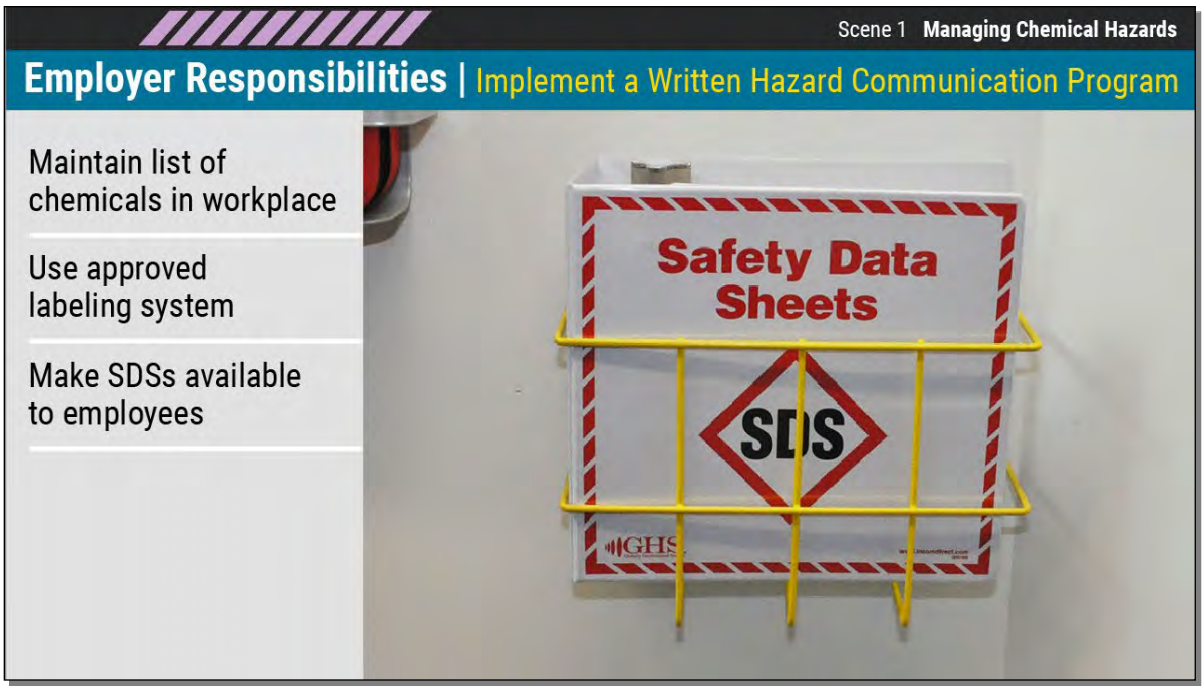
OSHA requires employers to prepare and implement a written hazard communication program and inform workers of the location and availability of the written program,

including the list of the hazardous chemicals in the workplace,

Slide 13 - Employer Responsibilities 2

the chemical labeling system to be used for containers...

Slide 14 - Employer Responsibilities 3



and access Safety Data Sheets. Employers are responsible for keeping the SDSs up to date.

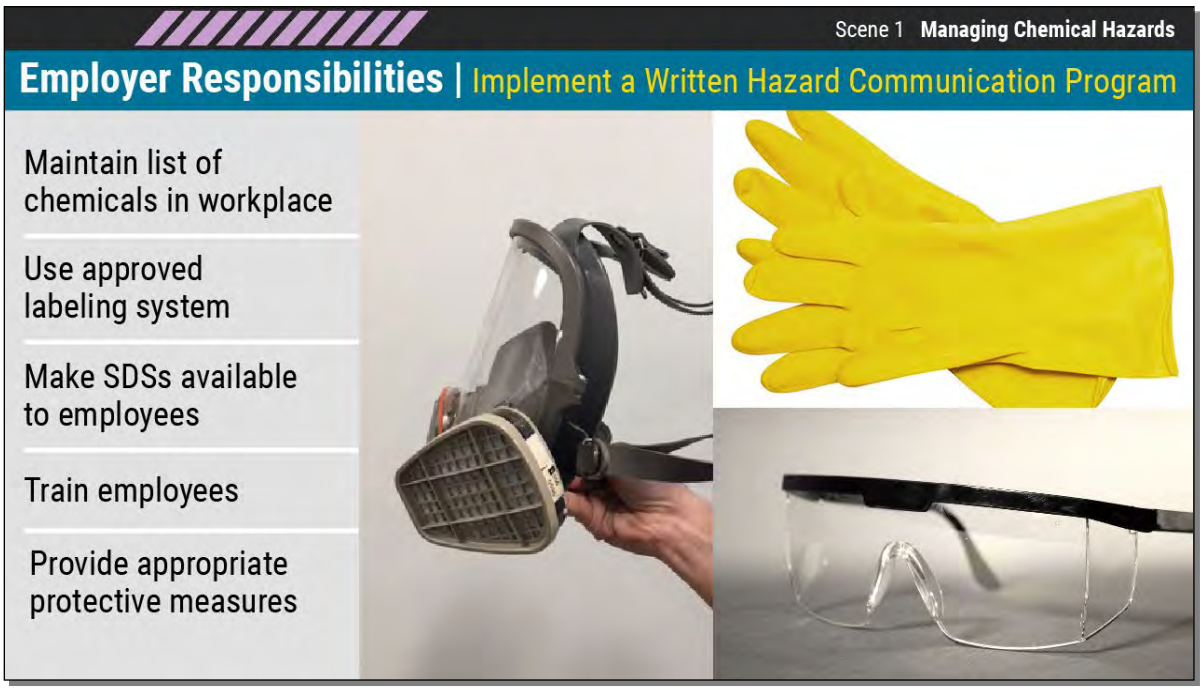
Slide 15 - Employer Responsibilities 4

Employers are responsible for training employees on the hazards of chemicals in the work area and the measures to protect themselves, including specific work practices, emergency procedures, and personal protective equipment workers should use.

This course is not meant to replace your employer's training. With assistance from Studio Safety departments productions assess hazards, including unusual chemical hazards, to ensure that department heads have any necessary additional training.

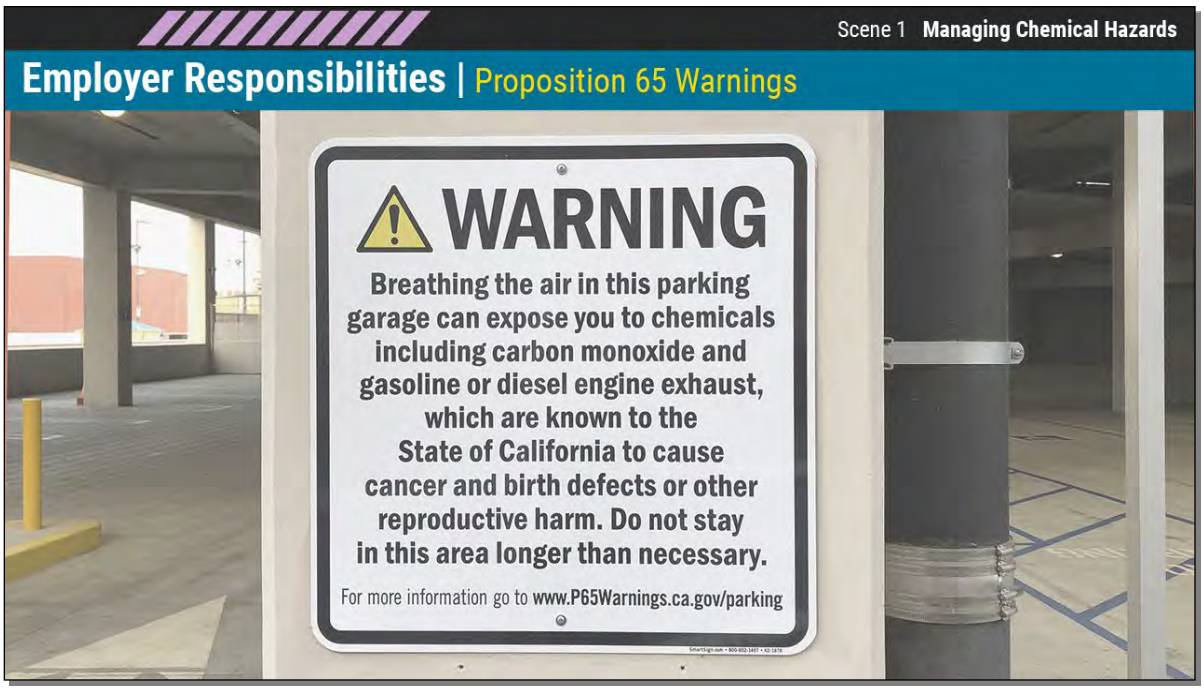
If your department uses a chemical that is classified as hazardous, your department head must inform production management to ensure proper steps are taken for everyone's safety.

Slide 16 - Employer Responsibilities 5



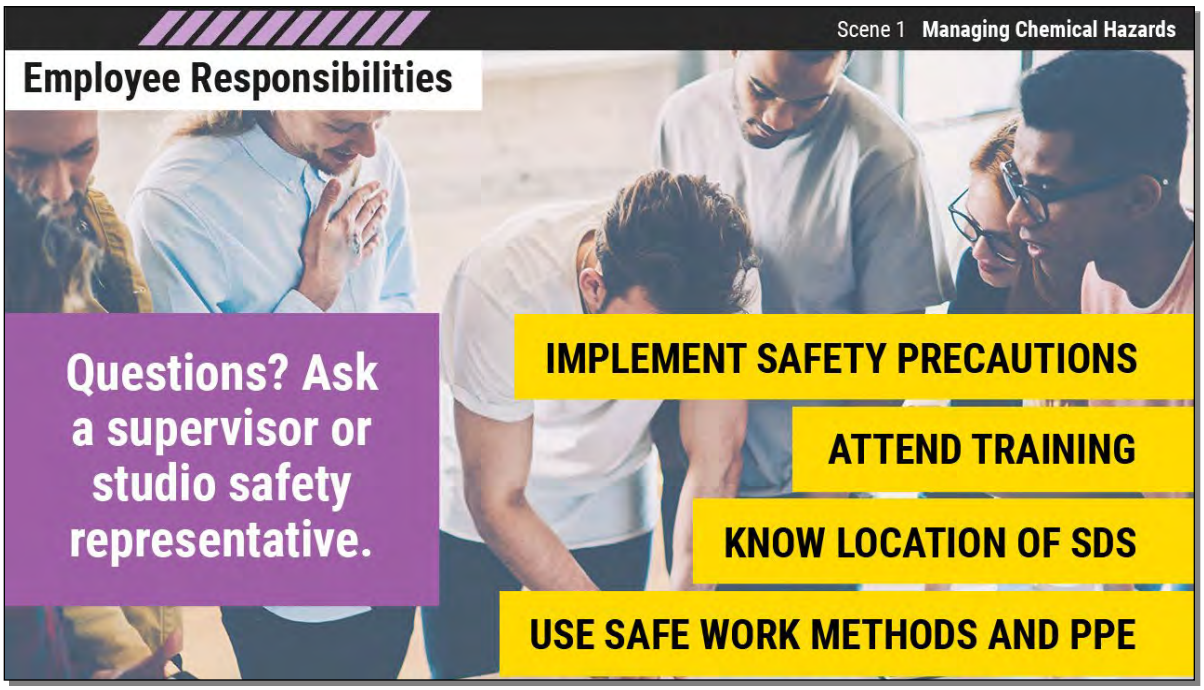
Employers are responsible for providing personal protective equipment (PPE) such as respirators, gloves, and safety goggles to employees when appropriate.

Slide 17 - Employer Responsibilities 6



In California, another way chemical hazards are communicated is by Proposition 65 placards. Prop 65 regulations require businesses to notify people before they are exposed to certain levels of listed chemicals from products that they purchase or that are present in homes, workplaces, or the environment.

Slide 18 - Employer Responsibilities 7

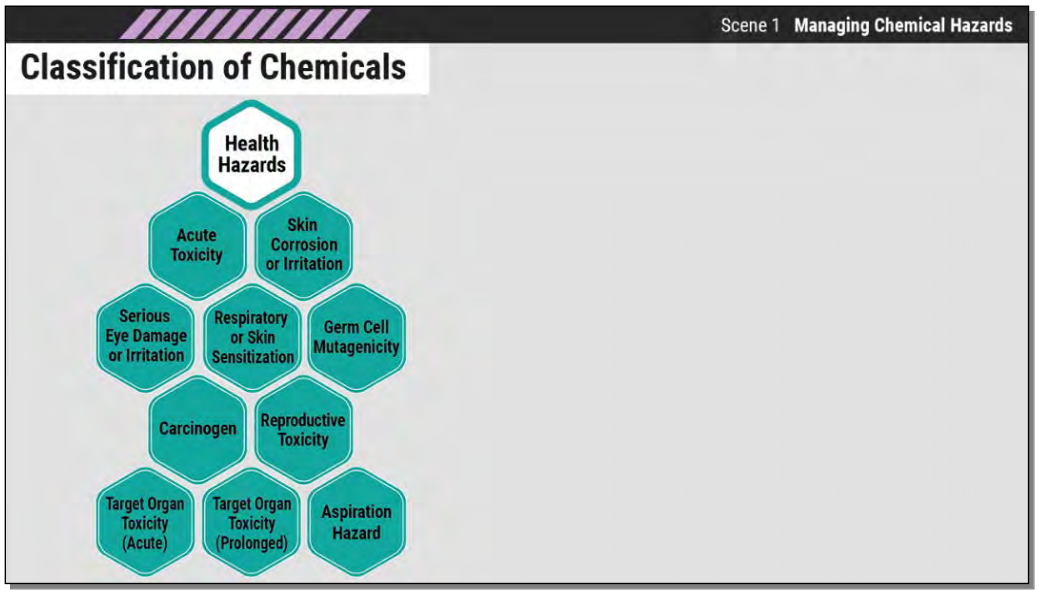


As an employee, you have the responsibility to implement the provided safety precautions when handling, using, storing, or transporting hazardous chemicals. You have the responsibility to attend training, know the location of Safety Data Sheets (SDS), and use prescribed work methods and PPE to protect yourself from potential hazards.

When there are questions, employees should ask a supervisor, such as their department head, or contact a studio safety representative.

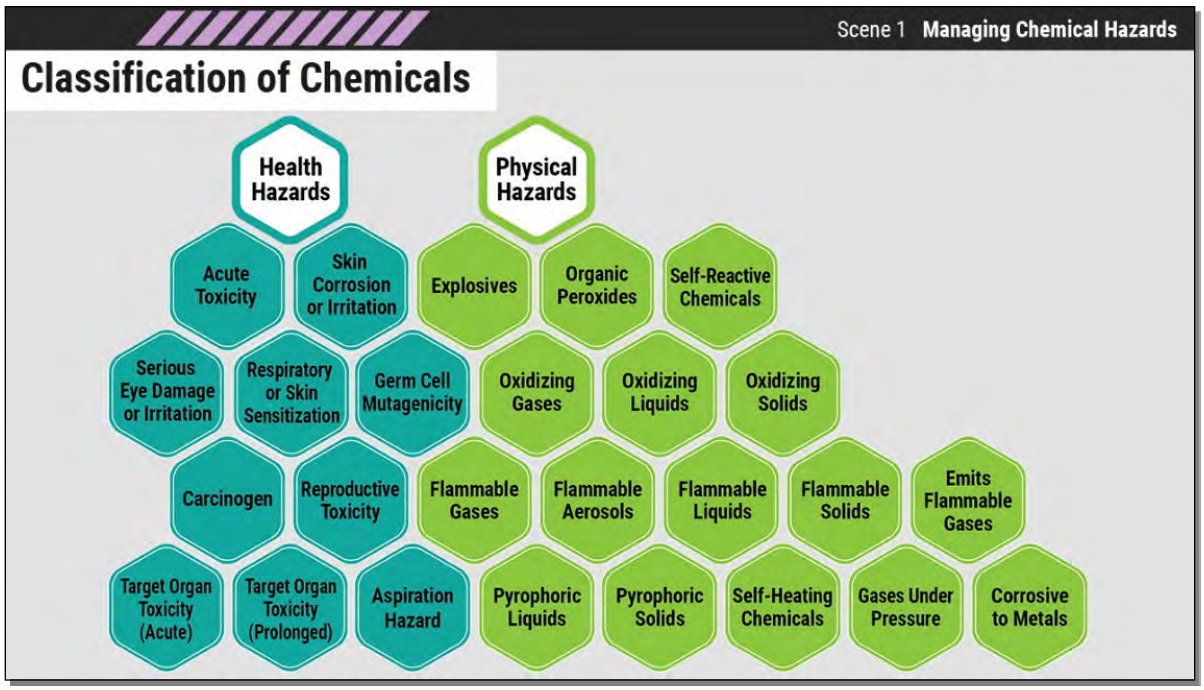
Slide 19 - Classification of Chemicals 1

Let's briefly describe the way the GHS classification system works. Chemical manufacturers evaluate and classify products by the hazards they present. These classifications ultimately determine the plain language statements and precautions on the labels and SDSs.



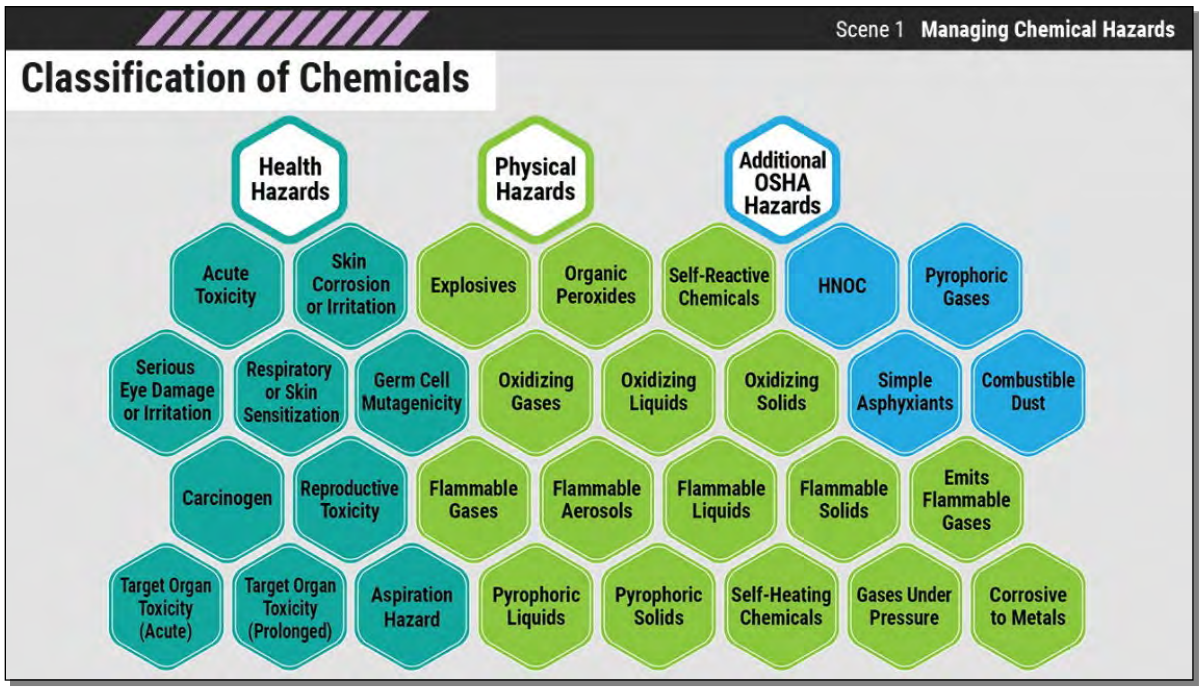
The GHS classes include ten health hazards,

Slide 20 - Classification of Chemicals 2



sixteen physical hazards,

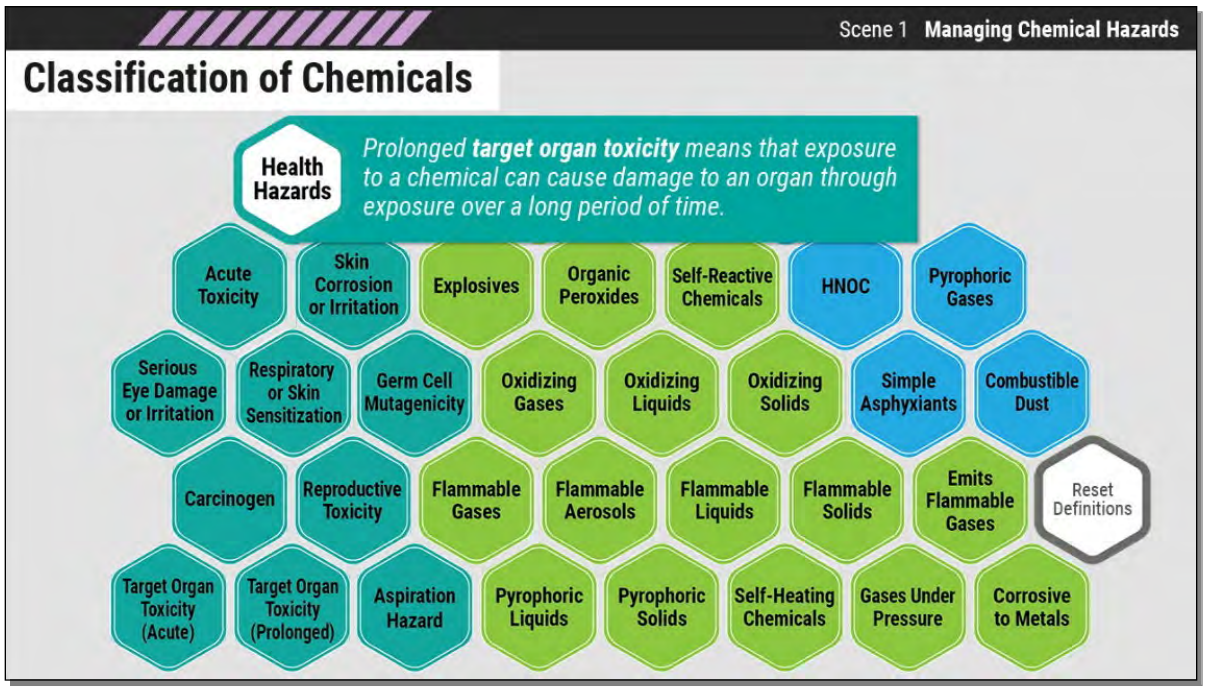
Slide 21 - Classification of Chemicals 3



and four OSHA-defined hazard classes that are not among the standard GHS hazard classes.

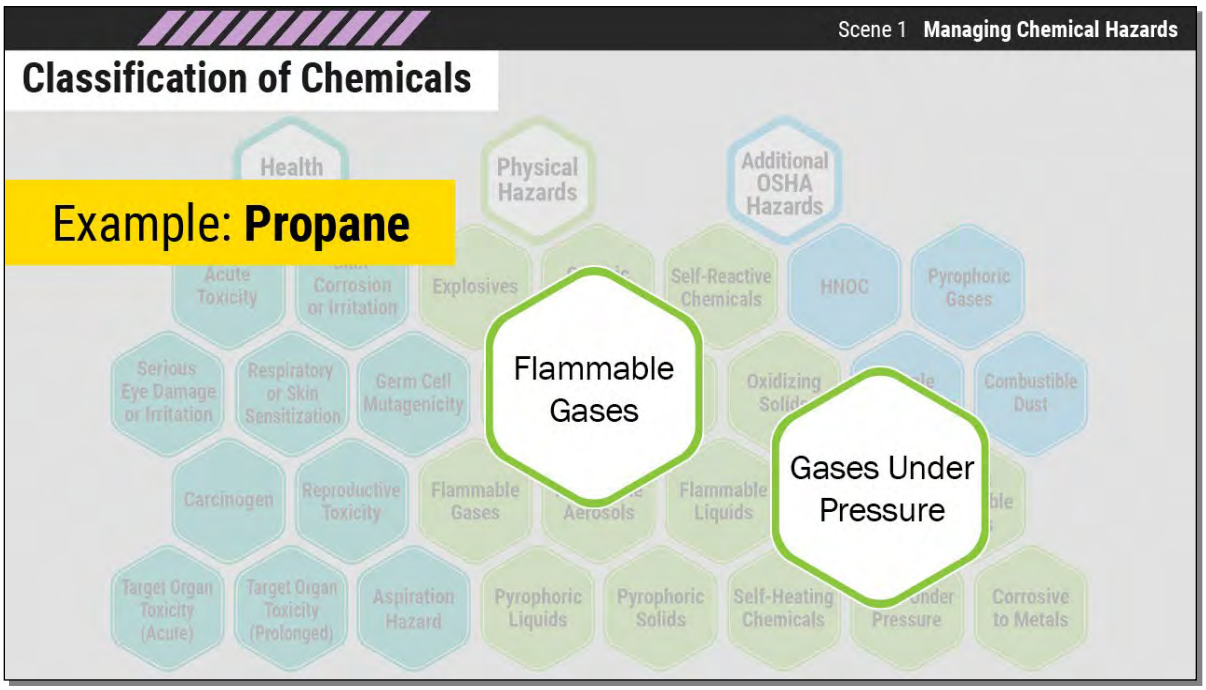
They are listed on labels and SDSs as OSHA-defined hazards.

Slide 22 - Classification of Chemicals 3



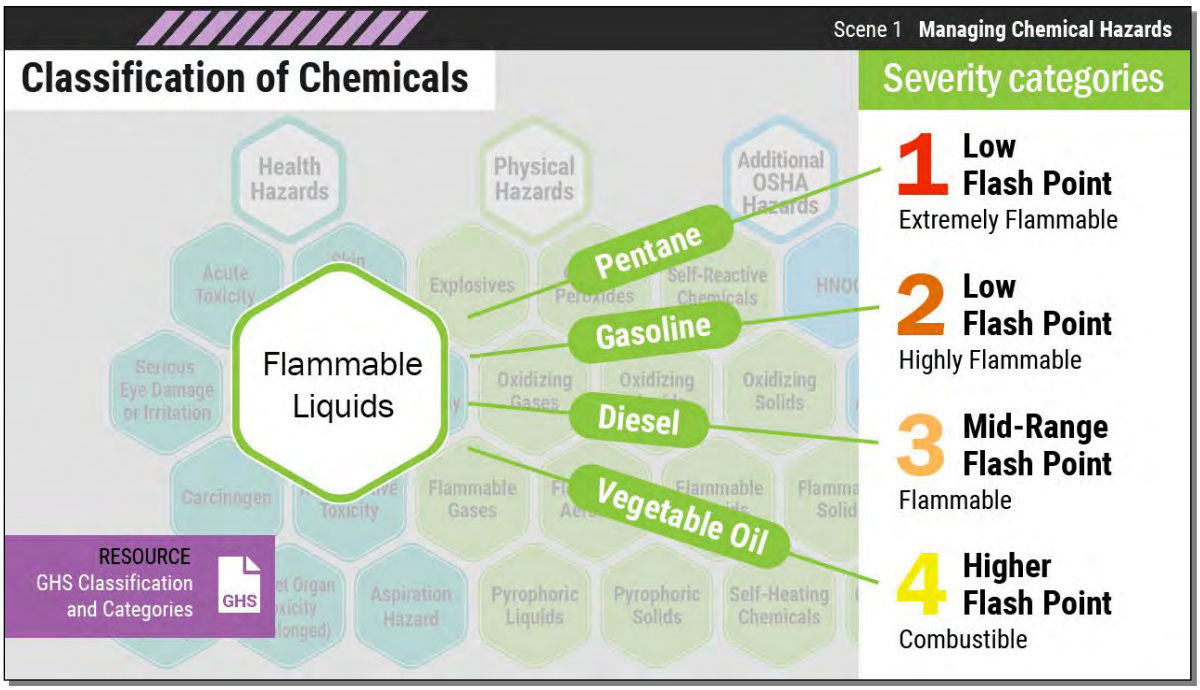
Click the tiles to view a definition of any of the classifications. Definitions can also be found in the glossary.

Slide 23 - Classification of Chemicals 4



To give an example of hazard classification, propane gas falls into two physical hazard classes; it is a flammable gas, and it is a gas under pressure.

Slide 24 - Classification of Chemicals 5



Many hazard classes are further categorized by degree of severity.

For example, flammable liquids are categorized by how easily they ignite: category 1 (extremely flammable), category 2 (highly flammable), and so on.

About half of the hazard classes are subdivided into two or more categories in this way, using various scientific parameters appropriate to each hazard.

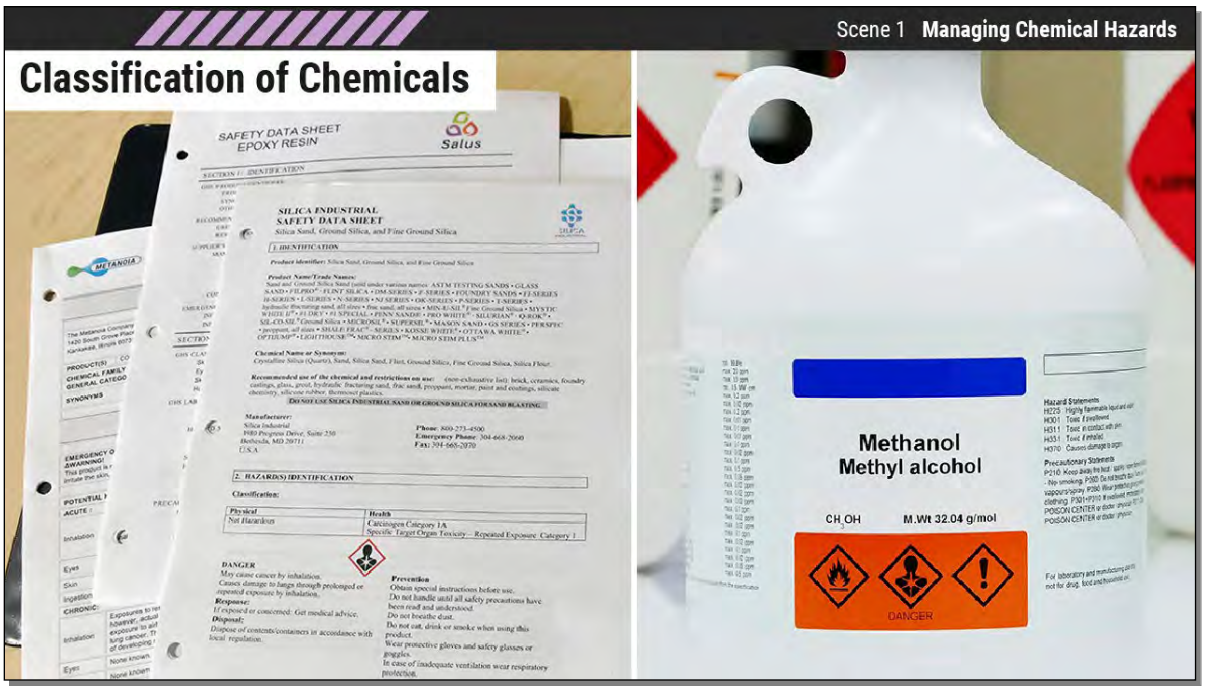
Category 1 always represents the most severe hazards or means that research shows a high degree of certainty about harmful health effects.

Click the **link** to view a breakdown of the classes.

The key takeaway here is simply that chemical manufacturers use the GHS classification system to communicate consistent, **plain language**, hazard warnings and precautions for the chemical.

As you will see later in the course, Safety Data Sheets list each cheimcal's hazard categories and classes along with their plain-language meaning.

Slide 25 - Classification of Chemicals 6

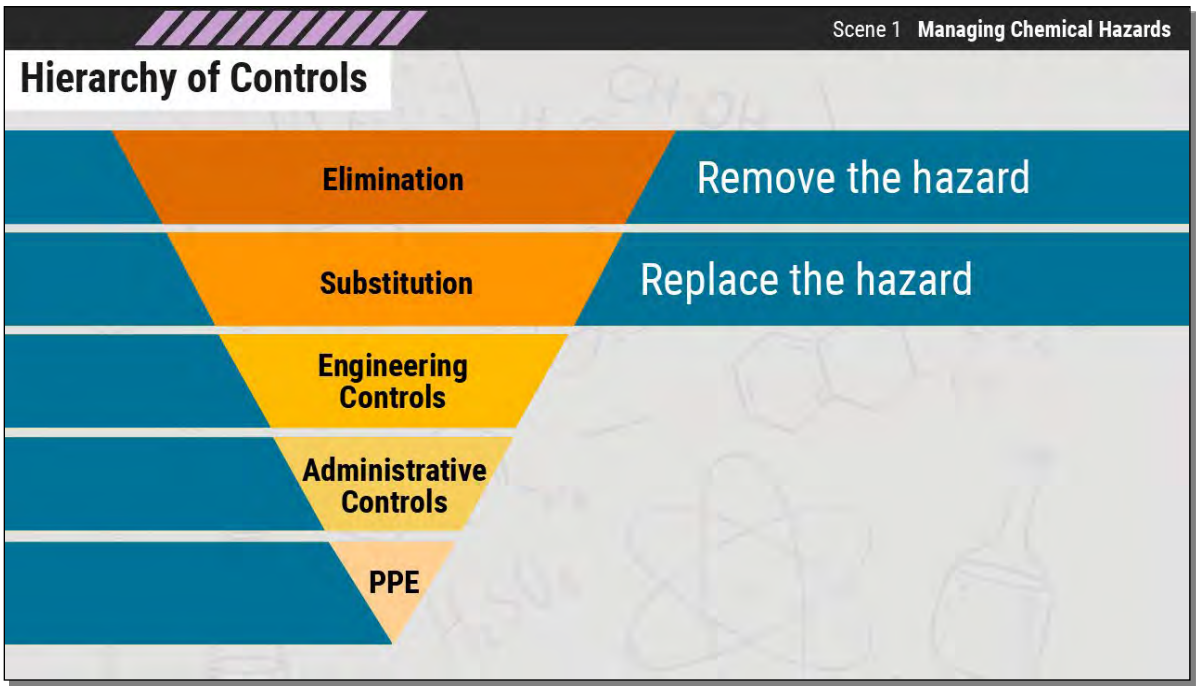


Before we wrap up this scene, there is one more important safety concept to consider.

In many cases, the best way to address a chemical hazard is to find a comparable product that has safer chemical properties.

Container labels and safety data sheets can aid in selecting safer products.

Slide 26 - Elimination and Substitution



You may be familiar with the hierarchy of controls. The inverted pyramid graphic indicates that hazard elimination and substitution are the most effective methods for controlling a hazard and should be the first solutions to consider.

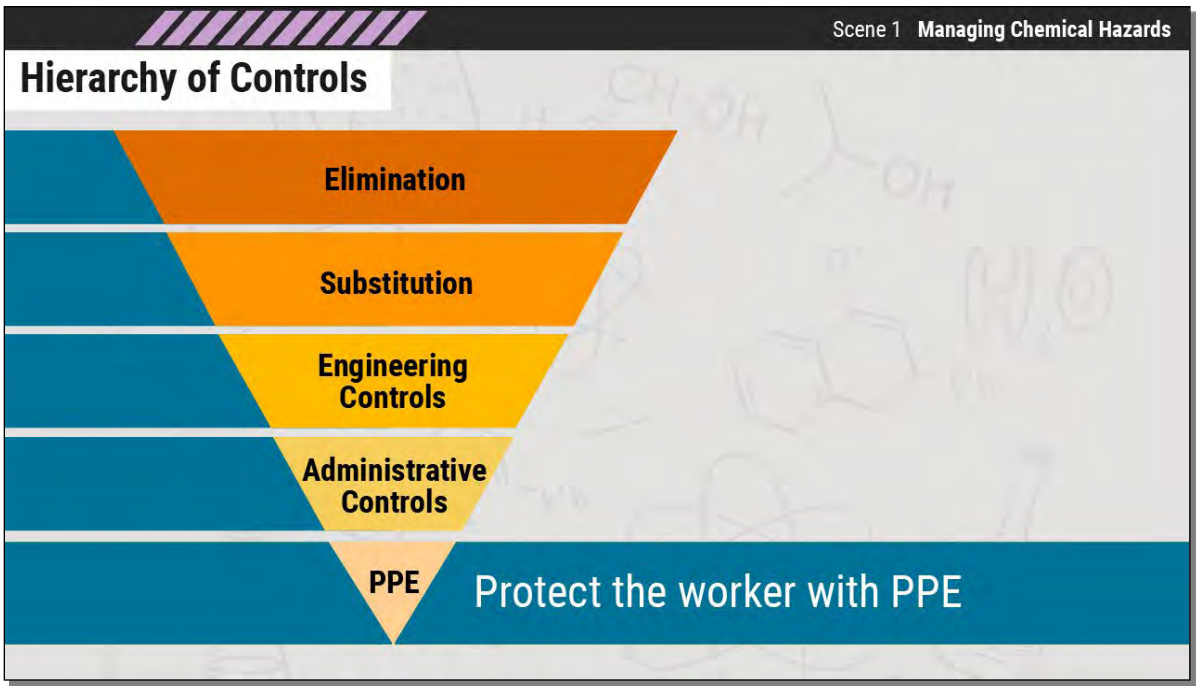
Slide 27 - Engineering Controls

Engineering controls are measures that your employer may implement to isolate people from the hazard. For example, using a ventilation system when handling chemicals that have dangerous fumes.

Slide 28 - Administrative Controls

Administrative controls limit the hazard by changing the way people work, such as adjusting work schedules to minimize exposure to hazards.

Slide 29 - PPE



In situations where a hazard is difficult or impossible to control other ways, the worker must rely on personal protective equipment (PPE).

Accident statistics show the effectiveness of controls tapers down at the lower end of the hierarchy because these methods depend on people being aware of the need for protection, having the correct protection on hand, and using the protection properly. There's just greater opportunity for human error.

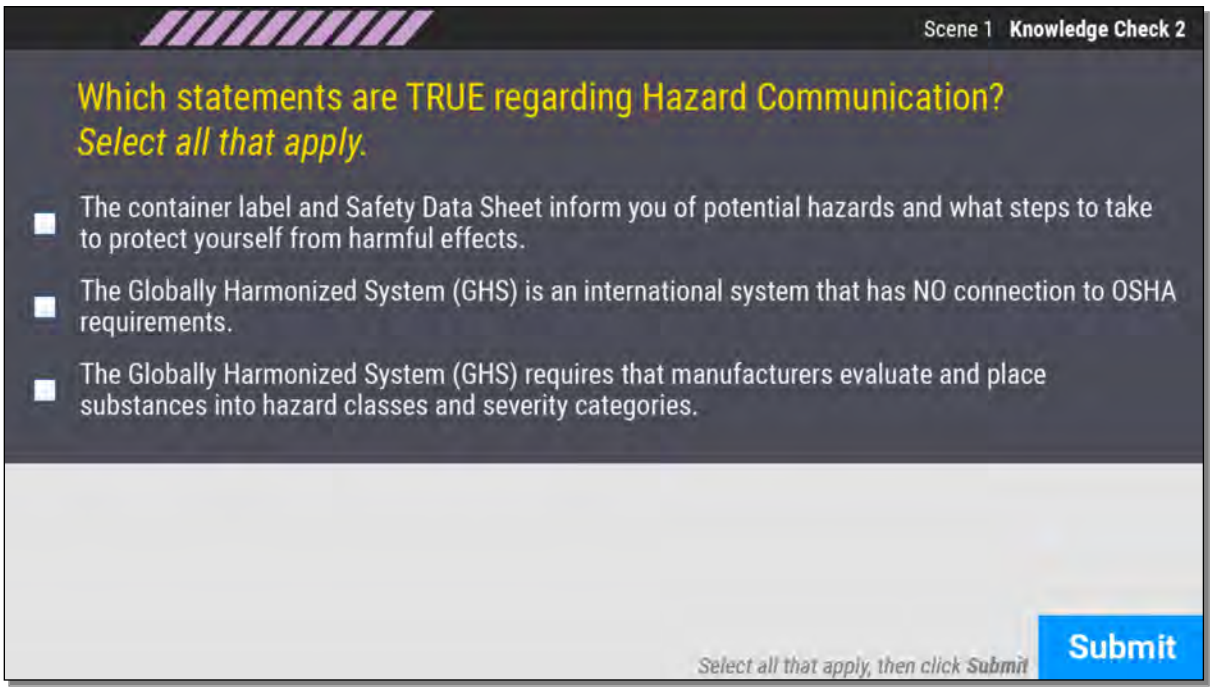
The higher up the hierarchy you can address the hazard, the lower the risk. So, consider all your options.

Whether you are attempting to eliminate the hazard or protect yourself from the hazard, you start by reading the container label, which is what we will cover in the next scene.

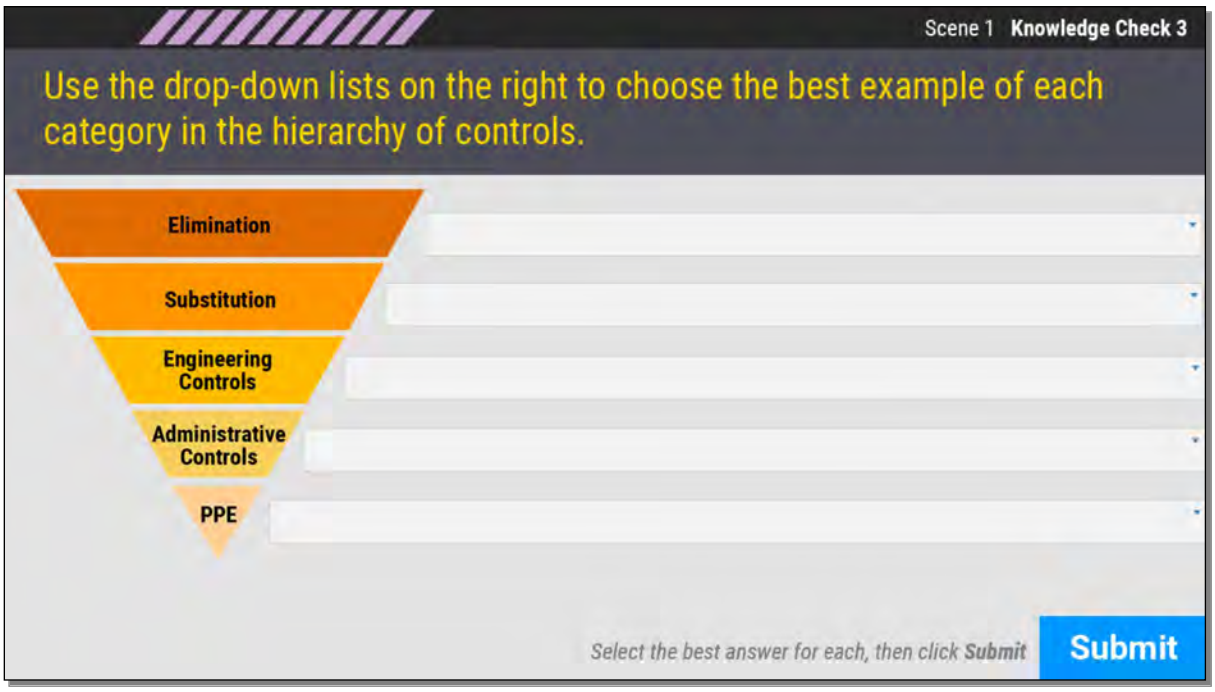
Let's check your knowledge so far with a couple challenge questions.

Slide 30 - Knowledge Check 1

Slide 31 - Knowledge Check 2



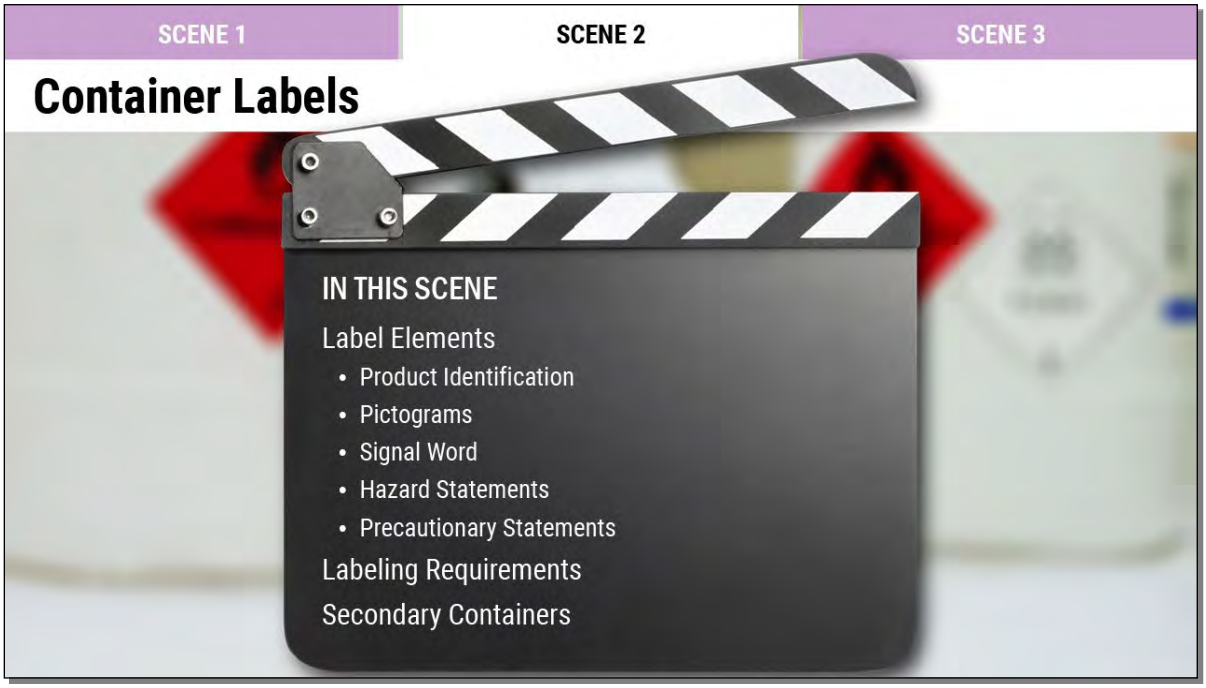
Slide 32 - Knowledge Check 3



Slide 33 - Scene2 Container Labels

Scene Two, Container Labels.

Slide 34 - Scene2 In This Scene

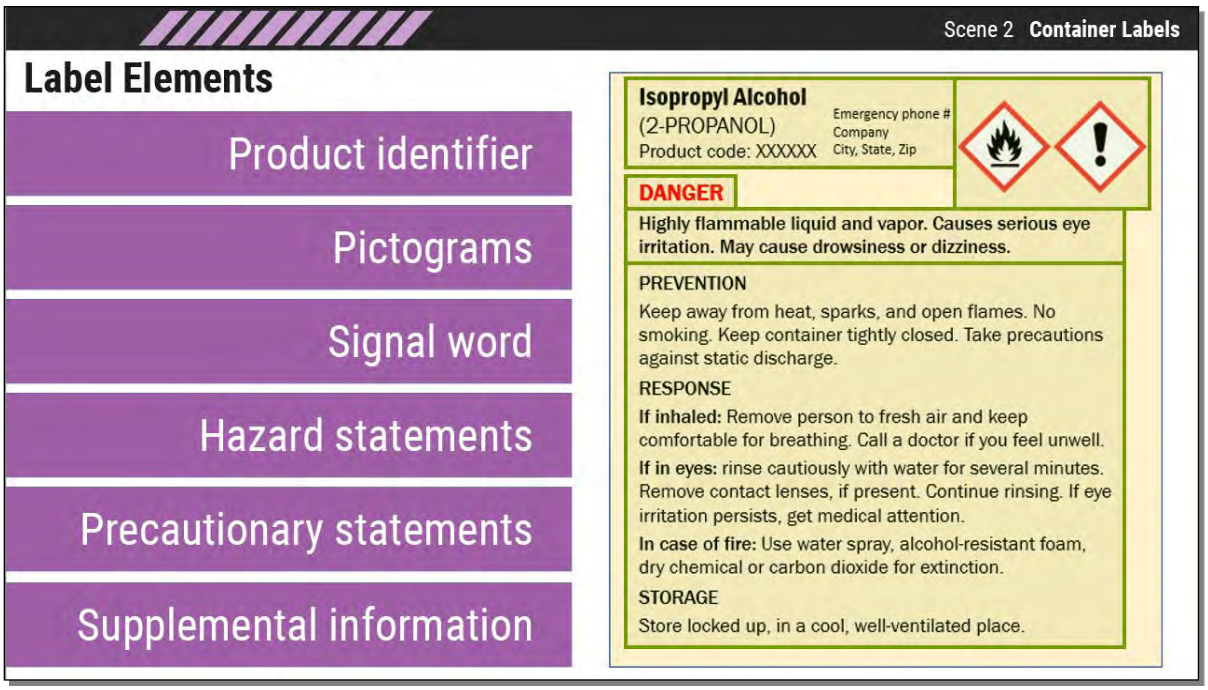


In this scene we will examine the five elements of a GHS-conforming container label: product identification, pictograms, a signal word, hazard statements, and precautionary statements.

You should know the purpose and meaning of each element.

You should also understand your responsibilities for maintaining labels and labeling containers if you transfer substances into workplace containers.

Slide 35 - GHS Container Labels 1

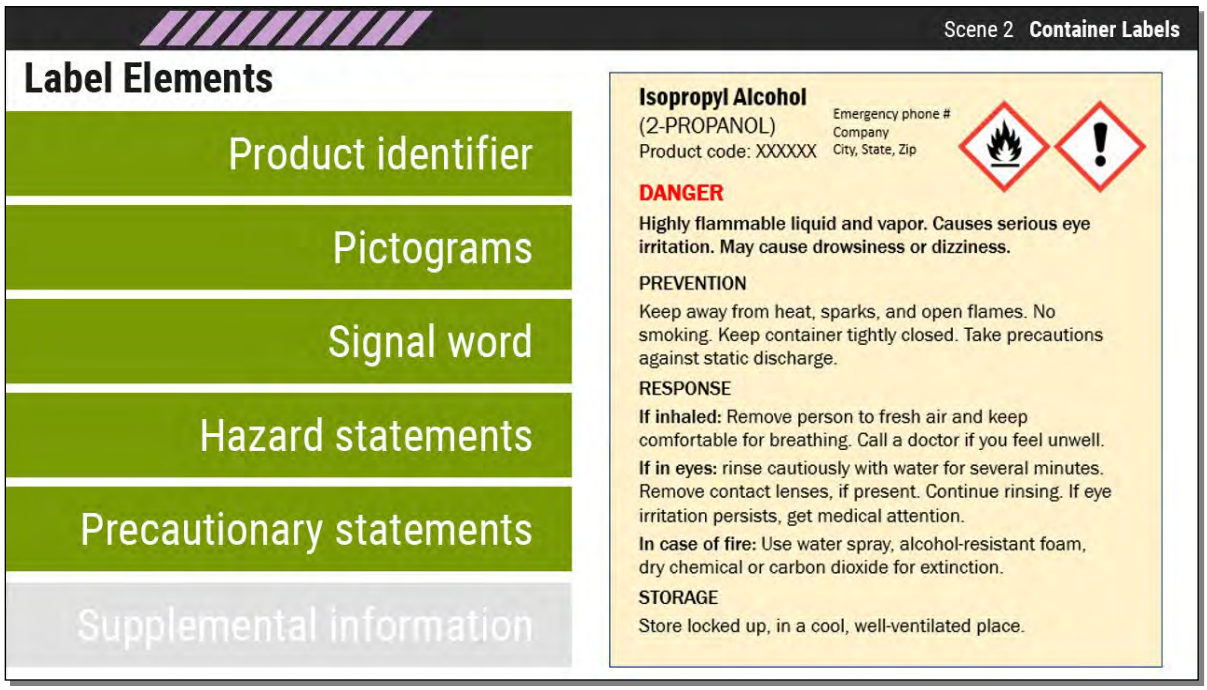


The label on the container is a worker's first source of information regarding a hazardous substance. Regulations require that containers used for hazardous chemicals have labels.

A GHS-conforming label contains the following five elements: product and supplier identification, one or more pictograms, a signal word, one or more hazard statements, and precautionary statements.

A container label usually contains other supplemental information, such as directions for use.

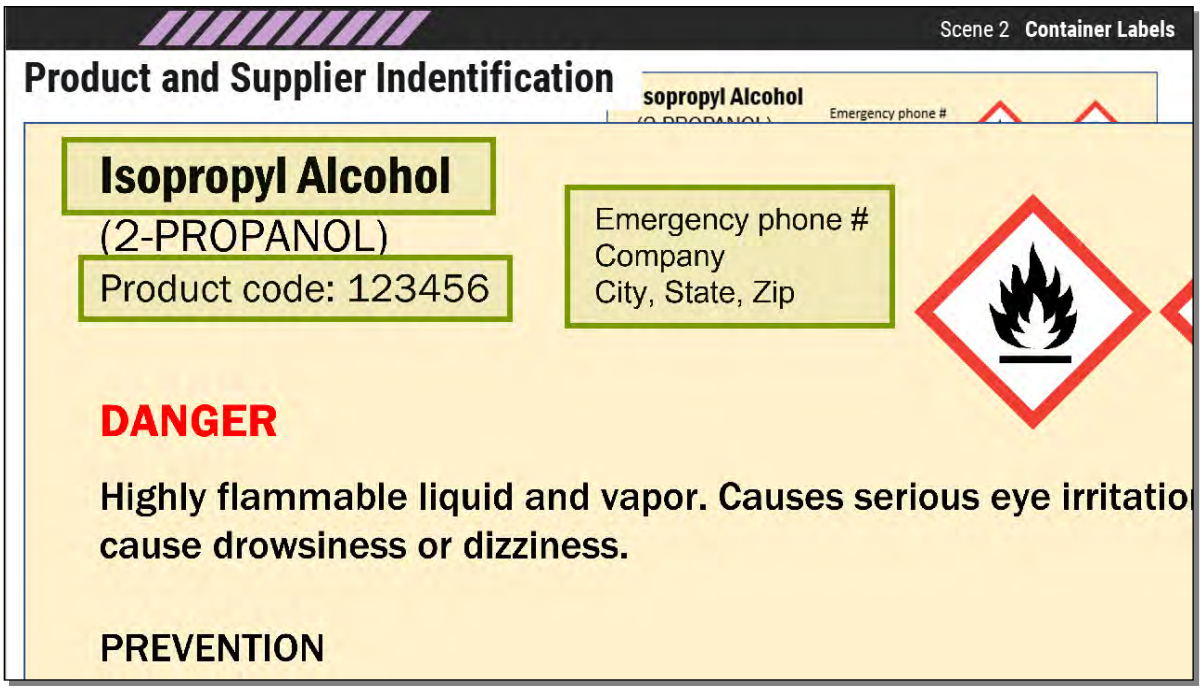
Slide 36 - GHS Container Labels 2



However, these five items are the required GHS elements that must be included on other work-site containers if you transfer the chemical.

Let's investigate what each of the label elements tell us.

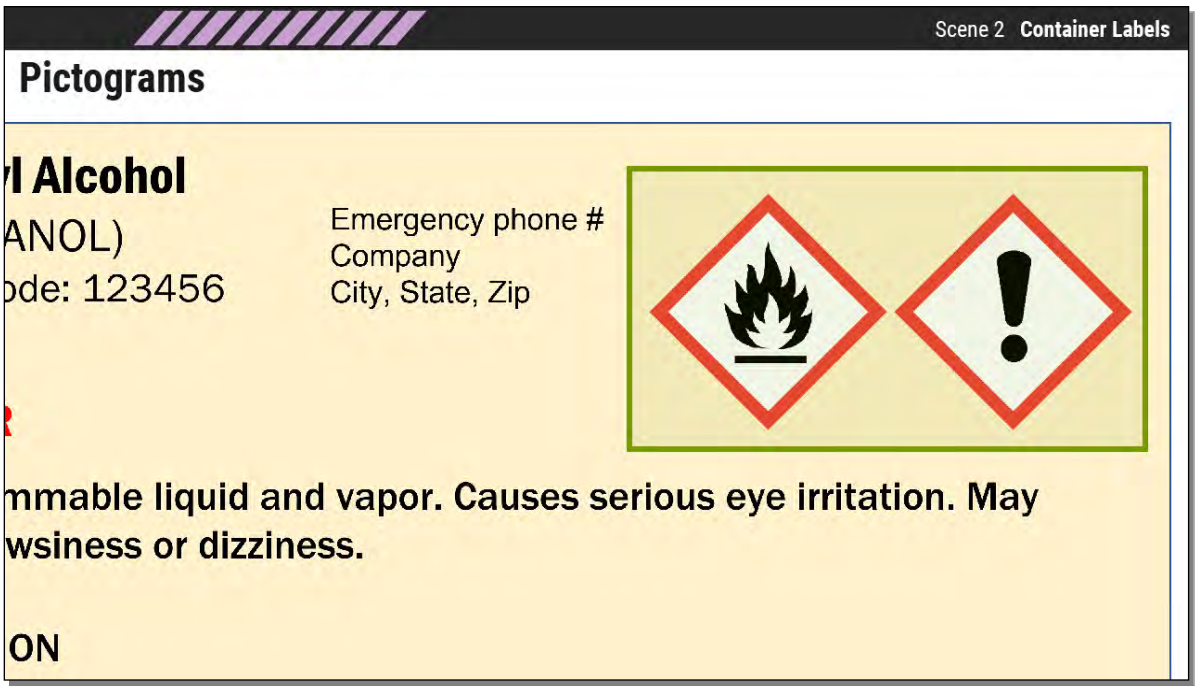
Slide 37 - Product and Supplier Identification



The **product identifier** is the product name. It could also be a unique identifying number such as a product code. This is the identifier you can use to look up the chemical and match it to the SDS. The supplier identification is the manufacturer's name, address, and phone number.

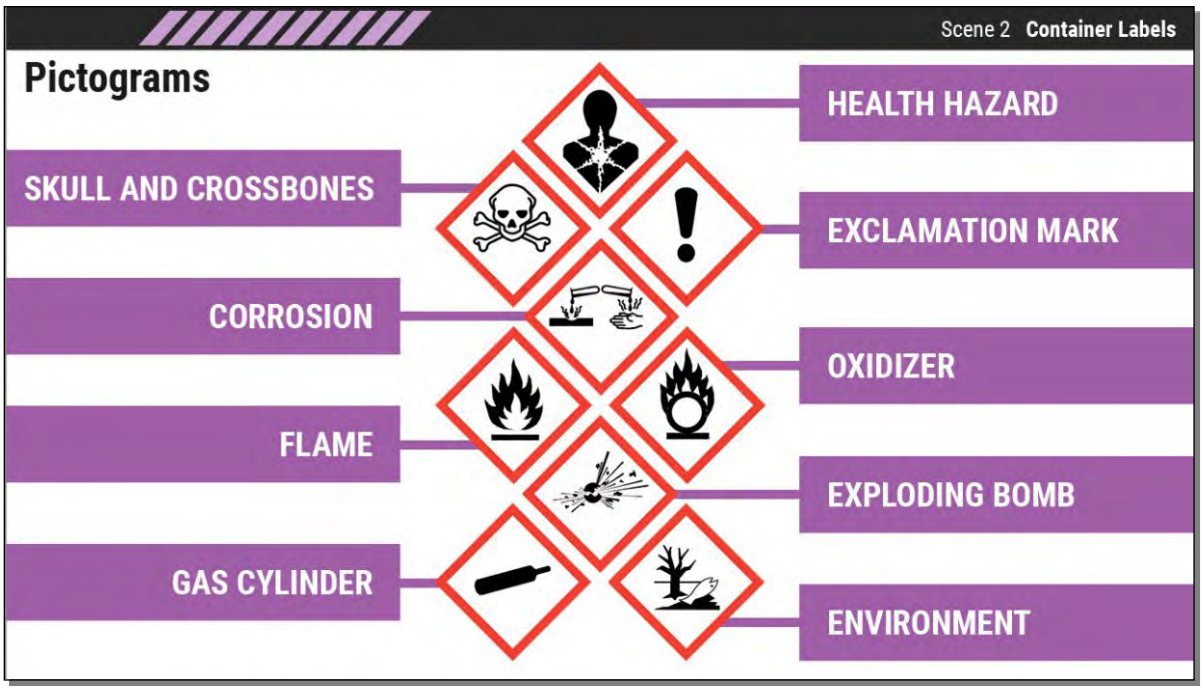
The same product identifier must be used everywhere the chemical is identified: on every container label, on the SDS, and on the employer's inventory of chemicals in the workplace.

Slide 38 - Pictograms



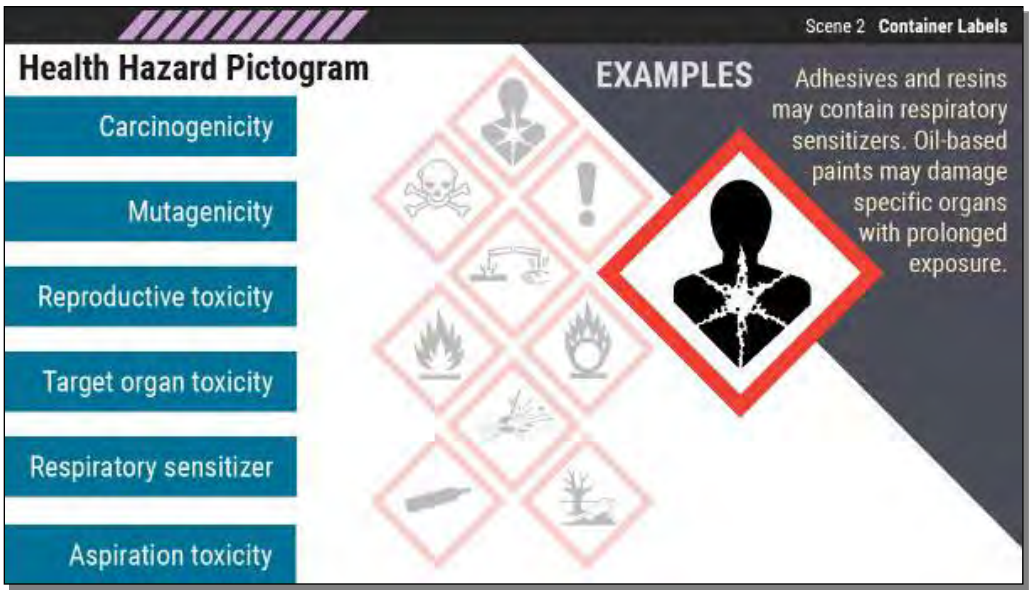
Pictograms are graphic symbols intended to visually convey the general types of hazards quickly. The label could require several pictograms to convey all hazard types.

Slide 39 - The Nine Pictograms



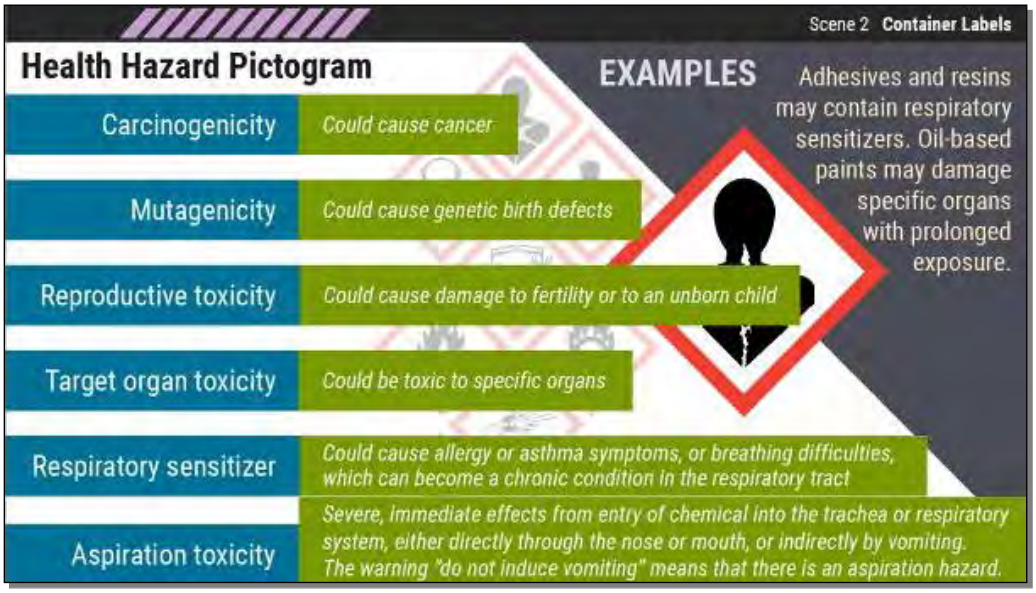
There are nine GHS pictograms in all. Let’s identify each of them.

Slide 40 - Health Hazard Pictogram



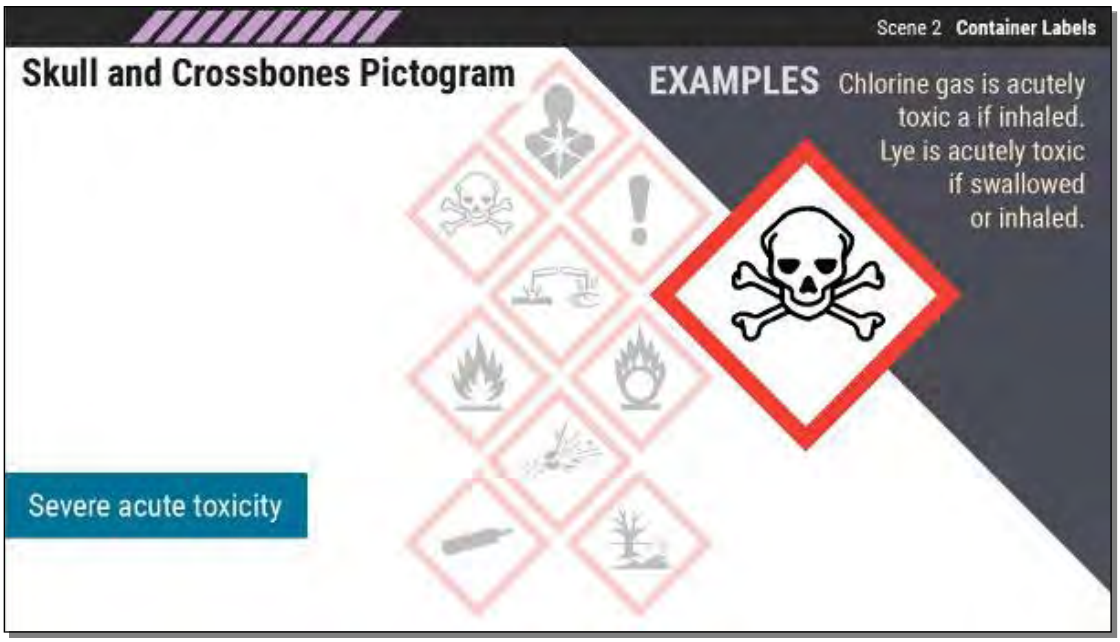
The first four pictograms we'll look at are health related.

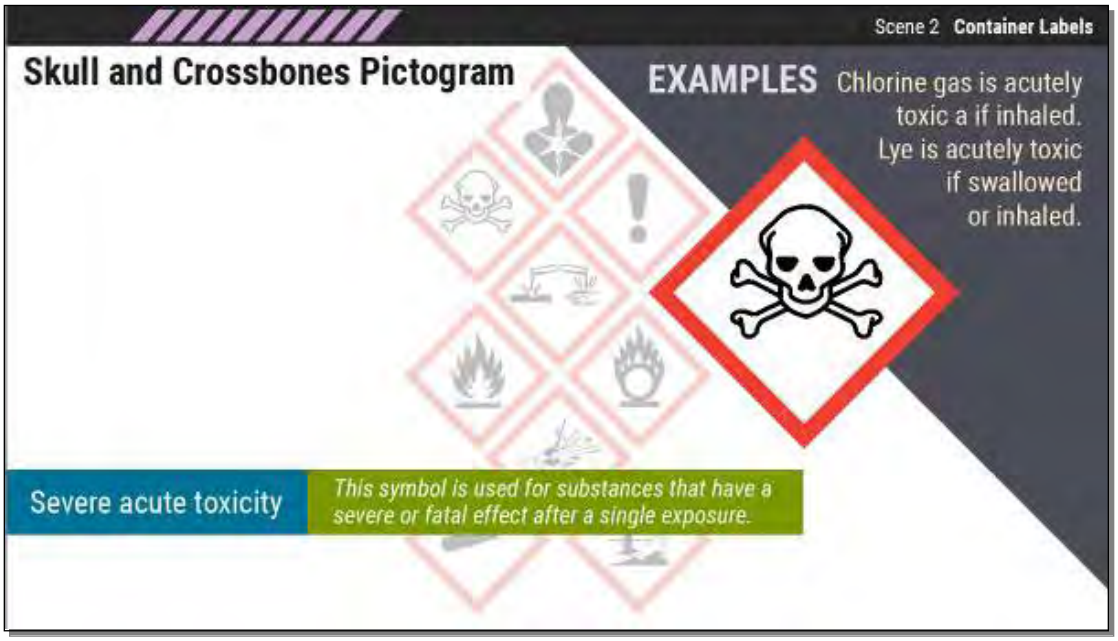
The health hazard pictogram represents chemicals that can cause long-term health problems such as cancer, birth defects, damage to specific organs, and allergic or asthmatic respiratory reactions.



If you need clarification, you can click on the terms to learn more about the associated hazards.

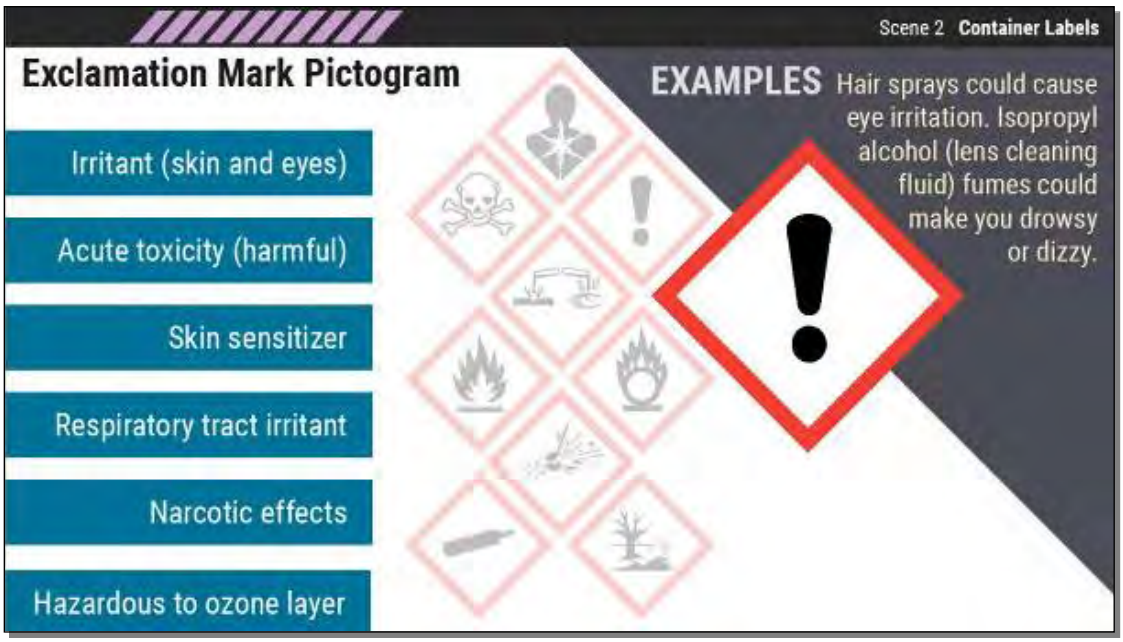
Slide 41 - Skull and Crossbones Pictogram

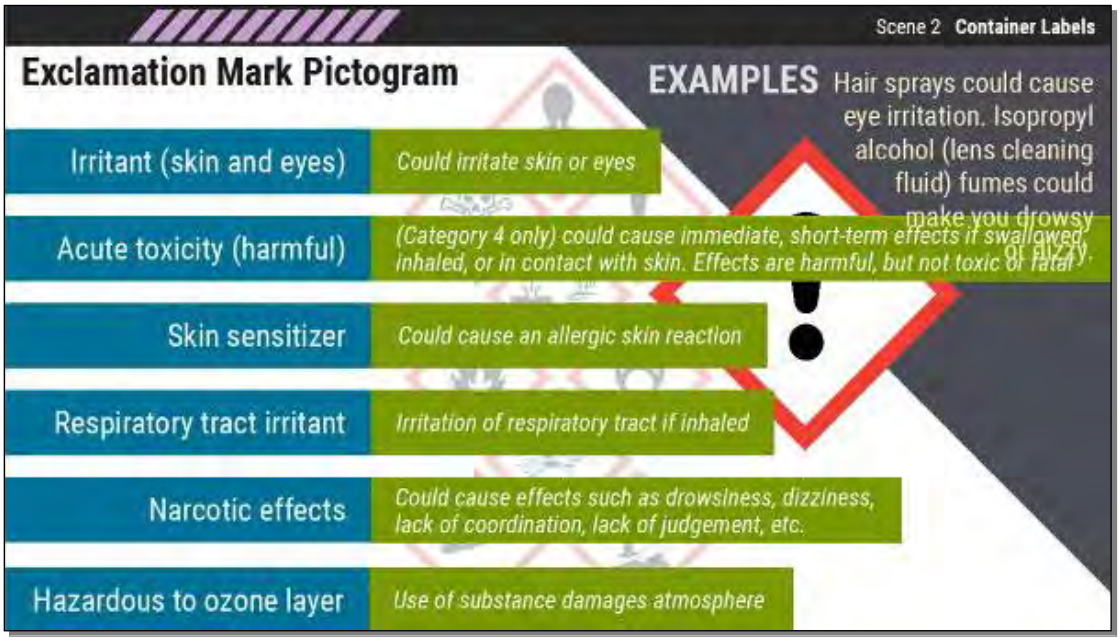




You already know what the skull and crossbones means--the substance is poisonous, or more technically, it is severely acutely toxic. Depending on the dose, ingesting the chemical could be fatal.

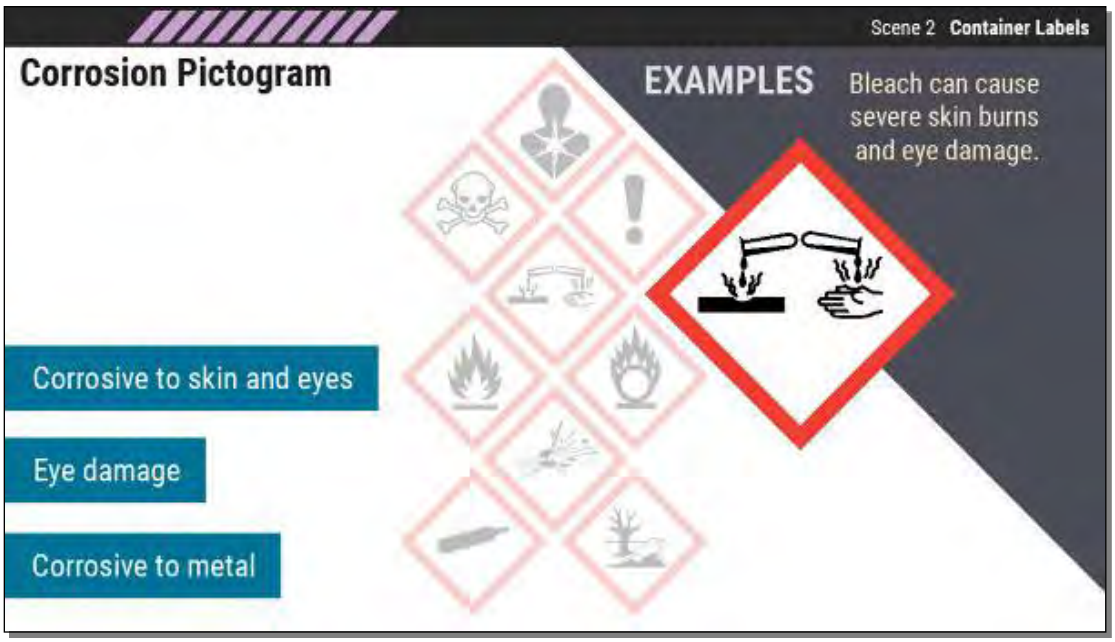
Slide 42 - Exclamation Mark Pictogram

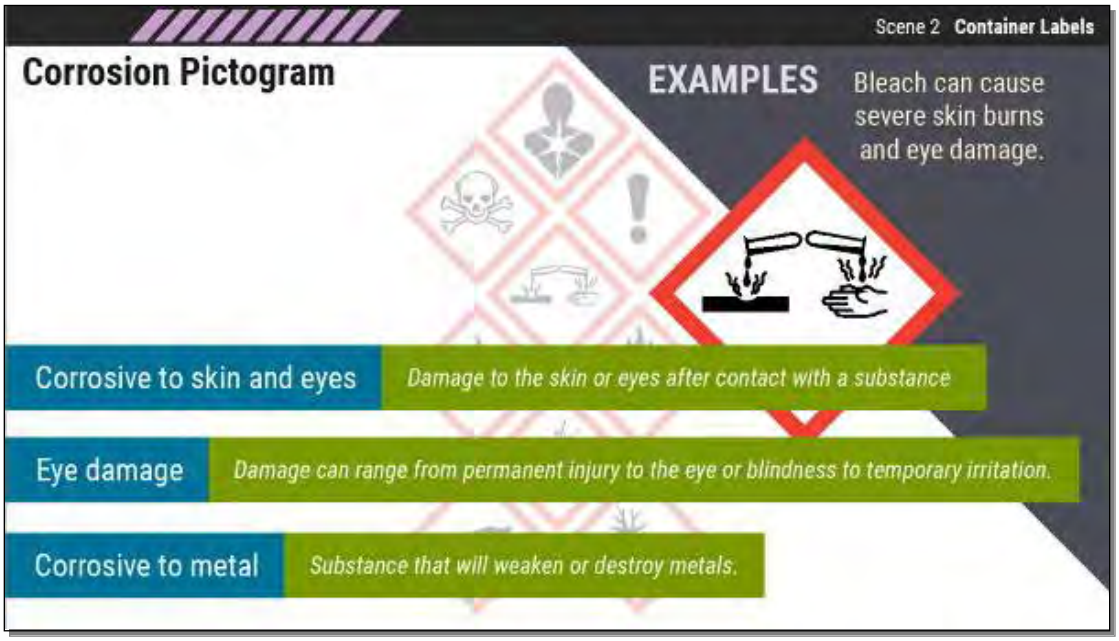




The exclamation mark pictogram is for health hazards that are immediate and harmful, but not deadly, like irritants to skin, eyes, or respiratory tract, or narcotic effects, meaning the chemical could make you drowsy or dizzy.

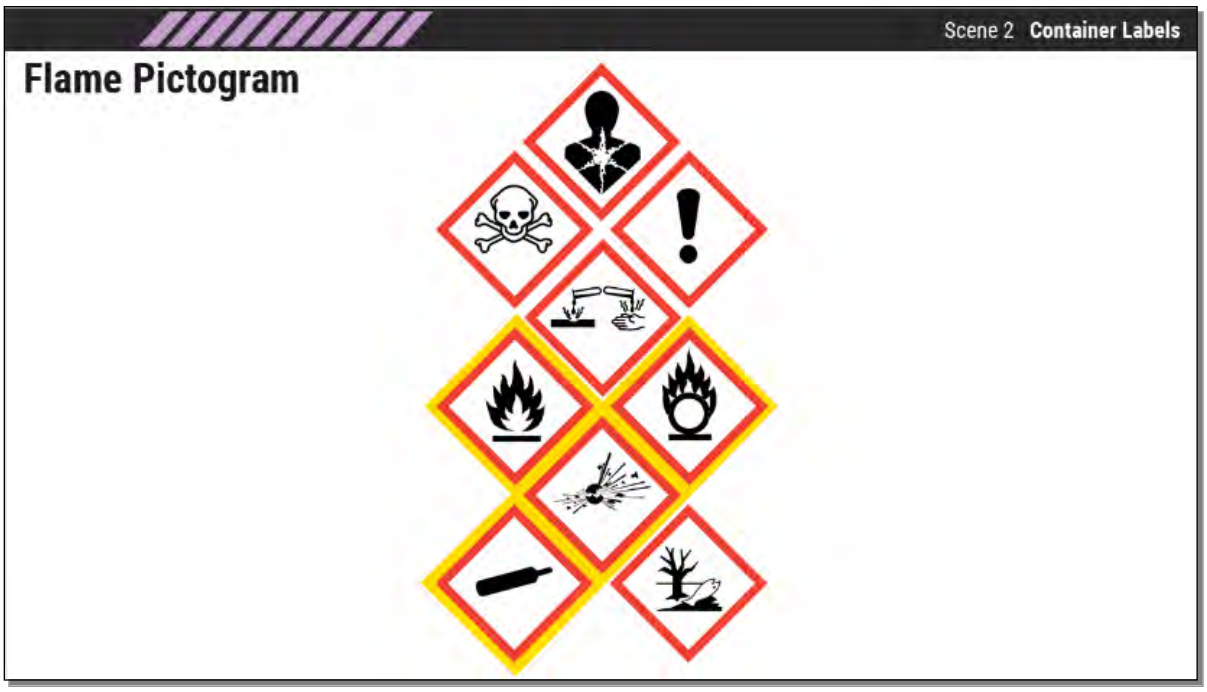
Slide 43 - Corrosion Pictogram



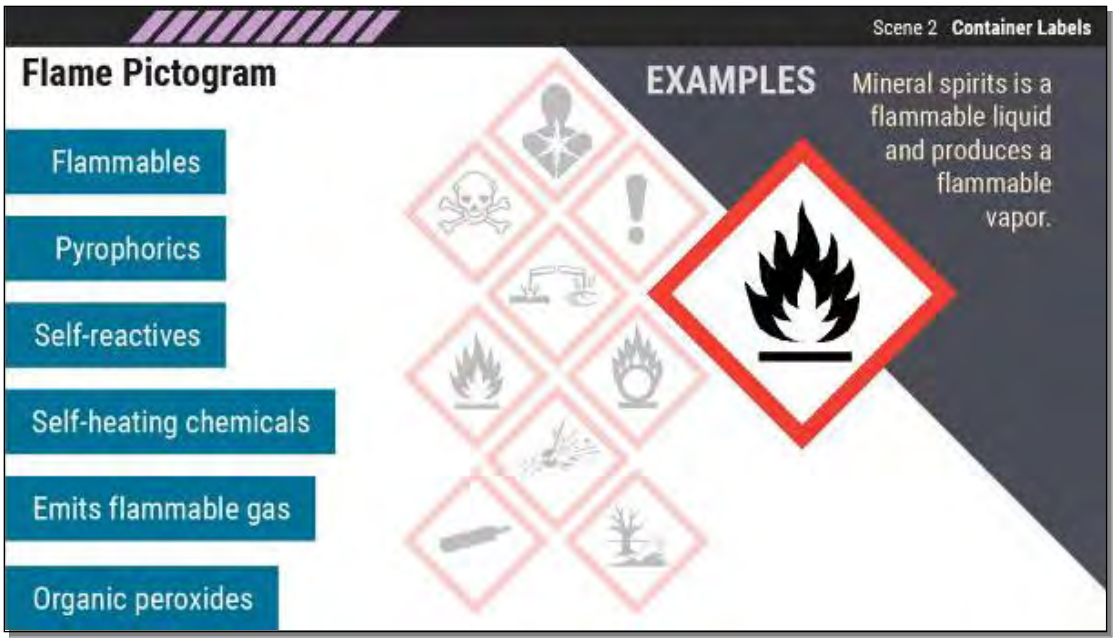


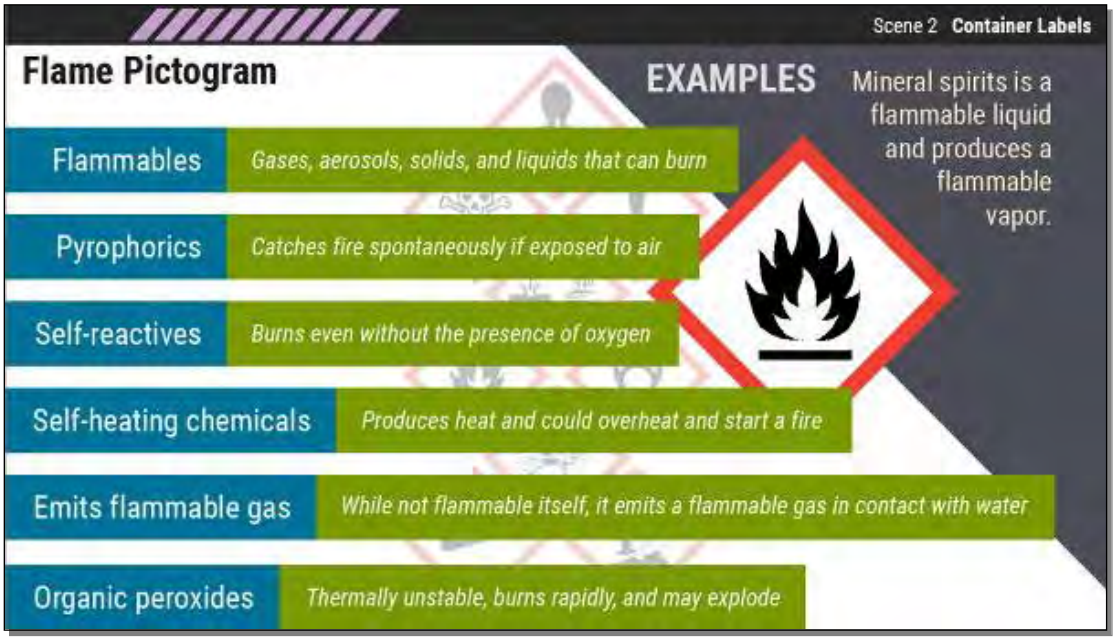
The corrosion pictogram shows dangers of corrosive chemicals like strong acids and alkaline substances. They can burn or dissolve skin and eye tissue and they could corrode metal, which, for example, could weaken metal shelving or damage metal containers.

Slide 44 - Flame Pictogram



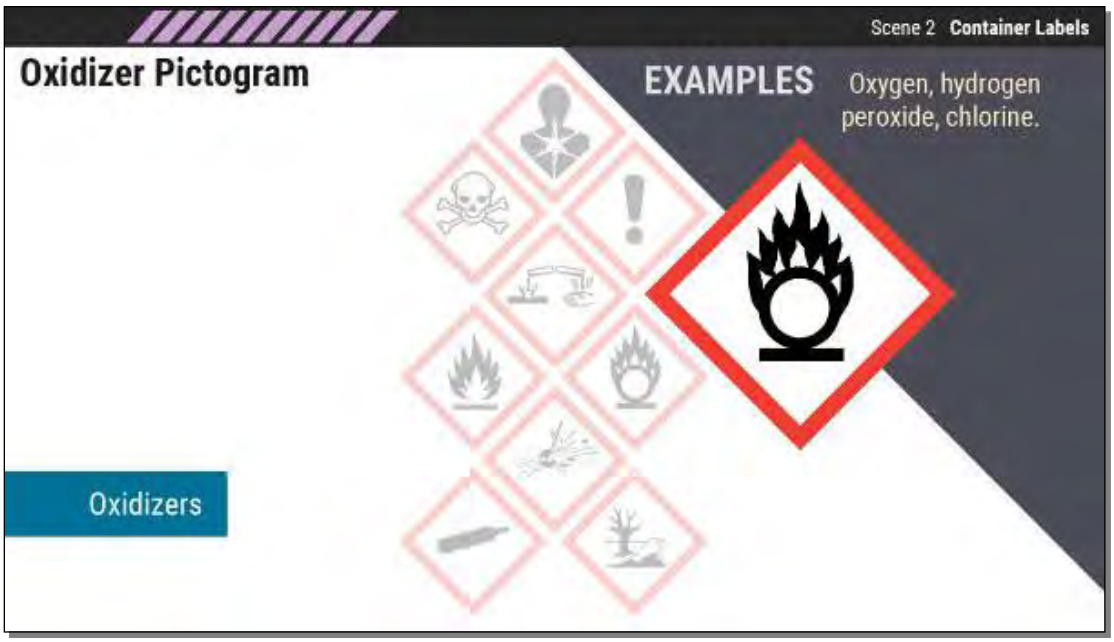
The next four pictograms communicate physical hazards.

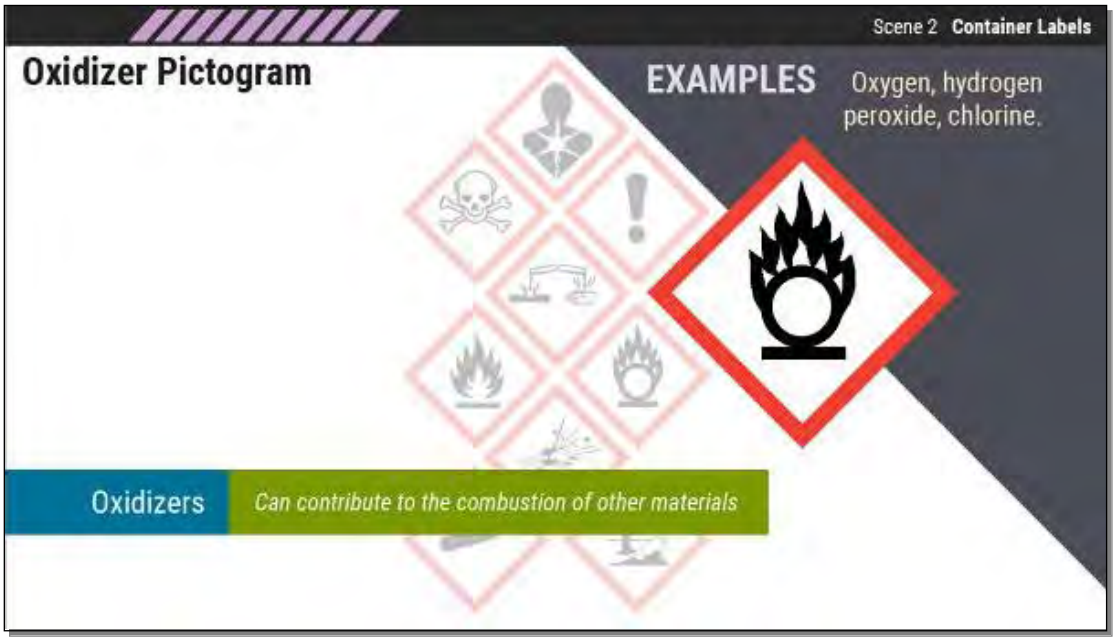




The flame pictogram is used on chemicals that are flammable, thermally unstable, or create other types of fire hazards.

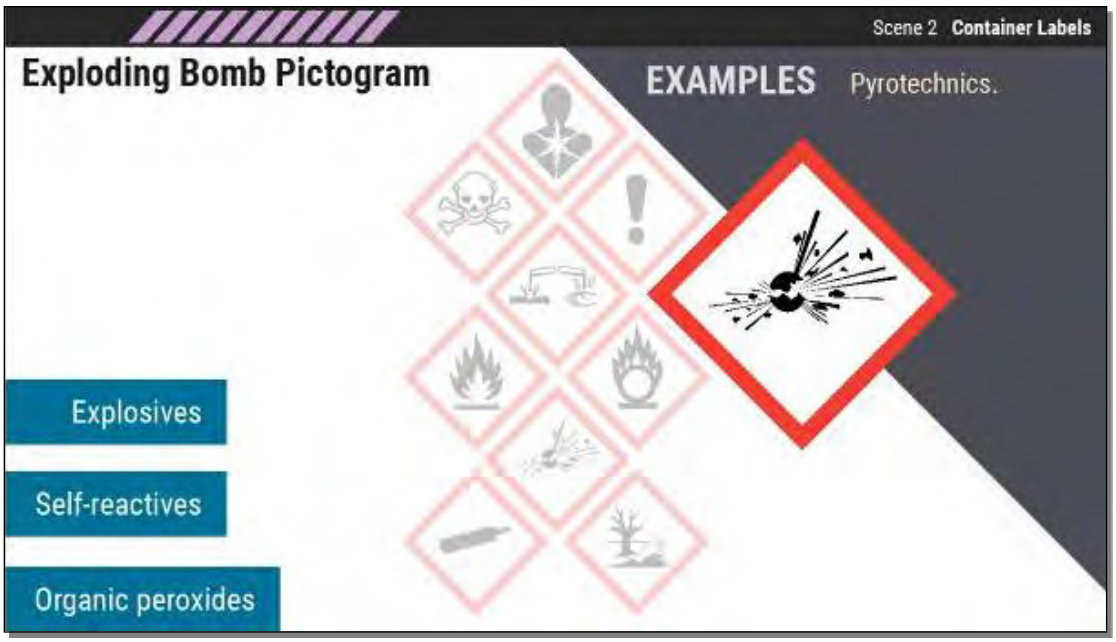
Slide 45 - Oxidizer Pictogram

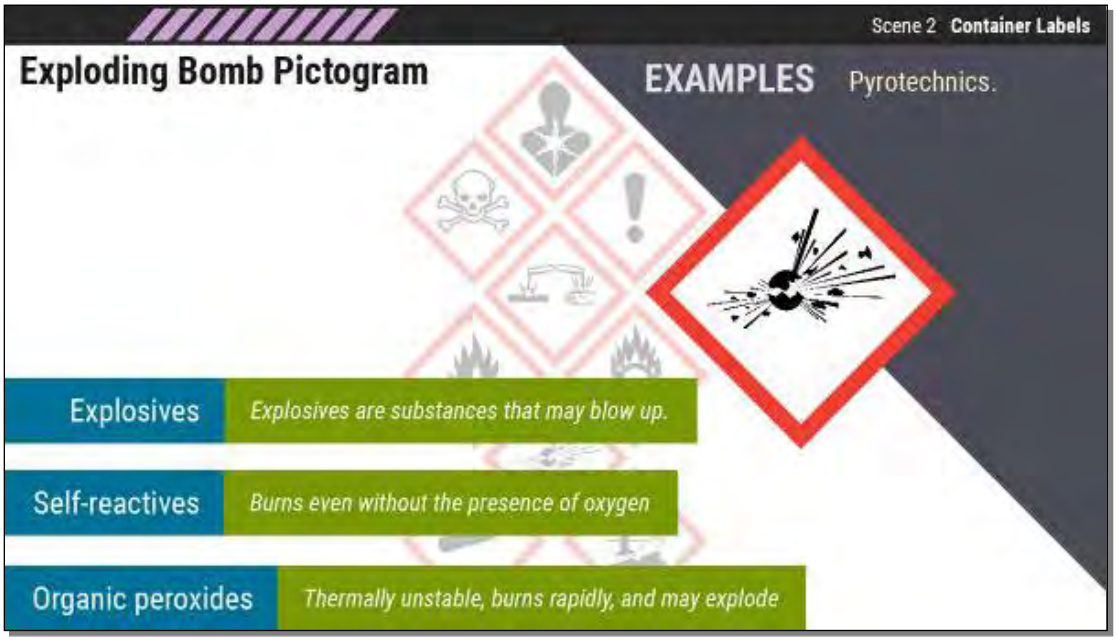




The oxidizer pictogram is found on chemicals that provide oxygen, which can contribute to combustion of other materials. Oxygen feeds fire, causing it to ignite more readily and to burn hotter and faster.

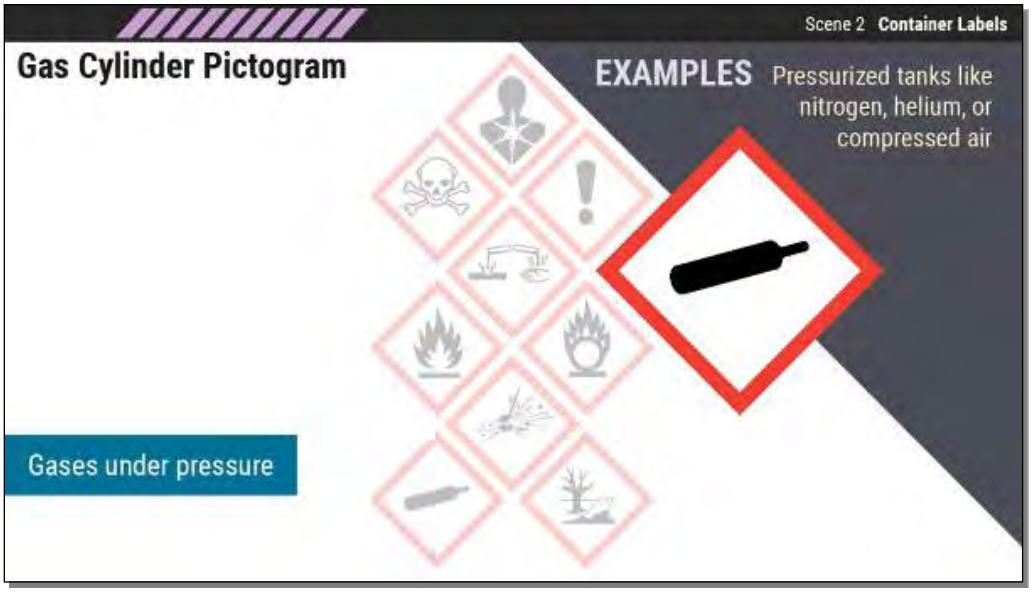
Slide 46 - Exploding Bomb Pictogram



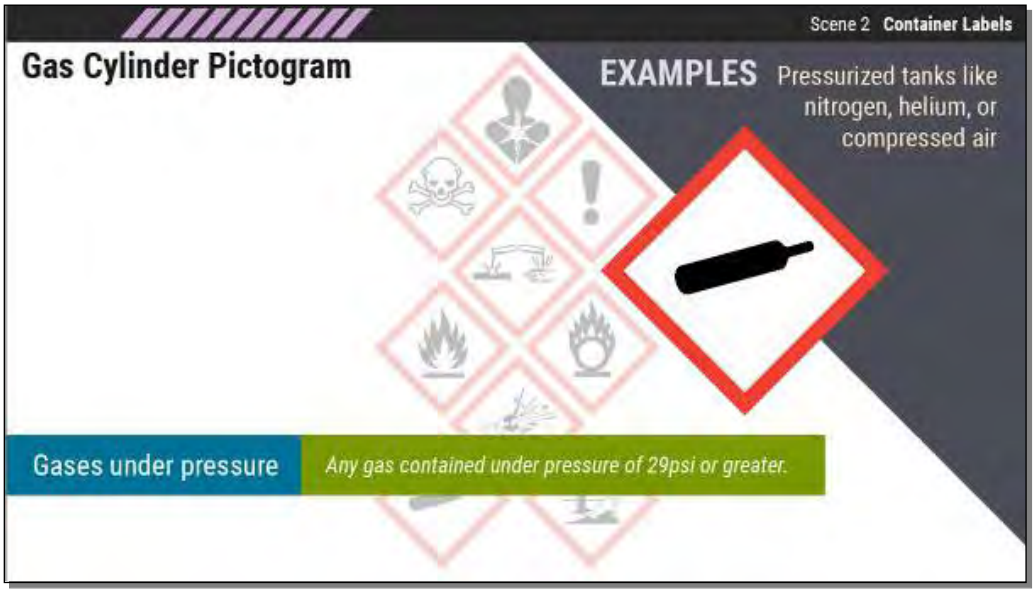


The exploding bomb pictogram warns that the chemical could explode. Primacord and black powder are examples of explosives used in this industry.

Slide 47 - Gas Cylinder Pictogram

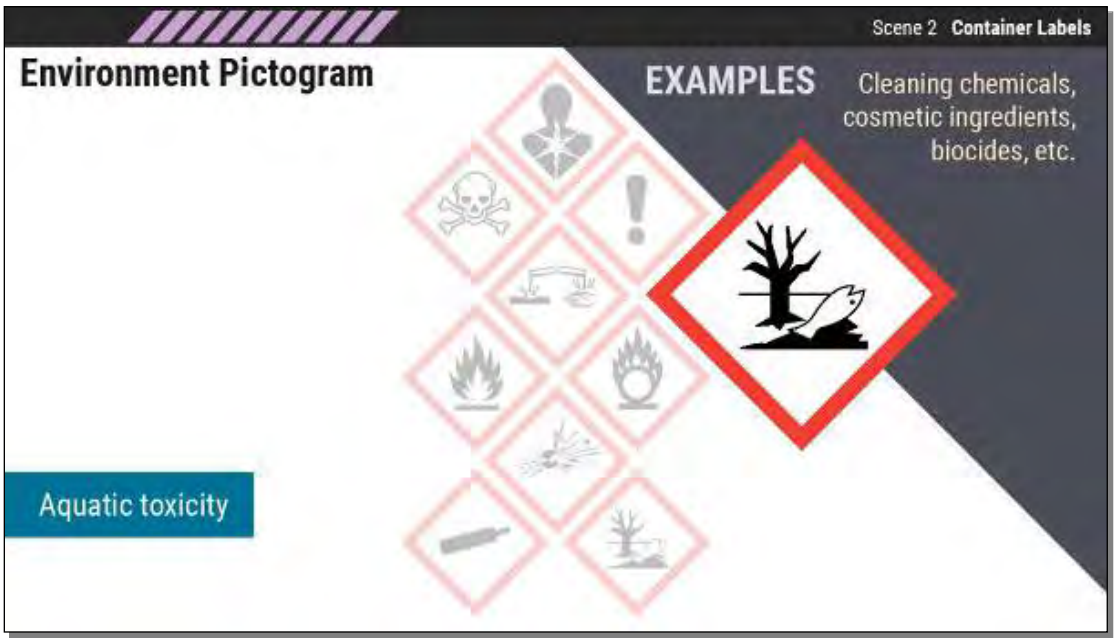


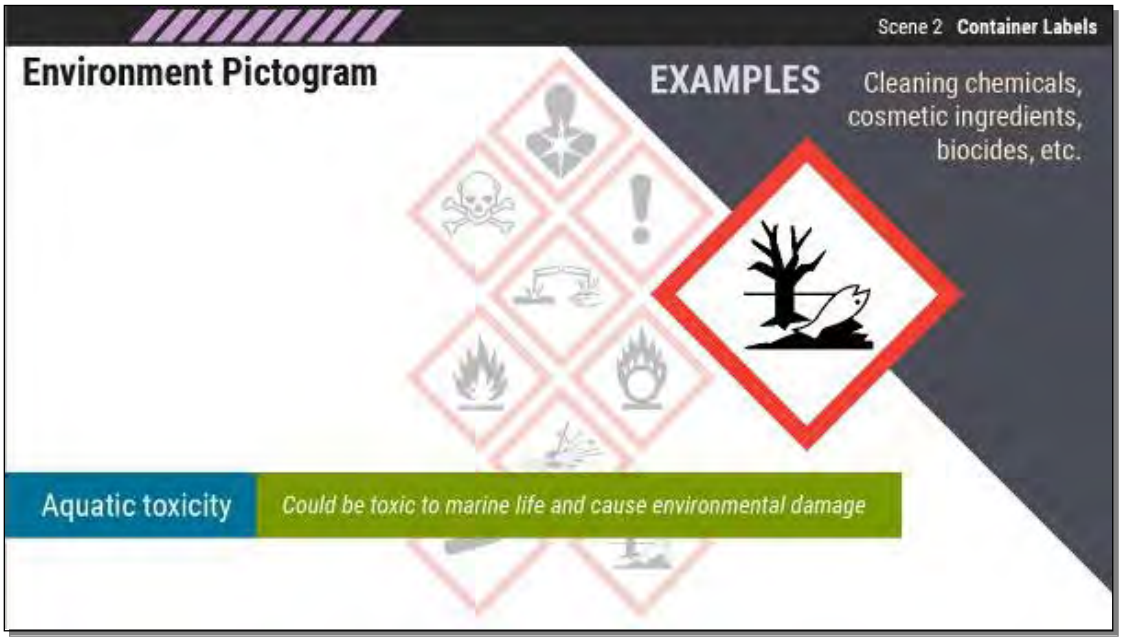
The gas cylinder pictogram warns about the physical hazard of gases under pressure. This symbol applies to any gas pressurized above 29 psi and any gas that is liquefied or refrigerated. Even inert gases, such as nitrogen, helium, and compressed air, fall into this category.



Gases under pressure can pose a risk of injury to eyes and skin. They may be an explosion hazard if contents expand due to excessive heat. If punctured, or if the valve is broken off, a gas cylinder can become a dangerous projectile.

Slide 48 - Environment Pictogram

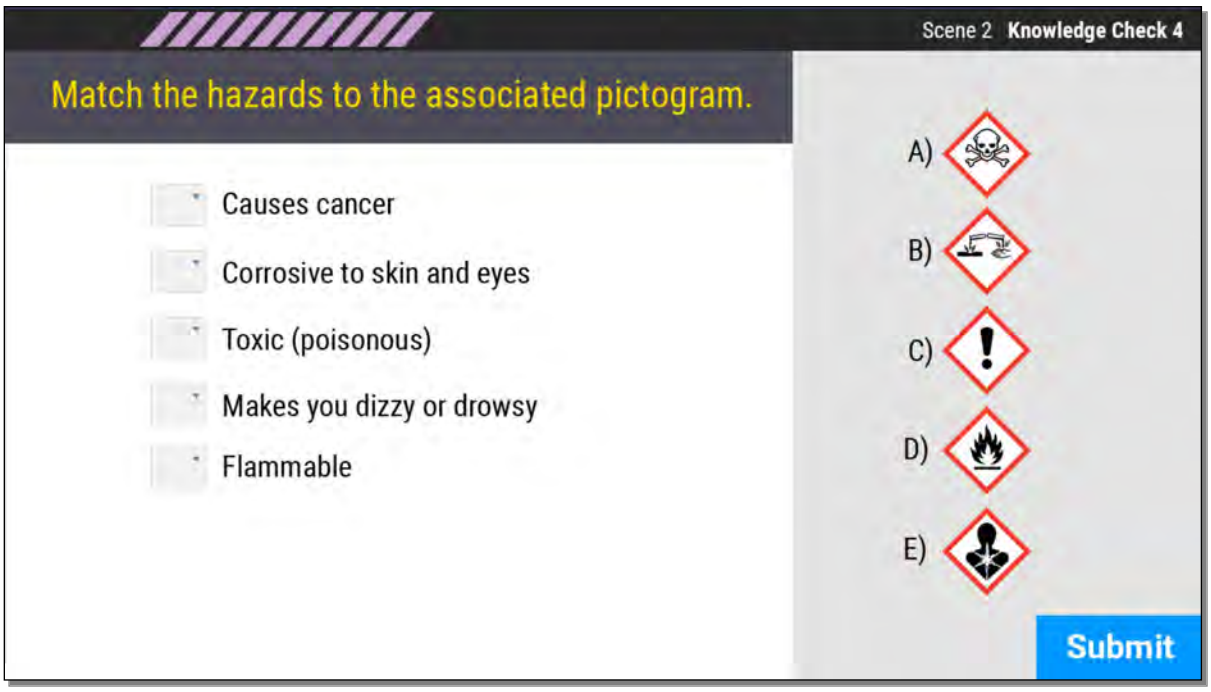




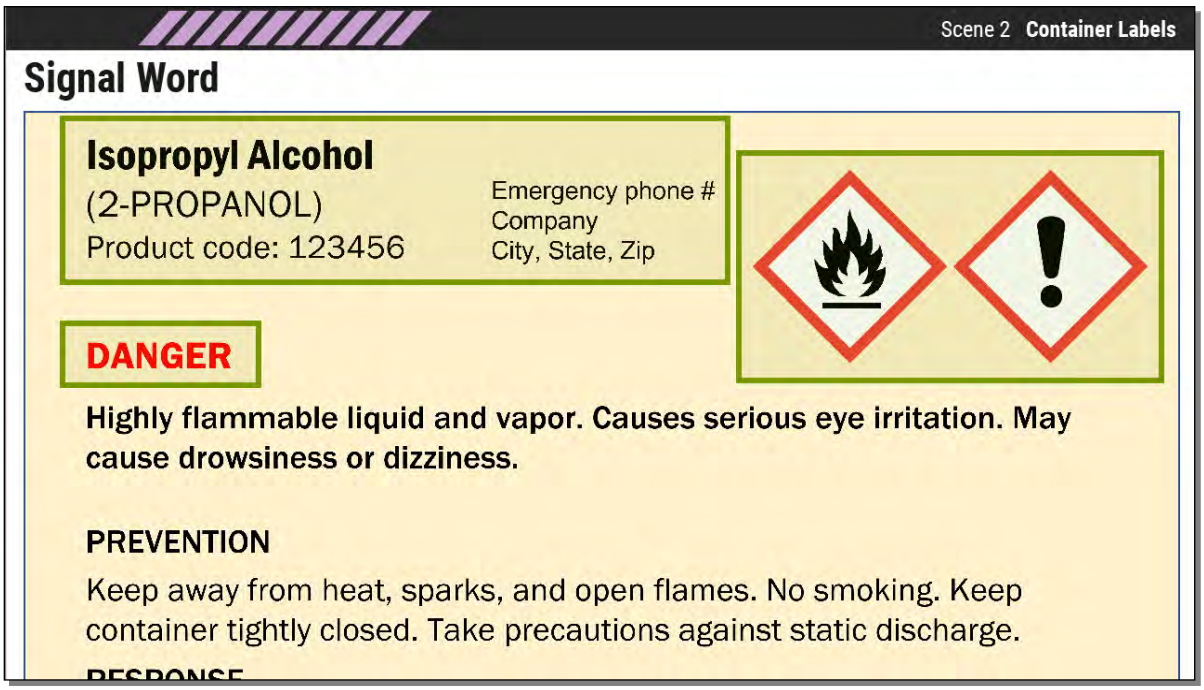
The final GHS pictogram is the environment pictogram. It warns that the chemical could be toxic to marine life and cause environmental damage.

Let’s review the pictograms with a knowledge check.

Slide 49 - Knowledge Check 4



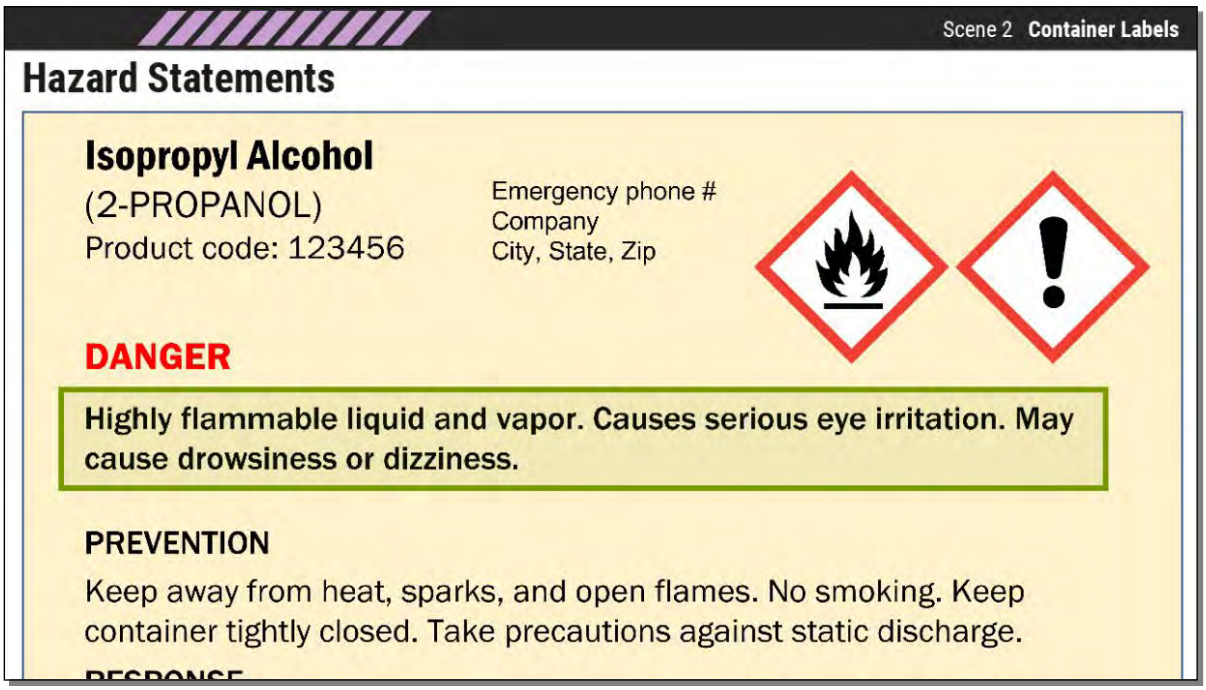
Slide 50 - Signal Word



Getting back to the label elements, so far, we have talked about the product identifier and the pictograms. Let's move now to the signal word.

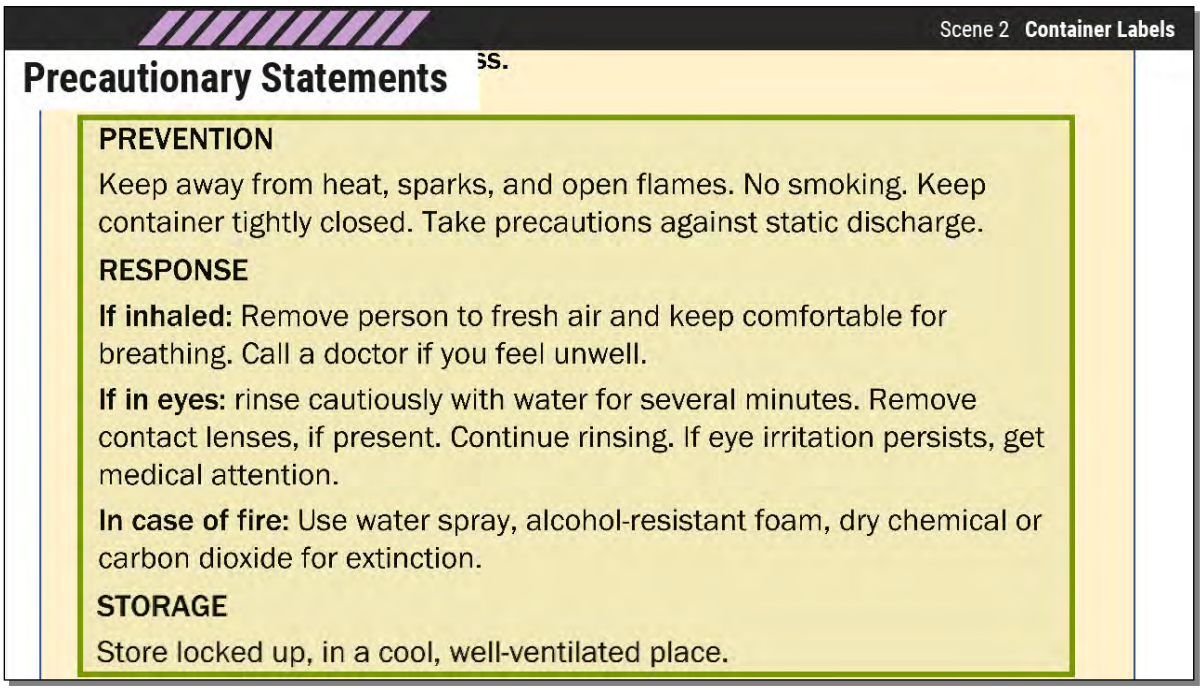
The signal word is either DANGER or WARNING. The signal word alerts the user to the severity of the hazard, DANGER for the most severe hazards, and WARNING for the less severe ones.

Slide 51 - Hazard Statements



The signal word is followed by hazard statements. These are standardized phrases that describe the nature of the hazard. In our example, the hazards statements are “Highly flammable liquid and vapor,” “Causes serious eye irritation,” and “May cause drowsiness or dizziness.” A product can have several hazard statements.

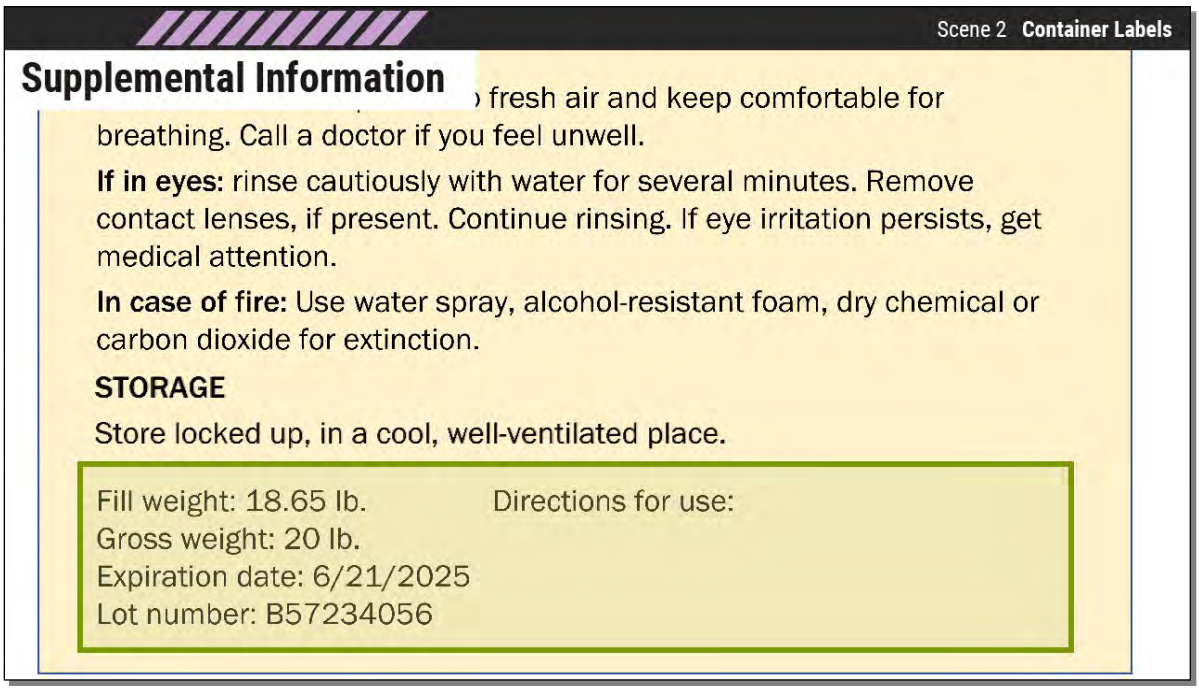
Slide 52 - Precautionary Statements



Next, there are precautionary statements. These are must-know precautions for using the product.

The precautionary statements tell you how to prevent adverse effects (for example, by wearing gloves to prevent skin contact) and how to respond in the event of an accident--you get the chemical on your skin, or a spill occurs, or a chemical catches fire. The precautionary statements say how to store and dispose of the substance safely.

Slide 53 - Supplemental Information



Lastly, manufacturers and importers are free to include supplemental information on the label such as the product's expiration date, directions of use, and so on.

Slide 54 - Workplace Container Labels

Manufacturers of hazardous chemicals ship products with a GHS-conforming label that has all the elements we just discussed. Once the chemical is in the workplace, employers in our industry usually use the provided GHS labeling, or they can use an alternate approved chemical labeling system. Either way, the container must be appropriately labeled.

Do not remove or alter the container label. If a label is inadvertently removed or defaced, a new label must be immediately applied that contains the same information as the original. When labeling containers, use labels, ink, and markings that are not soluble in the liquid content of the container.

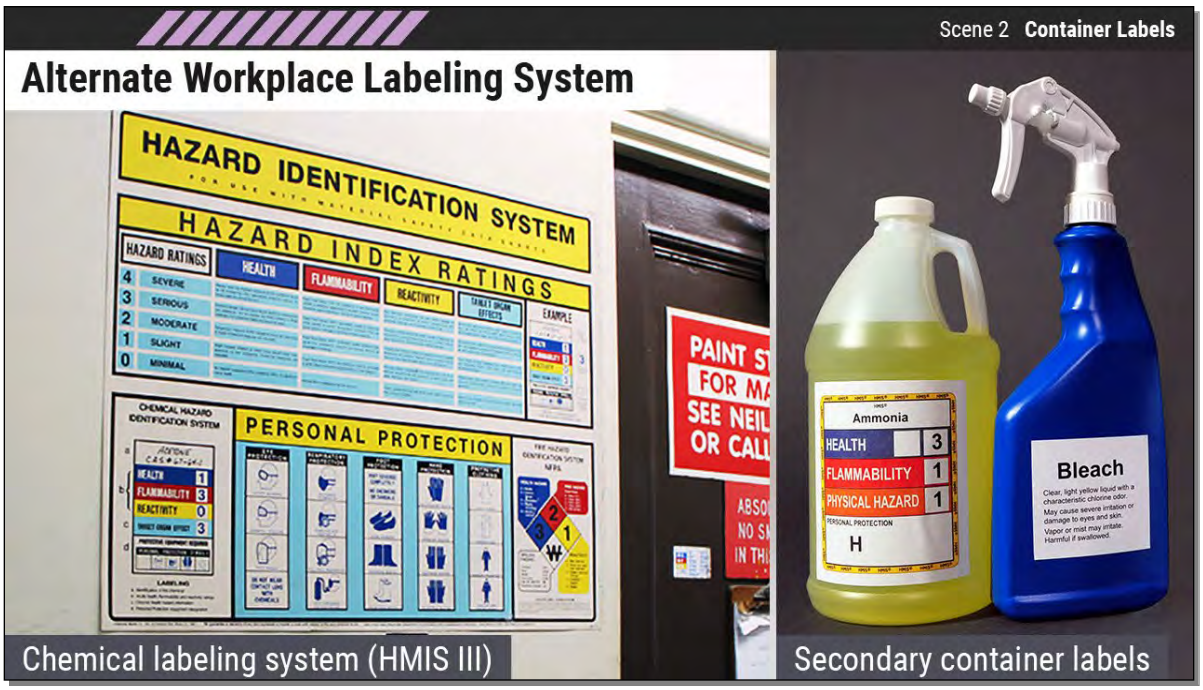
Slide 55 - Secondary Workplace Container Labels 1

If you transfer a chemical from its original container into a secondary container such as a portable spray bottle or can, you must replicate the original label information on the label onto the secondary container's label. Check with your employer regarding methods for replicating container labels.

Slide 56 - Secondary Workplace Container Labels 2

The employer may choose to replicate the same GHS-conforming label that came on the shipped container or use an alternate system. If the employer uses an alternate system, it must provide the product identifier and at least general information regarding the hazards of the chemical. The workers must be provided specific information about the physical and health hazards either by the label or in combination with signs, placards, or by other means that are immediately available to the workers.

Slide 57 - Alternate Workplace Labeling System

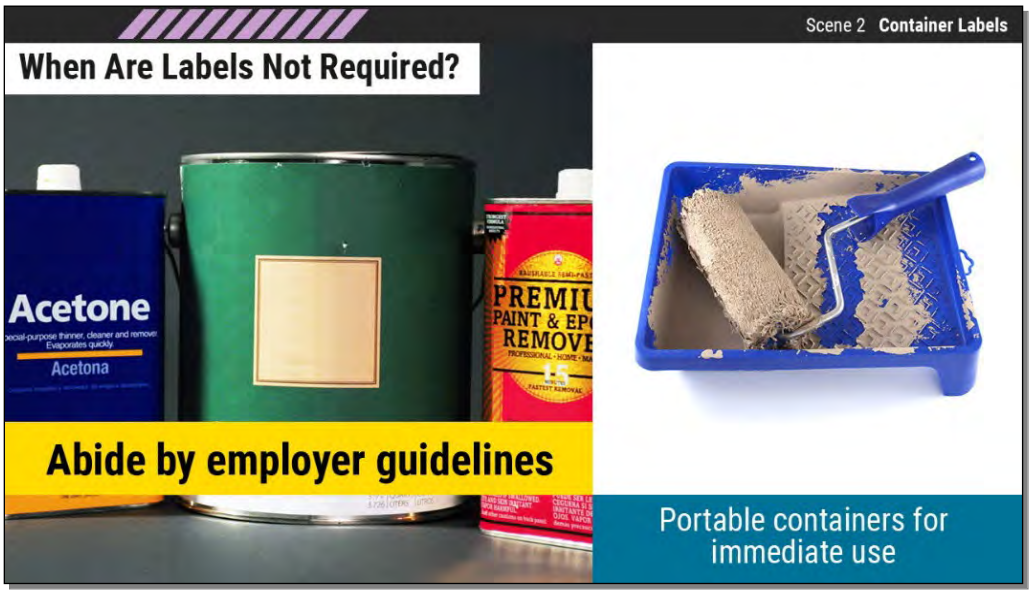


A chemical labeling system, like HMIS III shown here, presents information in words, pictures, symbols, and colors. The employer must train workers on the labeling system they use.

Text must first be in English, but may also be offered in other languages.

Slide 58 - When Are Labels Not Required?

OSHA does NOT require labels for portable containers that are for immediate use and remain under the sole control of the employee who makes the transfer.



Regulations also allow a labeling exception for “stationary process containers,” though rarely relevant in our industry.

Your employer may follow additional rules for labeling. Abide by their guidelines.

Slide 59 - Other Labeling Regulations

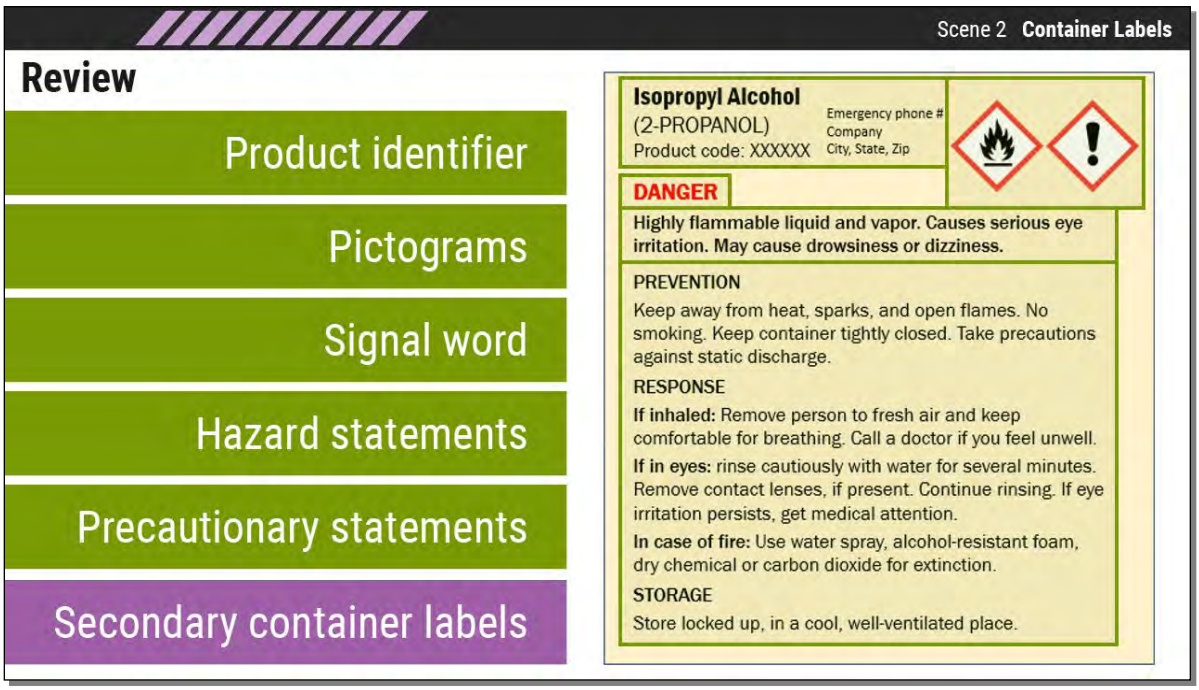
It is important to note that HazCom does not regulate labeling of chemicals and substances that fall under other government agencies.

For example, the labeling of cosmetics falls under Food and Drug Administration regulations; pesticides are under the Environmental Protection Agency; black powder and explosives fall under the Bureau of Alcohol, Tobacco, Firearms, and Explosives; and consumer products fall under Consumer Product Safety Commission regulations.

Although “consumer products” are products commonly used in the home, they may contain chemicals that would fall under HazCom if they were in a greater quantity or concentration. Therefore, some products you use may not necessarily have the GHS-type described in this scene. However, the product will still have an SDS.

Whatever the elements contained on the label, for your safety, read and follow the label instructions and warnings.

Slide 60 - Review

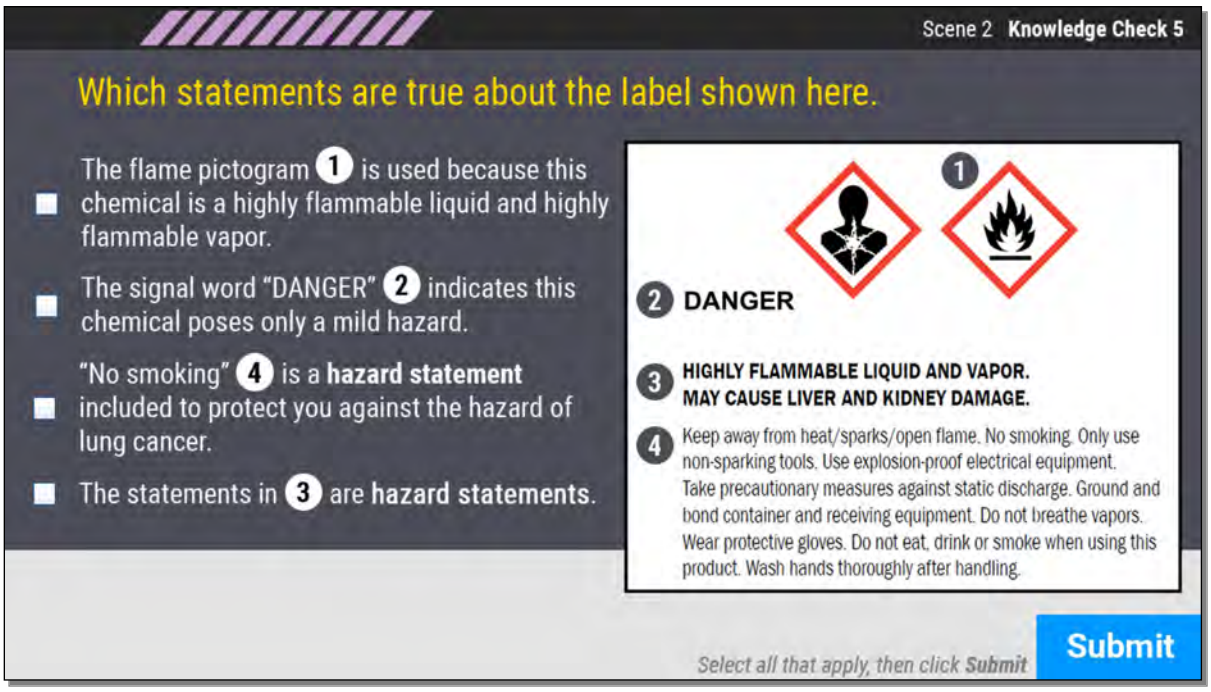


To review what we've covered in this scene, a GHS container label has five required elements: the product and manufacturer identification; pictograms (which give you a quick visual warning of the hazards); a signal word (danger or warning, depending on the severity of hazard); hazard statements (which identify the specific hazards for you); and precautionary statements (which tell you what you need to **do** about it).

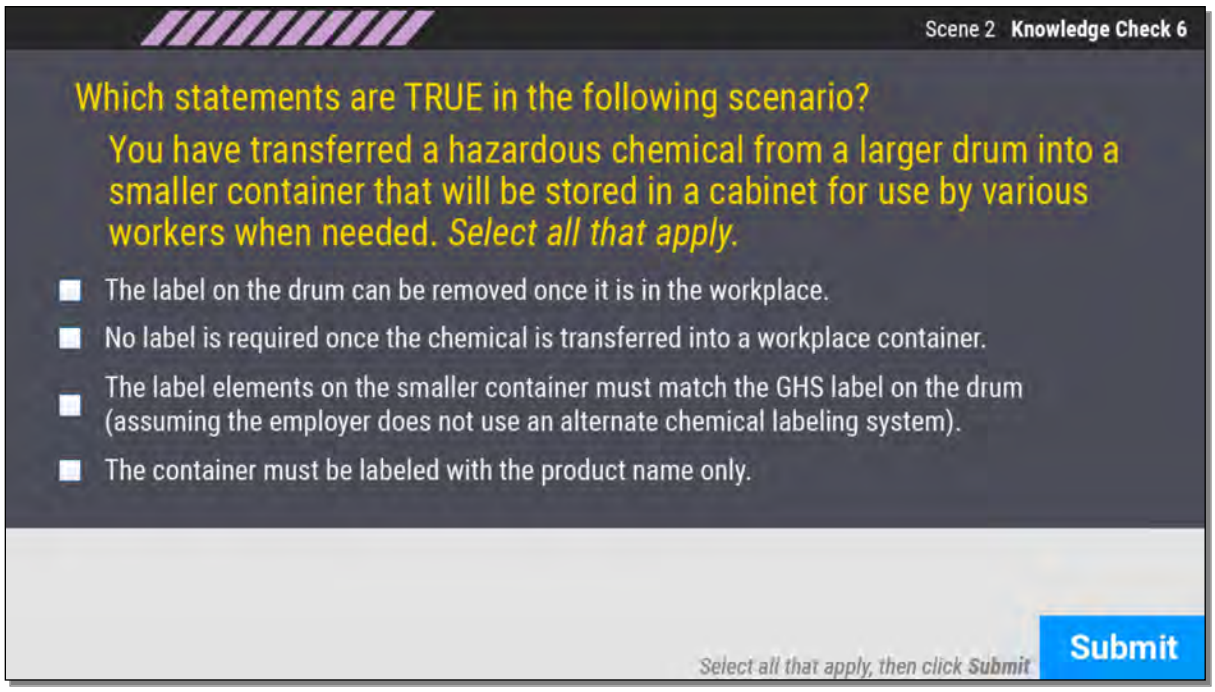
If someone transfers the chemical into another container in the workplace, that container must also be labeled. The only exceptions are for portable containers for immediate use by one person and stationary process containers.

That's it for container labeling. Let's check your knowledge with a couple challenge questions.

Slide 61 - Knowledge Check 5



Slide 62 - Knowledge Check 6



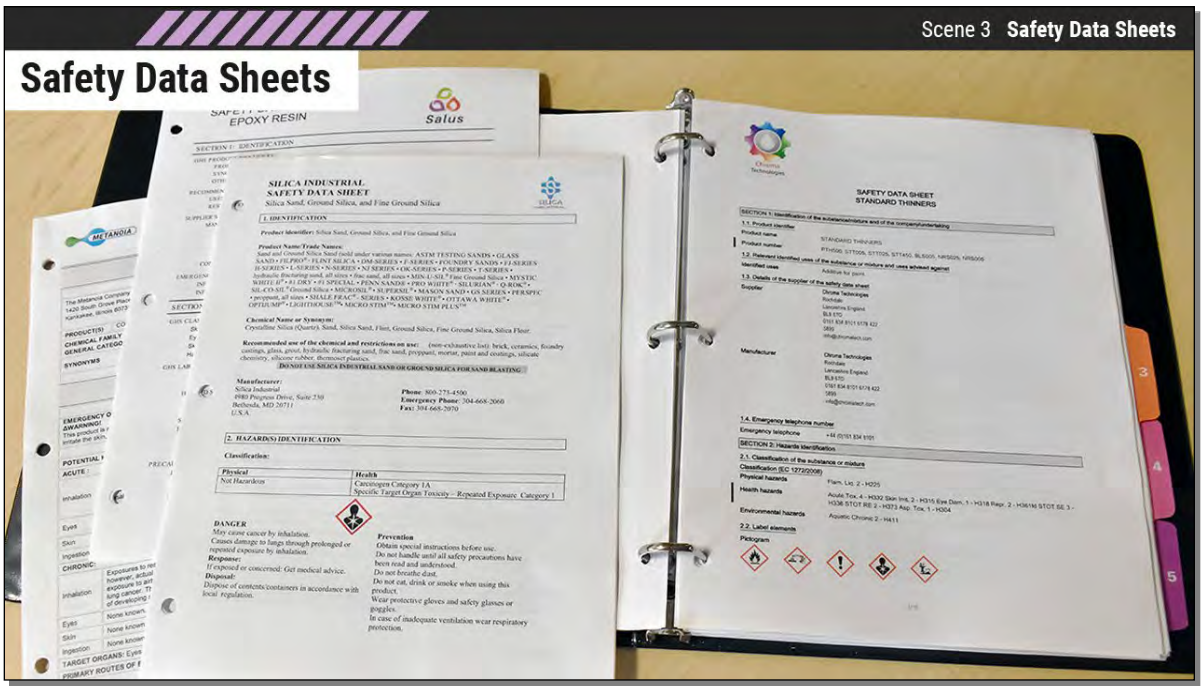
Slide 63 - Scene3 Safety Data Sheets

Scene Three, Safety Data Sheets

Slide 64 - Scene3 In This Scene

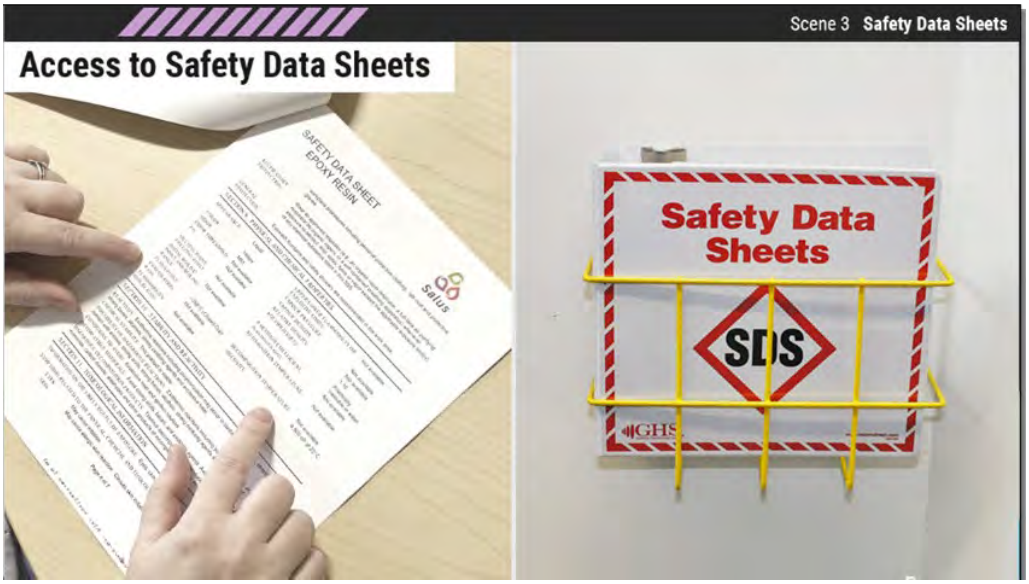
The essential take-aways from this scene are the requirements for providing workers access to Safety Data Sheets and how the information on Safety Data Sheets is organized.

Slide 65 - Safety Data Sheets



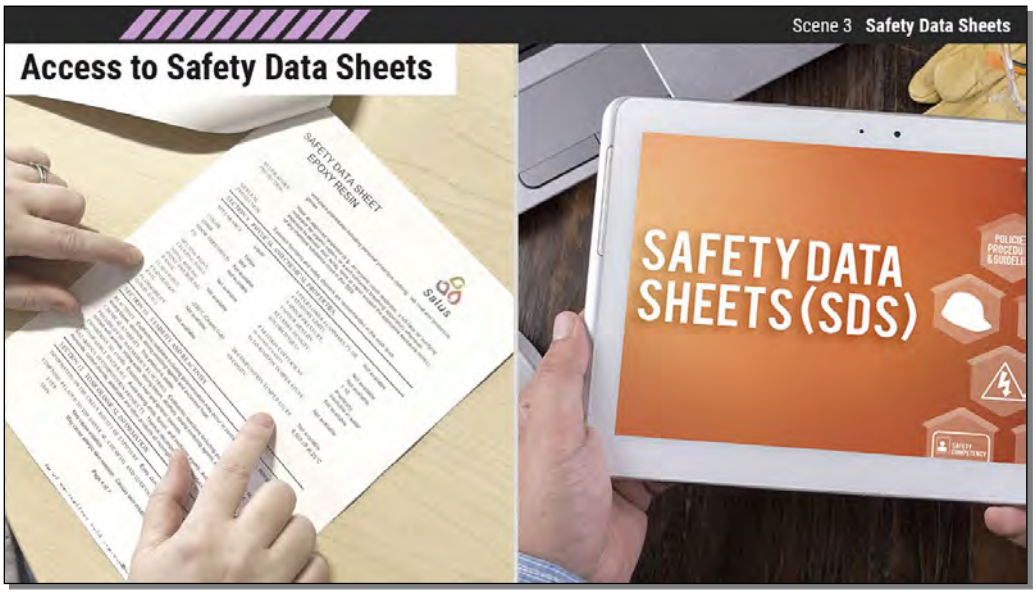
Safety data sheets provide far greater detail than container labels and are an important reference for workers using hazardous chemicals, as well as for first responders in case of a spill, fire, or medical emergency.

Slide 66 - Access to Safety Data Sheets



Employers must have an SDS for each hazardous chemical in the workplace and ensure that it is readily available to workers.

Employers may keep SDSs in a binder, but there are other approved methods for providing them,

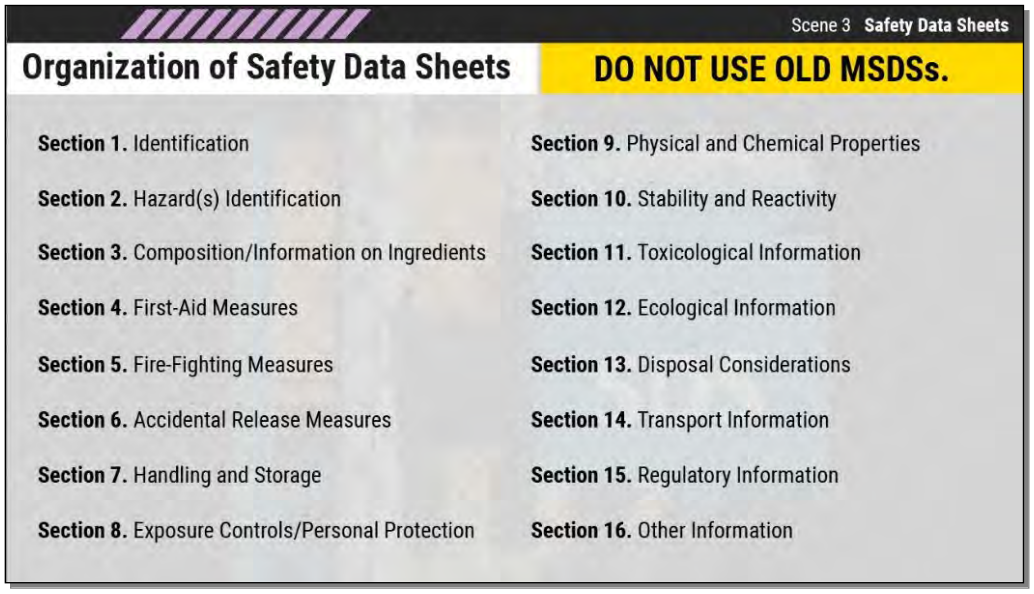


such as on-demand online SDS service, provided that internet service is readily available.

Whatever the employer's system, individuals who work with hazardous chemicals must know where SDSs are kept. This is part of the employer's job-site training.

Slide 67 - Organization of Safety Data Sheets 1

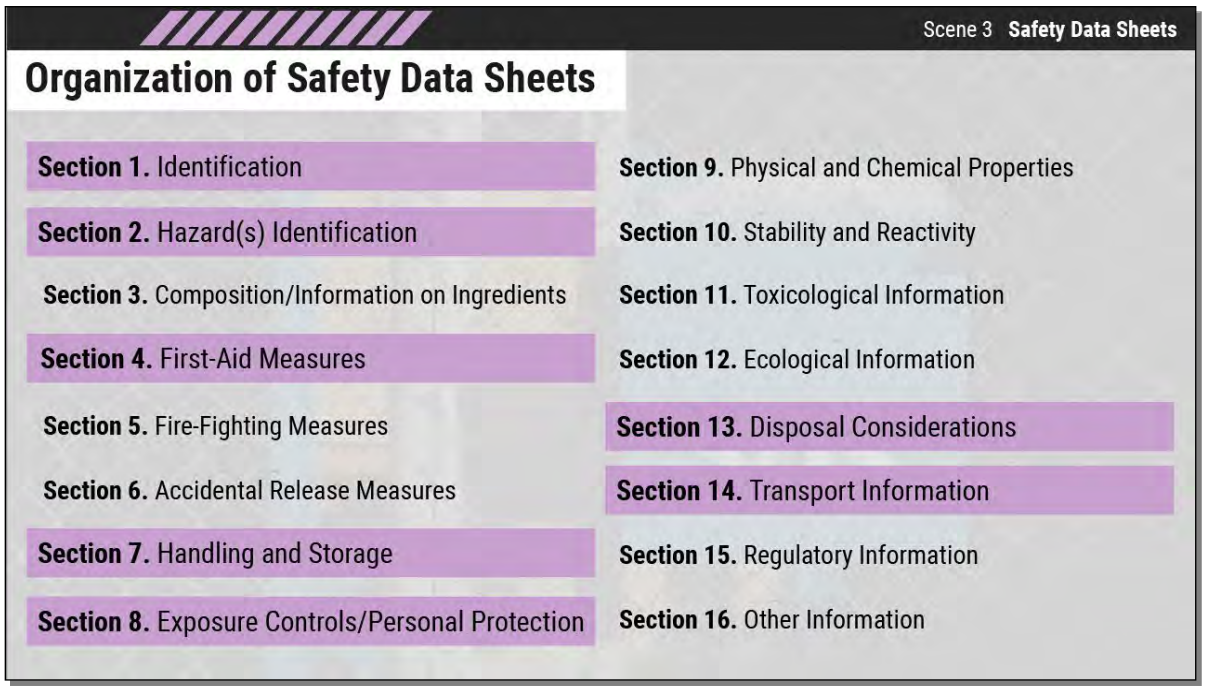
The information on an SDS is presented in a specific order.



There are sixteen numbered sections with standardized headings and subheadings. Every SDS is organized this way, so you can quickly find the information you need.

Prior to 2012, data sheets were called Material Safety Data Sheets (MSDS) and the information had no established order. All MSDSs should have been replaced some time ago. If a current SDS is not available, follow up with Studio Safety. Do not use old MSDSs.

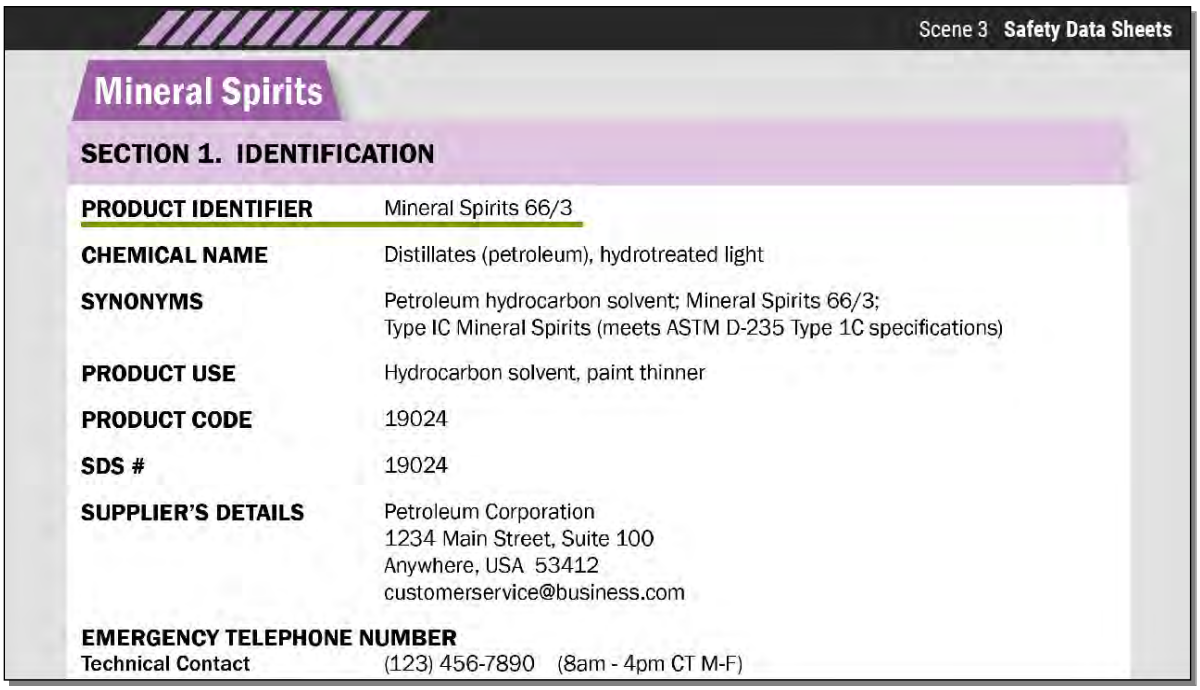
Slide 68 - Organization of Safety Data Sheets 2



In this scene, we are going to focus on seven sections that are likely to be the most helpful to you. We will show examples from a variety of SDSs. Depending how you are viewing this training, every detail may not be legible on your screen.

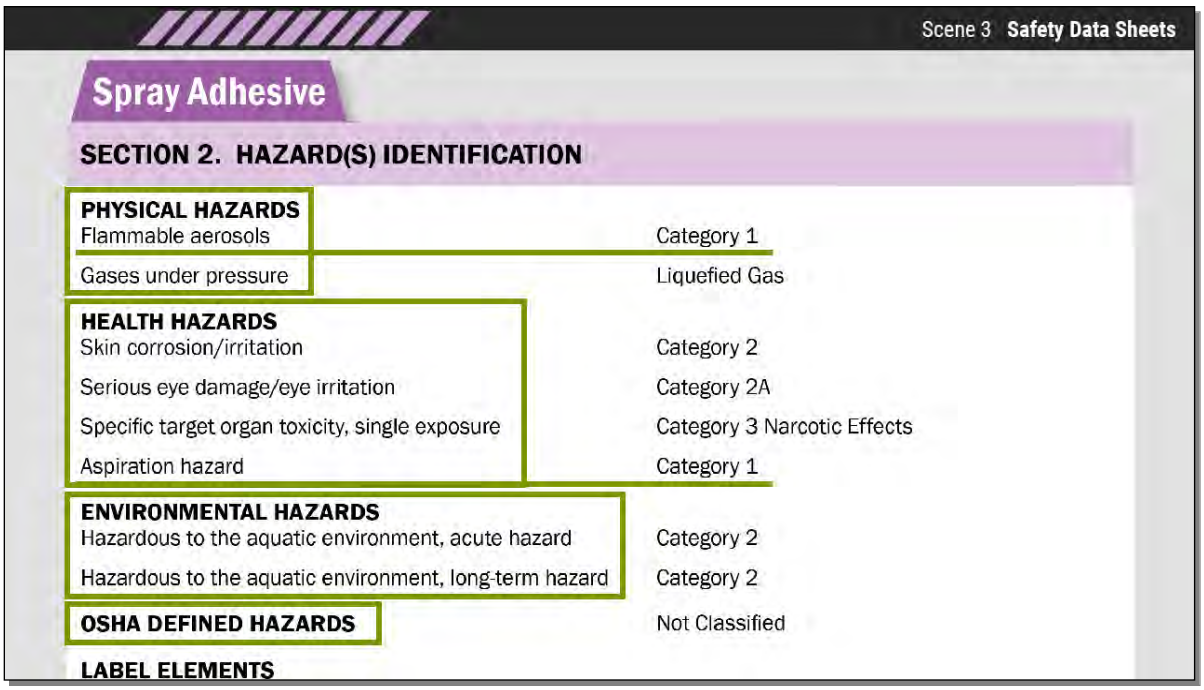
If you want to see the examples more closely, download the *SDS Examples* pdf from the RESOURCES link.

Slide 69 - Section 1 | Identification



Let's start with Section One, Identification. This example shows the Identification section for mineral spirits. Note that there are a variety of ways to refer to a given chemical, such as chemical names and other synonyms, or a product code. They are all noted in this section, but the product identifier at the top is the assigned name that is always consistent wherever the chemical is referenced including the container label and the employer's list of workplace chemicals.

Slide 70 - Section 2 | Hazard Identification 1

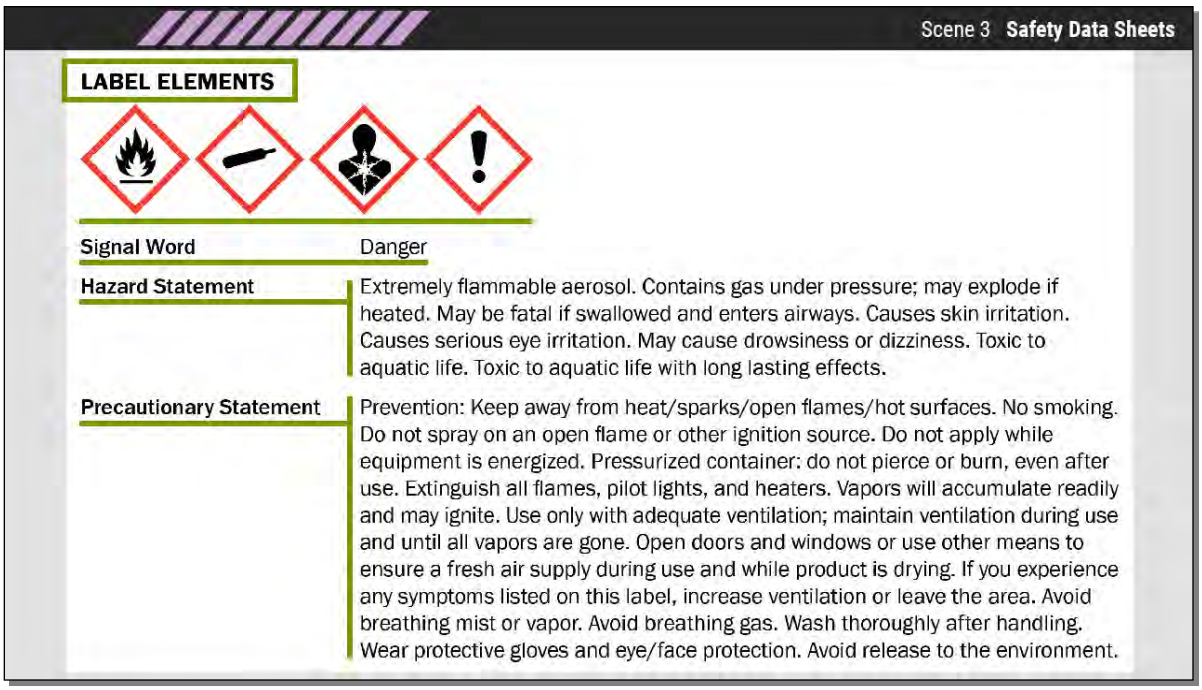


Section Two, titled Hazard Identification, lists the hazard classes and severity categories. Remember category one is always the most severe. Our example, spray adhesive, is a category one flammable aerosol and a category one aspiration hazard, meaning it may be fatal if swallowed or inhaled.

Note that the SDS lists physical hazards, health hazards, and environmental hazards for this substance.

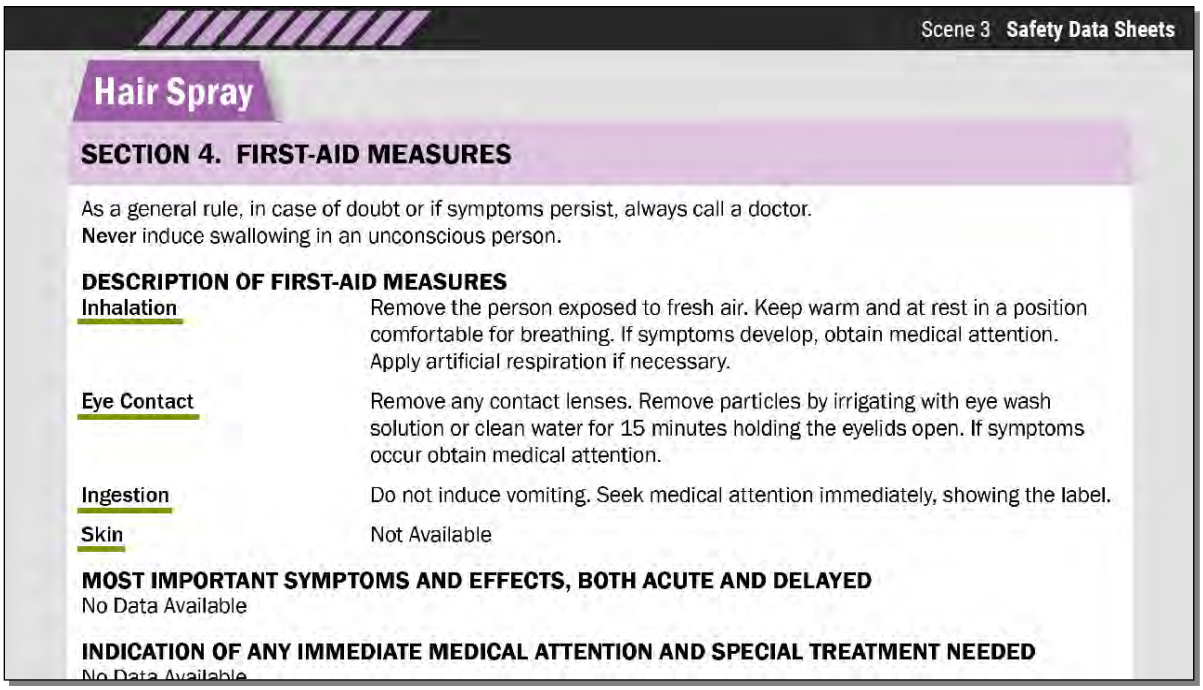
There is also a subsection for OSHA-defined hazards described earlier.

Slide 71 - Section 2 | Hazard Identification 2



This section also includes the required label elements: pictogram, signal word, hazard statements, and precautionary statements. Having the label information repeated in the SDS may make it easier to read when the size of the typeface on the container is small. If you need to make a new container label, you can copy the information from Section Two of the SDS.

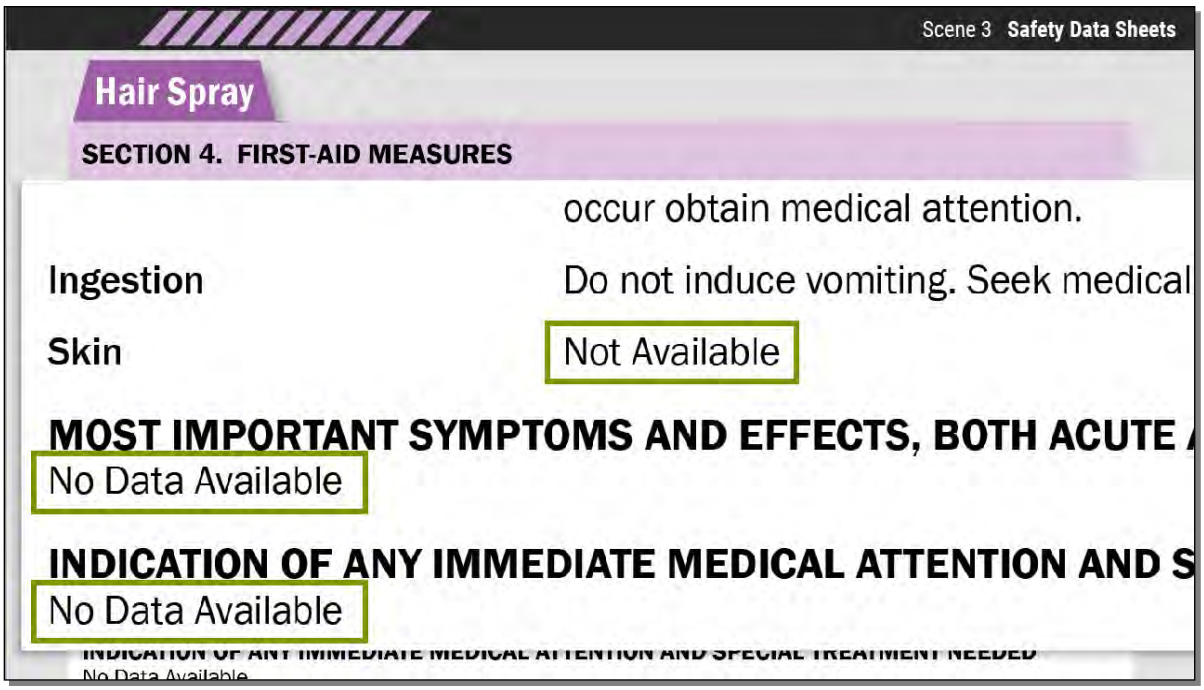
Slide 72 - Section 4 | First-Aid Measures 1



Section Four is First-Aid Measures. Our example is hair spray. This section is subdivided according to the routes of exposure: inhalation, contact with eyes, ingestion, and contact with skin. It describes the harmful effects, the immediate medical measures, and special treatment necessary.

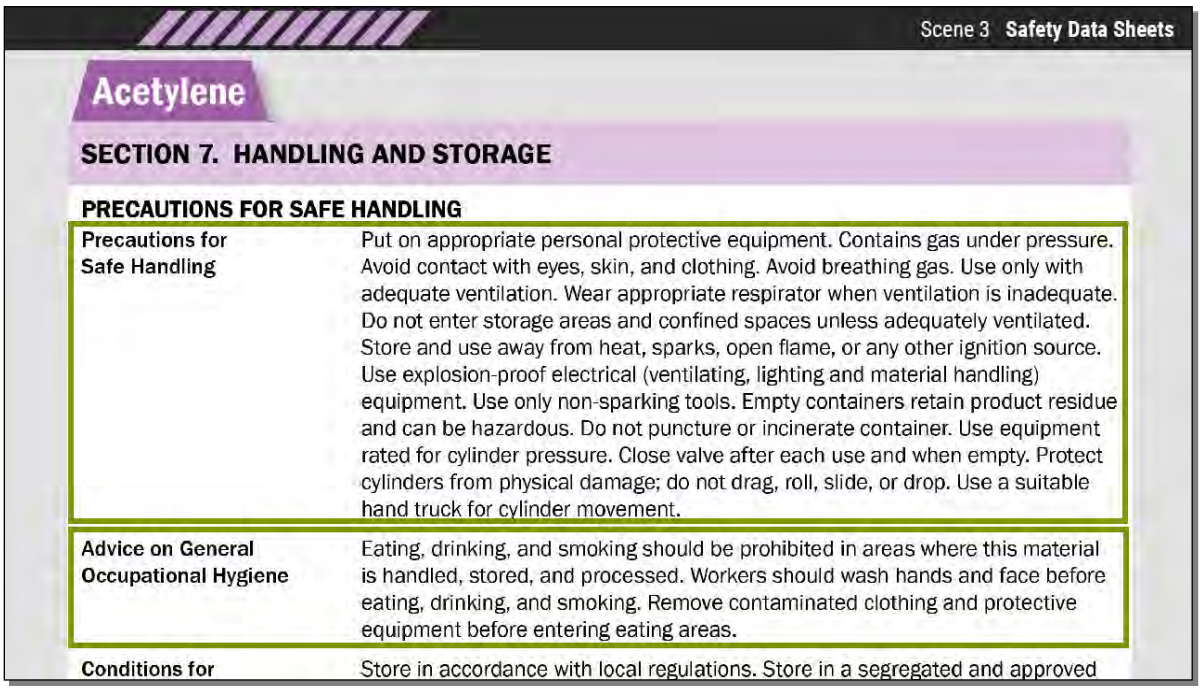
In the event of a medical emergency, be sure medical personnel are provided with the SDS. First aiders can use the information in Section Four. Medical personnel may also need the specific toxicology information (given in Section Eleven) so they can quickly diagnose and properly treat the victim.

Slide 73 - Section 4 | First-Aid Measures 2



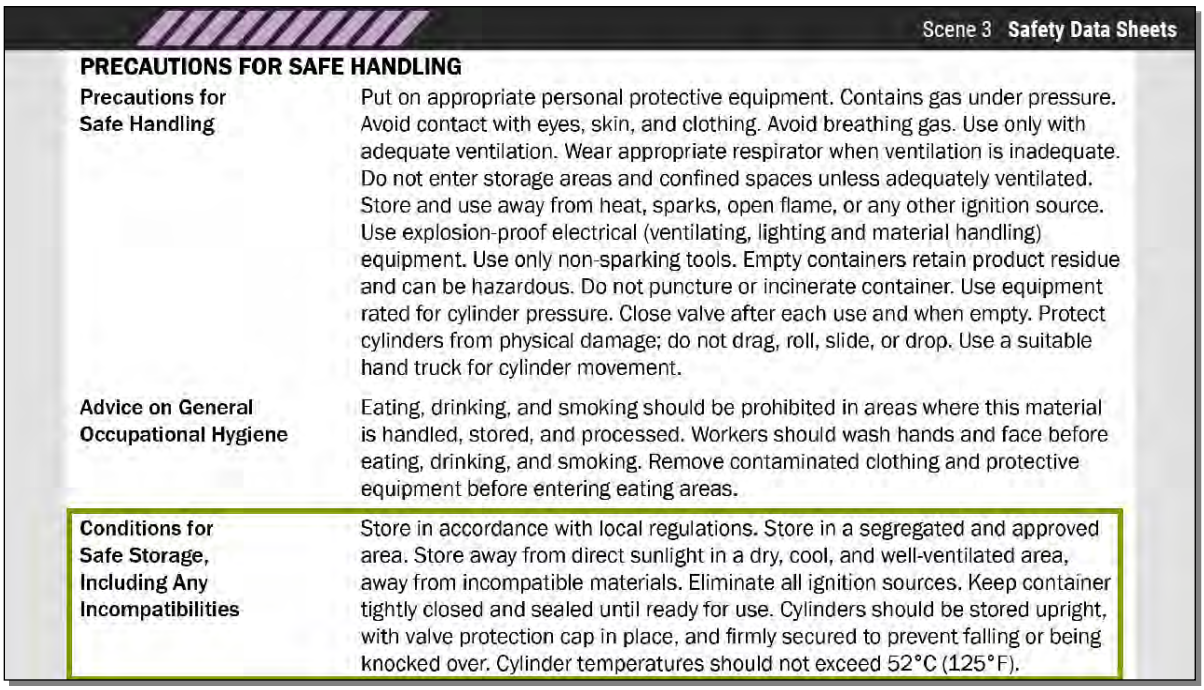
You may find sections where the SDS provides no information. This is a consequence of the standard format of headings and subheadings and is intentional. It eliminates any question about whether information is missing from the sheet.

Slide 74 - Section 7 | Handling and Storage 1



Section Seven provides precautions for safe handling. Our example is acetylene, which is the fuel used for cutting and welding metals, so there are rather a lot of precautions. The section also includes general hygiene advice and

Slide 75 - Section 7 | Handling and Storage 2



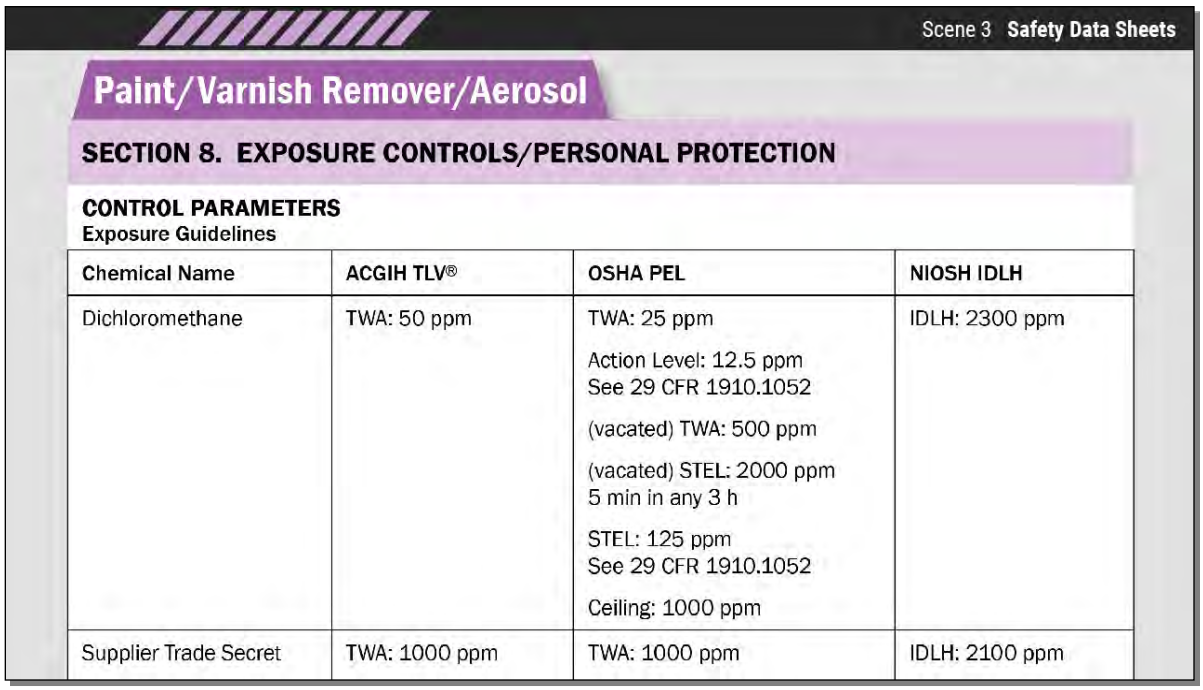
Scene 3 **Safety Data Sheets**

PRECAUTIONS FOR SAFE HANDLING

Precautions for Safe Handling	Put on appropriate personal protective equipment. Contains gas under pressure. Avoid contact with eyes, skin, and clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame, or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.
Advice on General Occupational Hygiene	Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas.
Conditions for Safe Storage, Including Any Incompatibilities	Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool, and well-ventilated area, away from incompatible materials. Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52°C (125°F).

conditions for safe storage. Safe practices for handling and storing hazardous chemicals is often critical information for avoiding accidents and injury.

Slide 76 - Section 8 | Exposure Controls/Personal Protection 1



Scene 3 **Safety Data Sheets**

Paint/Varnish Remover/Aerosol

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

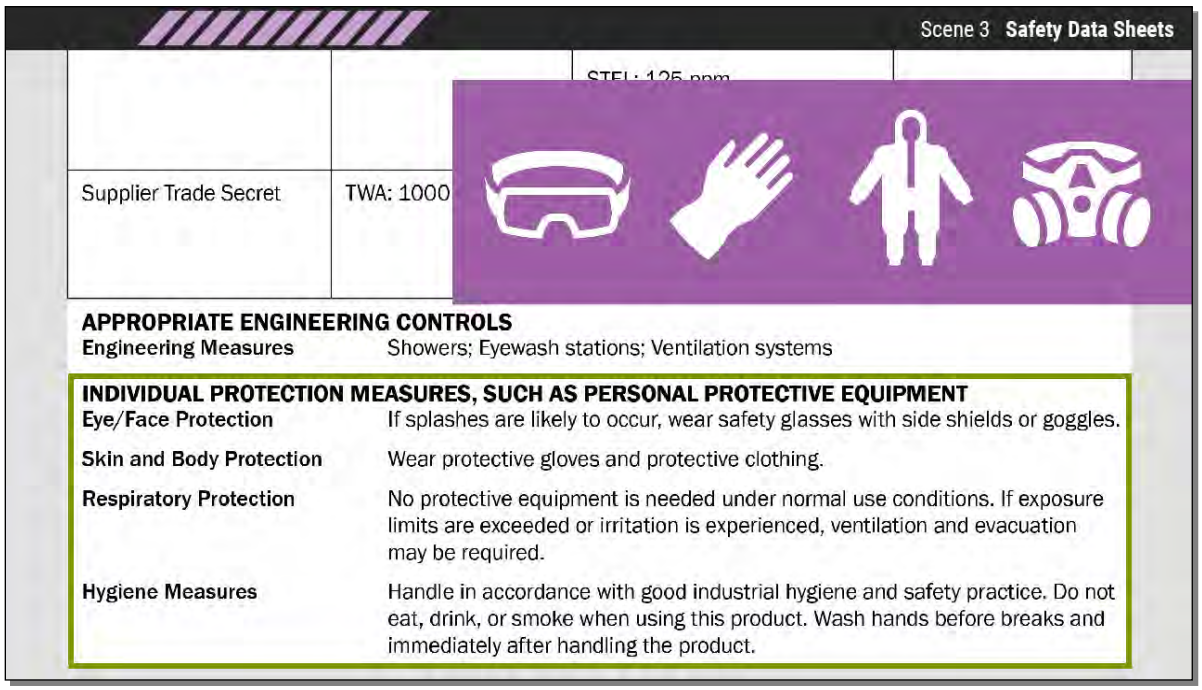
CONTROL PARAMETERS
Exposure Guidelines

Chemical Name	ACGIH TLV®	OSHA PEL	NIOSH IDLH
Dichloromethane	TWA: 50 ppm	TWA: 25 ppm Action Level: 12.5 ppm See 29 CFR 1910.1052 (vacated) TWA: 500 ppm (vacated) STEL: 2000 ppm 5 min in any 3 h STEL: 125 ppm See 29 CFR 1910.1052 Ceiling: 1000 ppm	IDLH: 2300 ppm
Supplier Trade Secret	TWA: 1000 ppm	TWA: 1000 ppm	IDLH: 2100 ppm

Section Eight, Exposure Controls/Personal Protection, provides the information needed to keep the level of exposure safe. Our example is an aerosol paint and varnish remover.

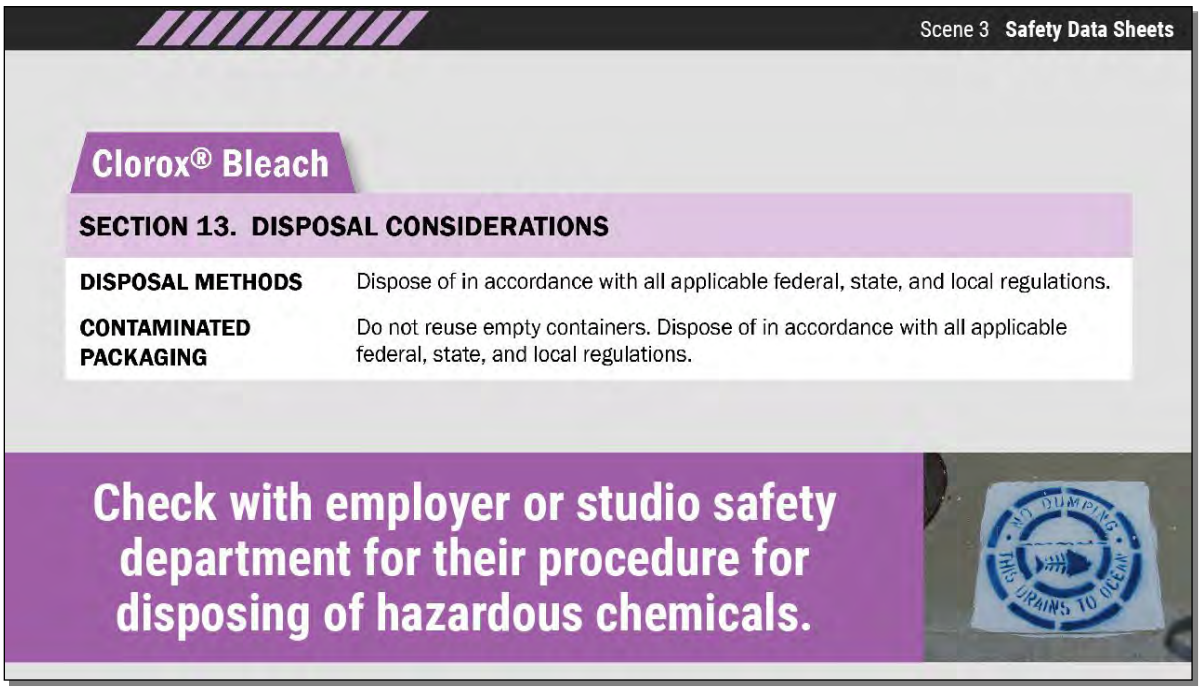
The first two subsections are mostly relevant to employers. It sets exposure limits and information they may need for developing engineering controls.

Slide 77 - Section 8 | Exposure Controls/Personal Protection 2



But the third subsection, Individual Protection Measures, is of direct use to people who handle the chemical. It specifies the recommended personal protective equipment like safety goggles, gloves, clothing, and respirators.

Slide 78 - Section 13 | Disposal Considerations

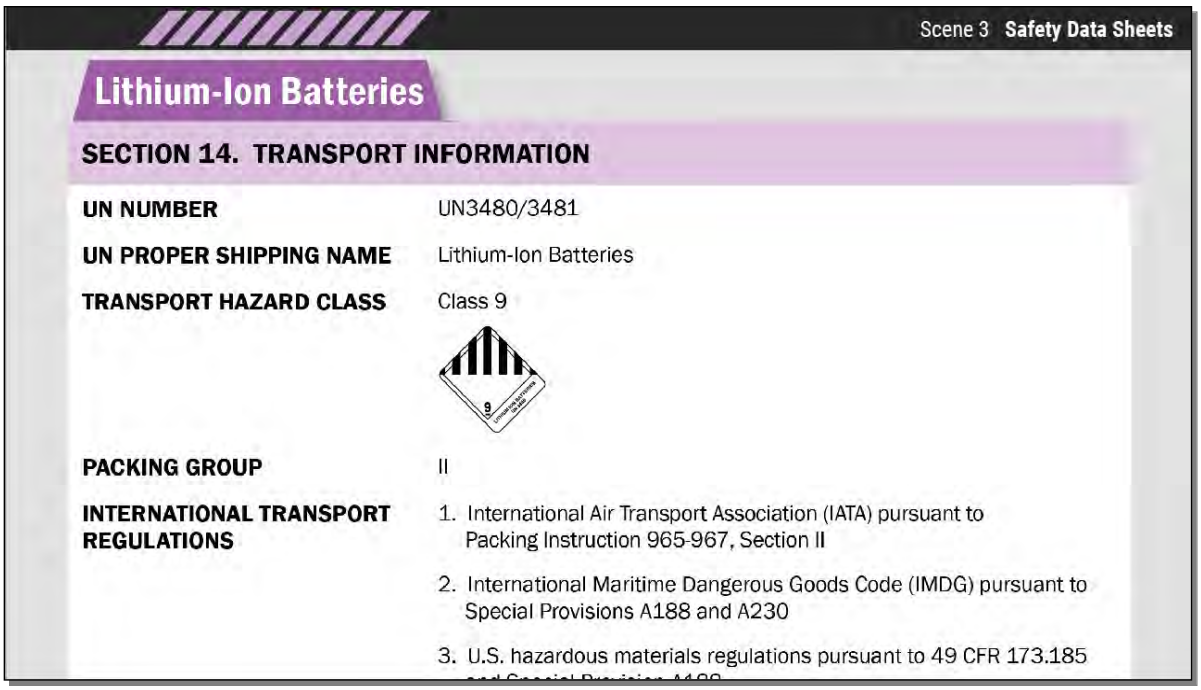


Section Thirteen is reserved for methods for disposal of the chemical and contaminated packaging. Our example is bleach.

This section commonly refers you to federal, state, and local regulations because disposal methods vary by jurisdiction. Check with the employer or studio safety department for their procedure for disposing of hazardous chemicals.

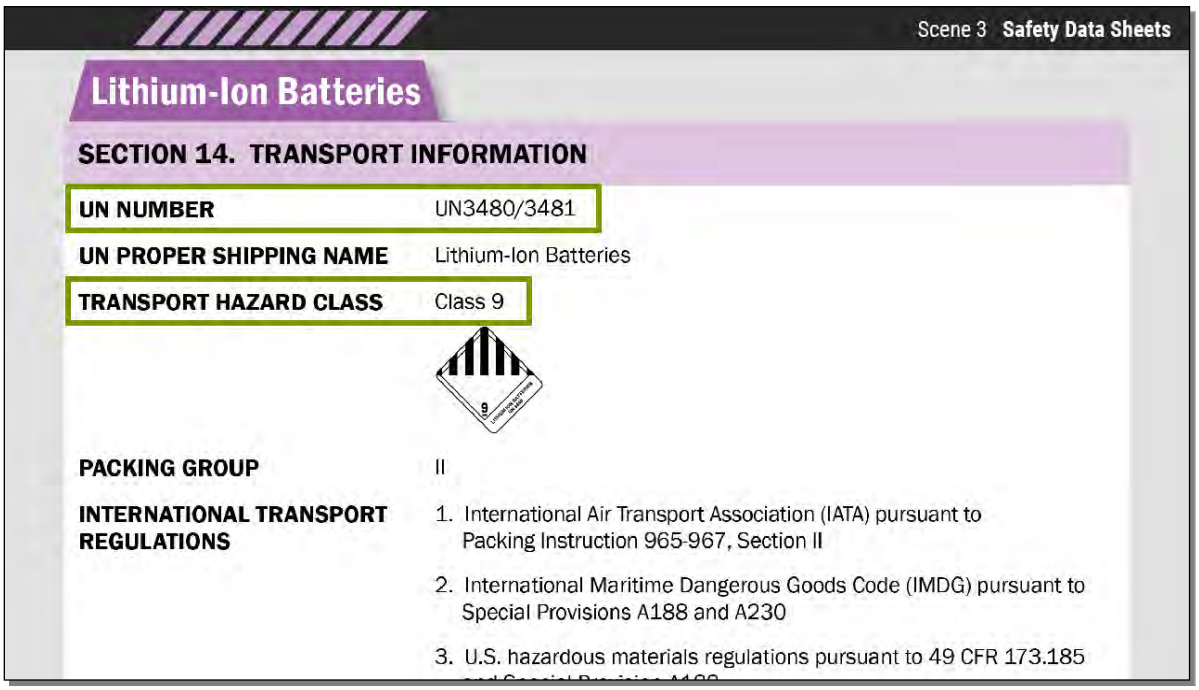
Workers should never dump hazardous waste down a sink, put it into a normal trash can or dumpster, or pour it out on the ground.

Slide 79 - Section 14 | Transport Information 1



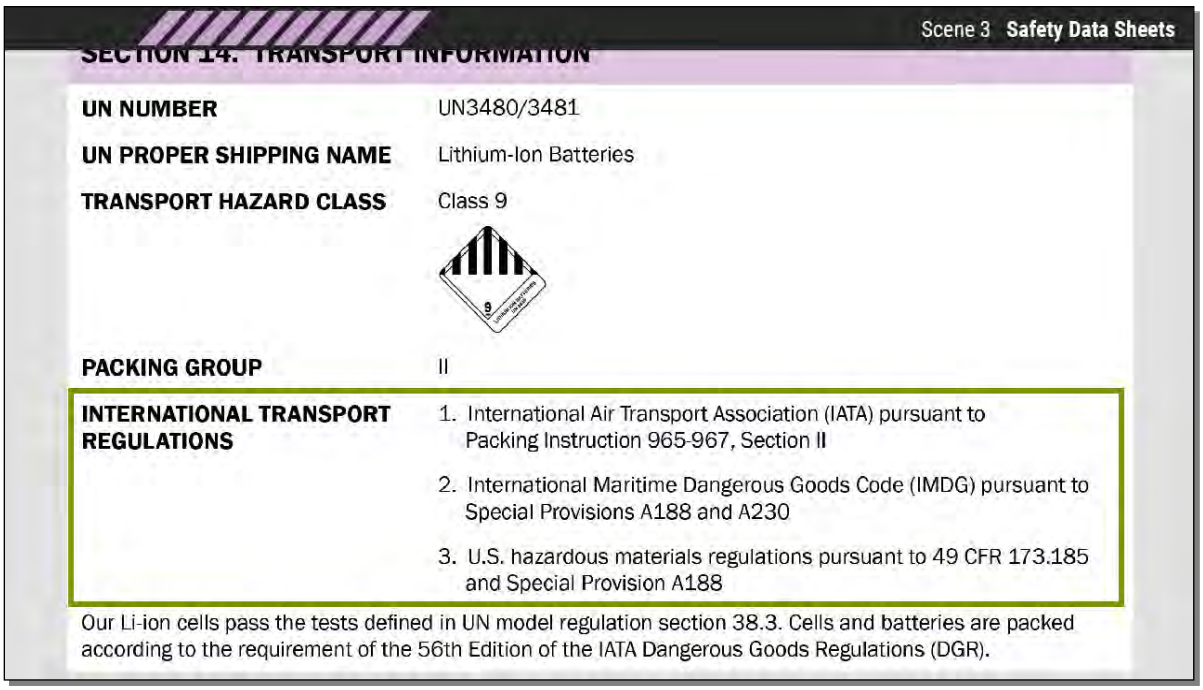
The last section we'll look at is Section Fourteen, Transport Information. Our example is lithium-ion batteries.

Slide 80 - Section 14 | Transport Information 2



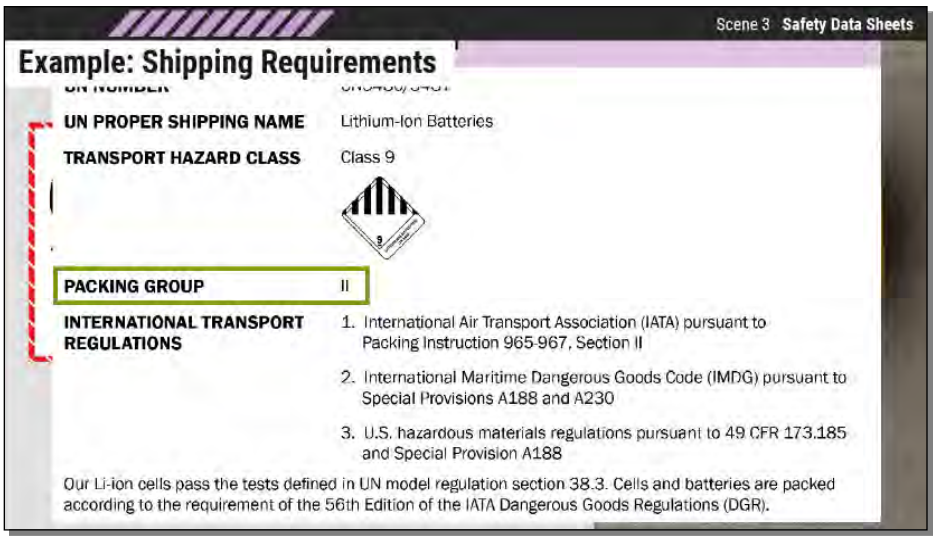
This section provides information the shipper needs to know to transport the product safely.

Slide 81 - Section 14 | Transport Information 3



Shipping hazardous goods requires special training regarding shipping paperwork, packing, and labeling. Carriers, like FedEx, DHL, and UPS, have trained personnel at select offices. Section Fourteen refers the shipper to the appropriate transport regulations.

Slide 82 - Example: Shipping Requirements

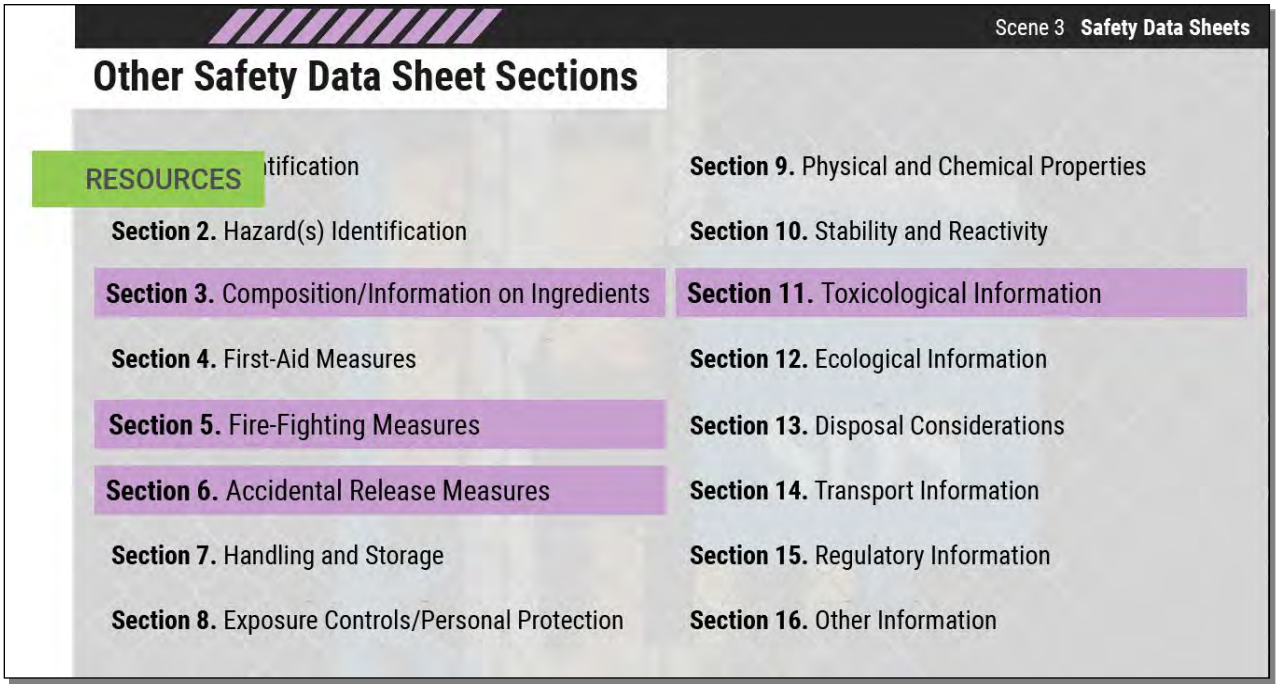


The packing group refers to the specific packing instructions and labeling requirements, so expect to provide the carrier with a copy of the SDS.

Items that are classified as hazardous include common items from aerosol cans to lithium-ion batteries.

If you're someone who is tasked with transporting or shipping hazardous substances, you can download the *Shipping and Transport* course supplement as a reference from the RESOURCES link. Shipping items safely is not difficult but failing to follow the requirements can lead to authorities holding or delaying delivery of equipment. It can result in fines, and in the extreme case, it could result in a threat to life or property such as a fire on a truck or aircraft. For further assistance, contact your studio safety department.

Slide 83 - Other Safety Data Sheet Sections



While we have focused on seven of the most relevant SDS sections, other sections could be important in specific situations.

Section 3, Composition, tells you the harmful ingredients, which can be useful for comparing and selecting products.

Section 5, Fire-Fighting Measures, covers what should and should not be used to extinguish a fire--important information for first responders.

Section 6, Accidental Release, covers what to do in the event of a chemical spill.

Section 11, Toxicological Information, provides information that a physician needs in order to treat a person. For example, in the event of poisoning.

It is helpful to examine Safety Data Sheets for yourself and familiarize yourself with the format and information in every section.

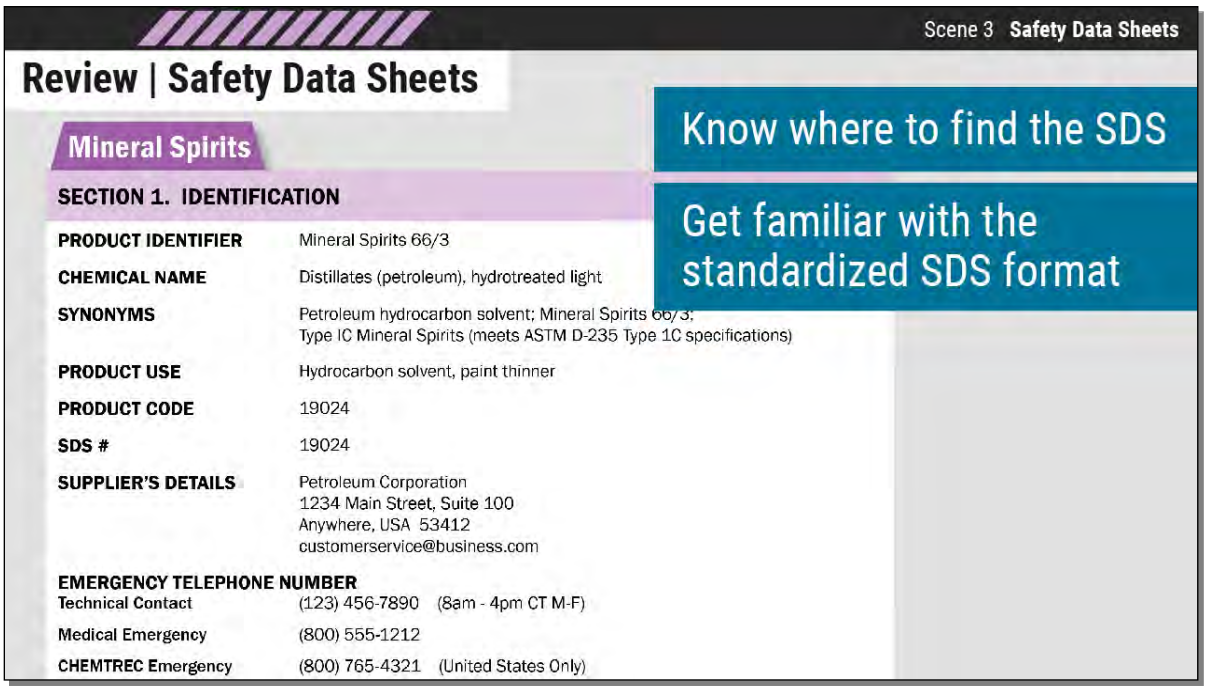
You can download the *Sample SDS* from the course resources (click the RESOURCES icon on the sidebar), or better yet, search online for a hazardous substance you use in your work and download its SDS from the manufacturer's website.

Slide 84 - Review | Safety Data Sheets 1

To recap this scene, employers must have an SDS for each hazardous chemical in the workplace and ensure that it is readily available to workers.

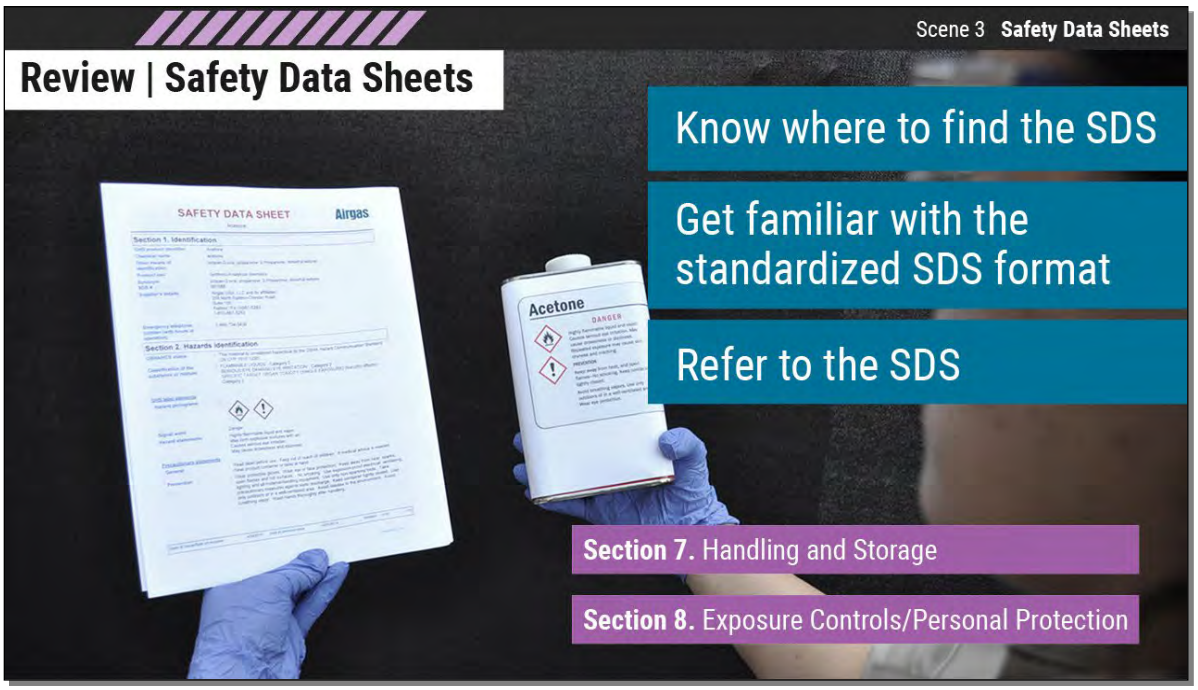
If you don’t know where the SDSs are located, be sure to find out before you start using the hazardous substance.

Slide 85 - Review | Safety Data Sheets 2



Safety Data Sheets use a standardized format of sixteen sections (and required subsections) that make the location of information consistent across all SDSs. Once you are familiar with it, the format makes it easier to locate the information you're after.

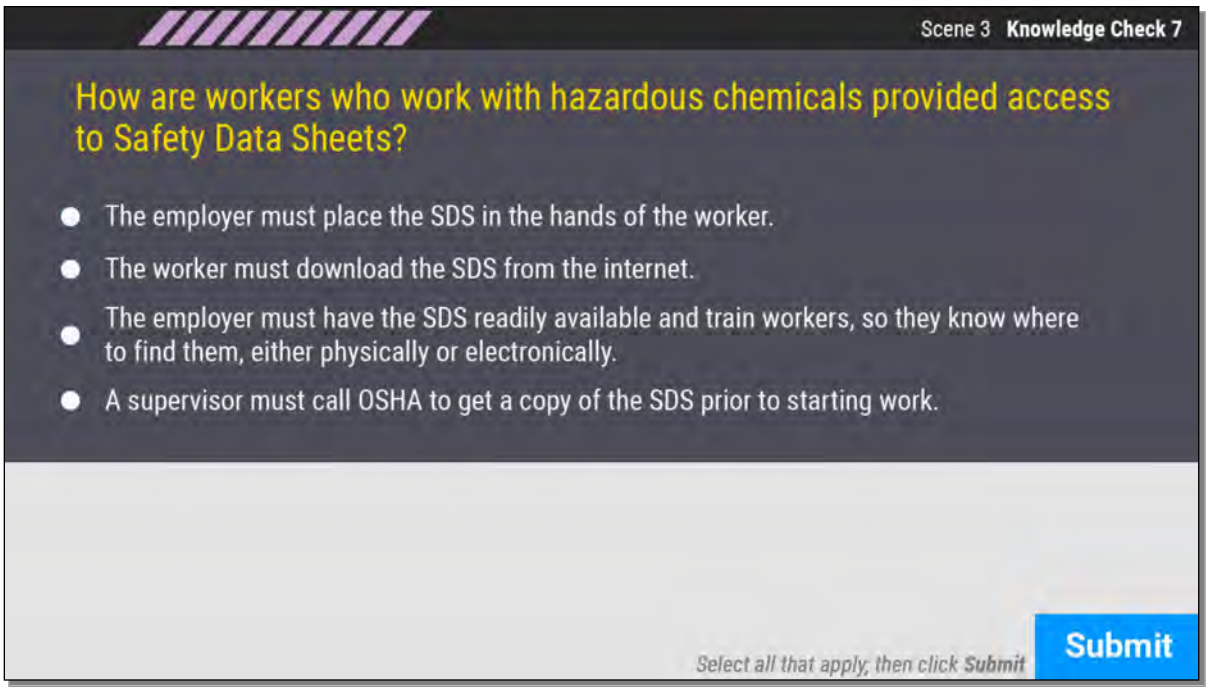
Slide 86 - Review | Safety Data Sheets 3



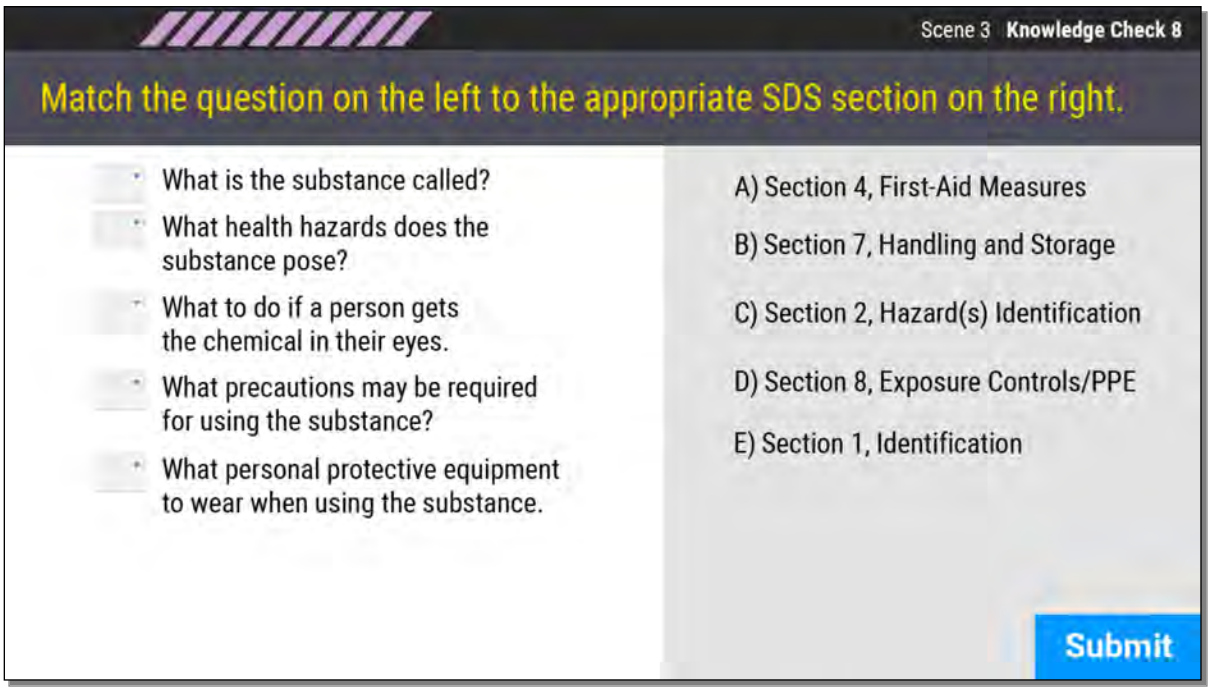
Before using a chemical, be sure to read sections of the SDS that may be relevant to the process you are undertaking, like requirements for safe handling and storage (section seven) and recommended PPE (section eight). In the event of a spill, a fire, or a medical emergency, make the SDS available to first responders and other personnel who may be exposed.

Let’s try a couple challenge questions to wrap up the course.

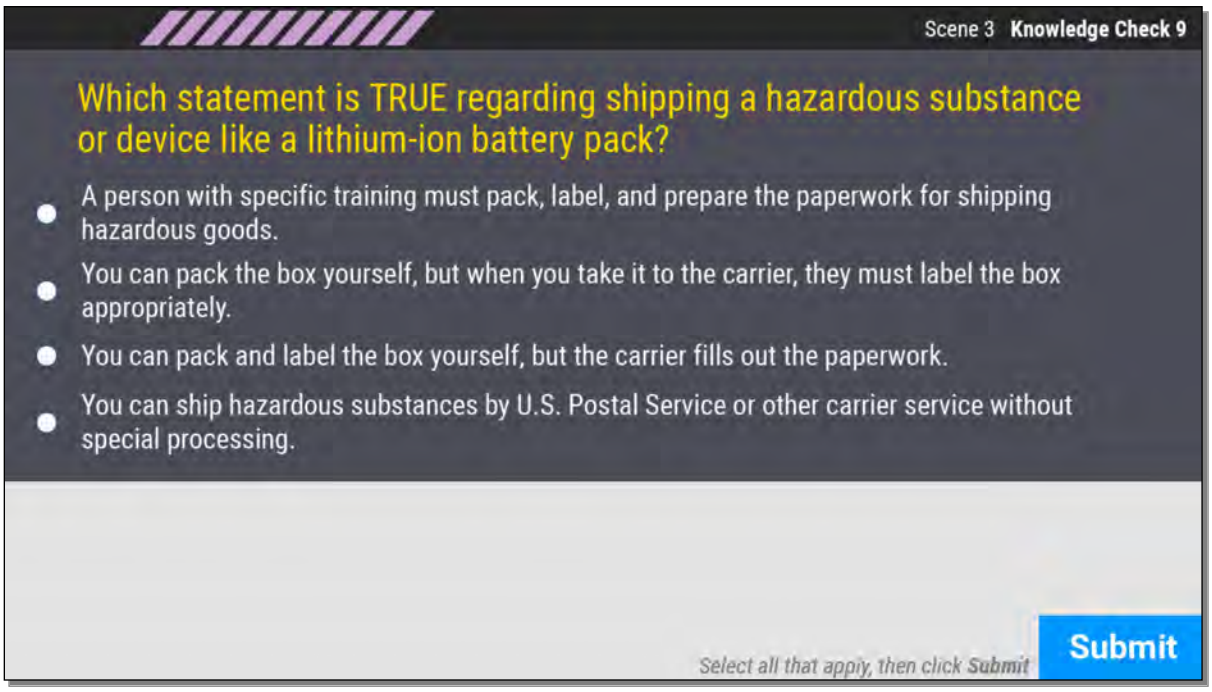
Slide 87 - Knowledge Check 7



Slide 88 - Knowledge Check 8



Slide 89 - Knowledge Check 9



Slide 90 - A Safe Attitude

Your safe attitude impacts how you act and react to workplace conditions and challenges.

Speak up about safety issues.

Ask questions.

Look out for your coworkers and for yourself.

Remember, safety starts with you.