Slide 1

The purpose of this presentation is to give you a general overview of the Federal Hazard Communication program.

Slide 2

What is HAZCOM? We hear that term come up a lot, but what does it really mean? HAZCOM is short for the Federal Hazard Communication program. With that in mind, are HAZCOM and HAZMAT the same program? The two terms are often used interchangeably. The answer would be false. OK then, so who does govern HAZCOM? It is OSHA, in 29 CFR 1910.1200, Hazard Communication. So then what about HAZMAT, is that OSHA or someone else? HAZMAT is primarily an EPA program. Although there is some overlap in the two programs, it is an important distinction because they both have their own unique requirements.

Slide 3

Why is HAZCOM important to me? Simply put, OSHA requires that employees understand the hazards associated with the chemicals they use in their workplace, and how to protect themselves.

Slide 4

There are five essential elements of the HAZCOM program. The are the written program, labeling, Safety Data Sheets, chemical inventory, and training. An important factor that is often overlooked is that the written program, chemical inventory, and training, must be specific to the workplace.

Slide 5

A question that comes up often is, “do I need a HAZCOM program?” The answer is, “it depends!” If you use any chemicals at all in the line of your regular duties, the answer is “yes”, even if they don’t seem very hazardous. Sometimes there are exceptions, like if you are using a chemical the same way you would at home, such as chemical wipes to clean your desk, or the oil you use to top off your government vehicle. This is referred to as “consumer use” in the OSHA standard. However, it is easy to cross this boundary when we perform more cleaning than we would at home, such as cleaning a large restroom for several people, or frequent disinfecting during a pandemic. Laboratories are also covered, but under what is called a “Chemical Hygiene Plan” because they use chemicals differently than what is typical in a workplace environment.

Slide 6

Considering what you have learned up to this point, let’s look at the following scenario. You are issued the Clorox wipes shown in the picture, and are instructed to use them hourly to disinfect a public-facing work area. Because this is a new product, what should you do? Your options are A) No big whoop, cleaning stuff is considered

consumer use; B) you could just refuse to use the product; C) Look for the SDS, or D) Talk to your supervisor or CDSO about how to safely use the product. In this scenario, you would want to do both C and D. It is important to note that although this product could be considered “consumer use” under some circumstances, that would not apply in this situation because of the frequency of use; most people do not disinfect hourly at home.

Slide 7

We’ve mentioned the SDS a few times, but what is it? What does “SDS” stand for?

SDS stands for “Safety Data Sheet”. Prior to 2012, there was not a standard format for what was known as Material Safety Data Sheets, or “MSDSs” at the time. It could sometimes be confusing and time-consuming to find important information on an MSDS, because there was so much variation between manufacturers. Several companies had already adopted a 16-section format similar to what we see today. In 2012, OSHA adopted the Globally Harmonized System, or GHS, which standardized the 16-section format.

Do you know where your workplace keeps their SDSs?

This should have been covered during your new employee orientation. If you are unsure, ask your supervisor or CDSO. As a bonus question: have you looked at them? Are they up to date? Does your workplace have employees who are younger than some of your SDSs?

How do you get an SDS?

Ideally, one should arrive with your product shipment. This doesn’t always happen, especially if you buy the product locally. These days, you can almost always find the SDS on the company website.

Slide 8

It is important for your SDS to match the manufacturer and product you are using. Although this seems pretty basic, it can be tricky if you don’t always purchase the exact same product every time. This is why it is important to periodically review your SDSs, preferably at least annually. Also keep in mind that the very latest SDS on the manufacturer website may not match what is on your shelf. If you have a five-year-old can of paint, it is appropriate to have a five-year-old SDS to go with it. My recommendation in that case is to initial that SDS along with the date you reviewed it, verifying it is still accurate.

Another question I hear is, is it really necessary to keep your SDSs 30 years? You don't have to if you keep your inventories for 30 years, and there is enough information on the chemical inventory to accurately lead you back to the SDS.

Slide 9

Speaking of a common term between the SDSs and chemical inventory, the GHS system also introduced the term "product identifier" in 2012. This is a term that can be used to cross reference between the SDS, chemical inventory, and the product label.

Slide 10

Now let's go ahead and look for our SDS. This does not need to be a difficult process.

Simply put the manufacturer name and product identifier into your favorite search engine. In this case, I used Google.

Slide 11

Google brought me here to the product page where I can easily find a link to the SDS.

Slide 12

Now that we have our SDS, let's take a look at some of the highlights.

Right away, we see our product identifier.

It also shows recommended uses,

as well as and any warnings that we should know about.

Slide 13

If there were any hazardous ingredients, you would see them here. As you can see, this appears to be a safe product for us to use, especially with the frequency we discussed earlier.

There is also emergency information to include first aid,

and what to do in case of a spill. Even the safest products can cause a reaction in case of accidental exposure or improper use. This is why it is always important to maintain SDSs on hand.

Slide 14.

These sections cover safe handling and required controls.

This section explains how to safely handle and store your product. If there were any special precautions, they would be listed here.

Section 8 discusses required controls to include personal protective equipment, or PPE. For instance, if you were required to wear gloves, they would be listed under “skin and body protection”. Some brands of wipes recommend the use of gloves, but these do not. This of course does not mean you cannot use gloves; it just means this product is less likely to cause skin irritation than some others. The respiratory protection section is often general and vague, this one at least tells you it is not required to use respiratory protection under “normal use” conditions.

Slide 15

Because we mentioned controls, let’s pause for a moment to discuss what is referred to as the hierarchy of controls. First, what are the three major categories of controls?

Engineering controls,

administrative controls, and

personal protective equipment, or PPE.

Can you name an example of an engineering control?

Typically we think of product isolation or industrial ventilation.

How about an example of an administrative control?

We see them all the time, work practice controls, training, maybe even limiting the time we perform a process.

How about PPE?

This is the least desirable in the hierarchy of controls, because it depends so much on the human factor. That said, it is also the most common. We often think of gloves, safety glasses or goggles, respirators, aprons, etc.

Slide 16

This section covers not just incompatible materials, but also chemical stability. This is important storage and proper use of the material.

The toxicology section discusses more detailed and specific health-related information to include routes of exposure, and long and short-term health effects. For instance, if the material was a carcinogen, that information would be listed here.

Slide 17

Disposal information is listed here. It usually just tells you to follow local, state, and Federal regulations.

Slide 18

Section 15 provides more specific disposal categories

Section 16 details information for NFPA and HMIS labeling, which include the numbers you often see on fire and chemical hazard placards.

Slide 19

Now that we have our SDS, can we start using our product?

Not quite, now let's take a look at the product label.

Slide 20

In addition to the standardized SDS format and signal word, GHS also brought us some standardization in labeling.

One of these changes is the harmonized signal word. If a product is deemed to require a hazard warning, the signal word would be either "danger" or "warning", depending on the hazard. Labels are also required to use standardized pictograms, a hazard statement, and precautionary statements.

Wait a minute, picto-what?

Any pictogram is simply a picture depicting a statement. GHS prescribed a set of pictograms to go on labels to warn users of associated hazards. Let's take a look.

Slide 21

Here are all of the GHS pictograms. Do you think you can match the meaning to each pictogram? Let's start from the top. Health hazard: Carcinogen/toxic: Which one do you think that is?

I'm not sure how to describe this picture, the man with an explosion on his chest. Flame: Flammable/self-reacting: This one should be pretty easy, but be careful because there are two with flames.

Hopefully you guessed the flame without the "O". Exclamation Mark: irritant/sensitizer: I think this one is pretty self-explanatory

Yes, it is the exclamation mark. Gas Cylinder: Gas: another self-explanatory one

It seems silly to put a picture of a gas cylinder on a gas cylinder, but there you have it. Corrosion: Skin/eye damage, corrosive.

This picture looks like a bad chemistry lab mishap. Exploding Bomb: Explosive

Yes, it is the picture of the exploding bomb. Flame Over Circle: Oxidizer

There is the other flame, but this one is over the "O". Oxidizers are a little scary, be very careful if you receive a product with this label. Environment: Aquatic toxicity

Oh, this is a fun one. It took me awhile to make out the fish and the tree in the picture. Scull and Crossbones: Acute toxicity

Another self-explanatory one, I think we can all associate the skull and cross bones picture with something that is very bad for you.

Bonus question: what IS acute versus chronic toxicity? Acute toxins can cause a health reaction immediately, and can range from a skin rash to death. Chronic toxins typically take many years, such as cancer or nervous system damage.

Slide 22

Now that we know all about labels, let's take another look at our label.

Oh, here is a pictogram! Or is it?

While this is a pictogram, it is not a GHS pictogram.

Slide 23

Now let's take a look at the back of the label.

Right here we have the hazard statement. This particular product is pretty safe and does not require a pictogram.

Here are a couple of label examples from different products that do have a pictogram and signal word. In this case, the signal word is "Danger" for both products. The

pictograms in the label on the right tell us it is a health hazard, and the exclamation mark tells us it is either a sensitizer or irritant. These are also chemicals to be cautious of, as sometimes it means the product is a respiratory sensitizer, which can cause an asthma-like reaction.

Slide 24

Let's do a quick check on learning. What is a product identifier?

The product identifier is the name or number used for a hazardous chemical on a label or in the SDS, and it is the same across the chemical list, SDS, and label.

If you recall, this is how it looked in our example.

Slide 25

Each chemical is required to come from the manufacturer with the following: the product identifier, signal word, hazard statement, pictogram, precautionary statement, as well as the manufacturer name, address, and phone number.

Slide 26

Remember, this is a manufacturer requirement, the user is not required to alter manufacturer labels to meet GHS requirements, as long as the label at least includes the product identifier along with words, pictures, or symbols that adequately communicate the hazard.

Slide 27

Time for another quick check on learning! Yes or no: You found this in your office, is it necessary to print out your own GHS-compliant label with hazard statements, signal words, and pictograms?

No

Slide 28

Now let's talk about transfer containers. These are common in workplaces when the user wishes to use a smaller container to dispense the product. In this case, I would like to dispense isopropanol from a smaller container to minimize the risk of spilling it during use. What would be a good container to use?

An Aquafina water bottle

A graduated cylinder

A GHS labeled squeeze bottle

Slide 29

A water bottle or any container that might be mistaken for somebody's drink is NEVER a good choice!

Slide 30

The graduated cylinder is ok, but because it lacks proper labeling, it is only appropriate for immediate use and must always remain within the employee's sight.

Slide 31

The optimal solution, when available, is a GHS labeled container, made just for this purpose. Although it doesn't include manufacturer information, it does contain the required product identifier and warnings.

Slide 32

Let's do another quick check on leaning. Find the SDS for this product. Pause the video, and look for the SDS based on the information you see on the label.

Did you use your favorite search engine to look for it? Sometimes you can make it even easier by typing "SDS" along with your manufacturer and product identifier.

Hopefully you see something that looks like this!

Slide 33

I hope you still have your SDS open, because I would like to take this exercise a little further, and see what all you have learned about finding information on an SDS. Go ahead and pause this video to make sure you have the SDS available. Now that your SDS is open, do you see the product identifier? What is it?

The product identifier is "Gorilla Super Glue". This is the term you would use on your chemical inventory.

Here is how it looks on the SDS.

Slide 34

Which section would I find information such as pictograms, hazard statement or signal words?

This information is found under Section 2: Hazards Identification

Slide 35

Do you see a pictogram? If so, what is it?

This product has the exclamation mark pictogram.

Now, do you see a signal word?

The Signal Word is “Warning”. Remember, the two choices are “warning” and “danger”.

Slide 36

How do the pictogram and signal word differ on the product label?

Do you see a pictogram and/or signal word on this label?

There is no pictogram

Is that acceptable?

Yes

Why?

Because there is a signal word.

So what is the signal word?

Warning

Slide 37

What is the hazard statement?

The hazard statement is just below the signal word. It tells us the product is a combustible liquid, causes skin irritation, causes serious eye irritation, and may cause respiratory irritation.

Does the hazard statement match the pictogram?

Yes, eye, skin, and possible respiratory irritation are in the hazard statement, and the exclamation mark warns us of possible irritation.

Slide 38

You have been asked to provide training in your shop for Gorilla Super Glue, what are some highlights you should cover?

Start with the information we already covered, to include the pictogram, signal word, and hazard statement.

What else would you discuss from Section 2?

Slide 39

Precautionary statements have a lot of good information regarding how to safely use the product, to include PPE, and what to do in case of inhalation exposure or contact.

Slide 40

Section 4 discusses first aid measures, as well as possible signs and symptoms of exposure.

This section talks about what to do in case of exposure.

Here is a discussion about both acute and “delayed”, health symptoms. Possible symptoms are important for employees to know about, so they are able to recognize that an exposure is taking place. For instance, if an employee’s eyes become irritated while using the product, they are more likely to attribute it to the product itself, and know they should move to a better ventilated area.

Section 6 discusses what to do in case of a spill, and if additional environmental precautions must be taken.

Slide 41

Additional safe handling procedures are discussed in Section 7.

You will also find storage considerations in this section. Pay special attention to safe storage temperatures and any incompatibilities. In this case, we must store our glue at room temperature, and away from any strong acids, bases, or oxidizers.

The engineering controls section discusses eyewash stations and ventilation.

You can see the PPE section does recommend chemically resistant gloves and eye protection.

Slide 42

Time for another quick check on learning. Keep in mind this presentation is recorded in the year 2021, where face coverings, procedural masks, and N-95 respirators are everywhere. Even then, I often find N-95 respirators in workplaces for “just in case”, which has many meanings. So the question is, will any of these protect you while using gorilla glue?

The answer is “no”. Cloth face coverings are never PPE, and even approved procedural masks are only effective for biological hazards. N-95 respirators are effective for biological and some particulate hazards. None of these will protect you from chemical vapors.

Slide 43

I mentioned the written HAZCOM program earlier in this presentation. Have you ever seen your shop’s written program? If so, where is it?

The location is of your written program is specific to your shop, so make sure to ask if you don’t know where it is.

Bearing in mind that the written program is supposed to be shop specific, what do you think is required to be in it?

The written program discusses how your office will meet requirements for acquiring and maintaining SDSs and product labels, as well as how they will train personnel.

It will contain an updated list of hazardous materials using “Product Identifier”. It is recommended to update this at least annually.

It is required to include methods for informing employees of hazards of non-routine tasks and unlabeled pipes.

How do you inform employees from other areas or companies of hazards associated with operations in your work area?

Slide 44

You might be asking, what is a non-routine task?

We all have them. Using our previous examples, we discussed using Clorox wipes several times per day. However, imagine that we only use the Gorilla Super Glue about twice per year. We might forget about the hazards associated with the glue.

Why do you think it is important to know what is in unlabeled pipes? Well, nobody really thinks about pipes, until they start to leak. Employees need to know how to appropriately respond to a pipe leak or a building emergency where the pipes might be compromised.

Multi-employer worksites. Imagine you are using your Gorilla Super Glue alongside a volunteer who is not assigned to your work area. How will you inform them of the hazards associate with the glue, or ask that they move to another work area until you are done?

Slide 45

So what are you taking back to your workplace? Most importantly, employees must understand the hazards associated with the chemicals they work with, to include the nature of the hazard, how to detect the presence of a chemical, and how to protect themselves.

Where can you get this information?

We have already learned that you can get a lot of information through training based on SDSs and labels

You should add this information to existing JSAs and SMIS

Scan through Safety, CASHE, and Industrial Hygiene audits to see if any chemical hazards have been identified through that process

Slide 46

One last quick check before we're done. Pause for a moment to think of the things you will bring back to your workplace.

How do you find an SDS? Where is your SDS binder? Is it up-to-date? How will you get an SDS if one is not current or doesn't exist?

What are the hazards of chemicals in your workplace? Hopefully you have been trained on the hazards of chemicals you already work with. Additional information should also be in your local HAZCOM training materials or JSAs, and you can always find information on the product label and SDS.

Where is your workplace chemical inventory? Do you know who to ask if you haven't already seen it? Is it up to date?

Where is your HAZCOM written program? Have you been familiarized with this document? Is it specific to your shop? Is it up to date?

Who is responsible for maintaining all this stuff? Is it your supervisor, CDSO, maybe even it's you!

Slide 47

I hope this training has given you a better understanding of basic HAZCOM and GHS requirements. If you have questions, there is additional information in Chapter 21 of the BLM Handbook 1112-1, Safety and Health Management, you can talk to your supervisor or CDSO, or you can visit the OSHA HAZCOM website.