HAZARDOUS MATERIALS

Safety Meeting Contents

- Meeting Notice
- Leaders Guide
- Employee Handout
- Employee Quiz
- Meeting Sign-In Sheet
- Employee Puzzle

PRIOR TO THE WEEKLY MEETING:

- Post the meeting notice by the timeclock
- Read through the Leaders Guide and Employee Handout to familiarize yourself with the topic for the week
- Make copies of the employee handout (one for each employee)
- Make copies of the employee quiz (one for each employee)
- Make copies of the weekly puzzle (one for each employee)

AT THE SAFETY MEETING:

- Pass around the meeting sign-in sheet – ensure all employees present at the meeting print and sign their names
- Pass out the employee hand-out
- Pass out the employee quiz
- Pass out the weekly puzzle
- Keep the meeting simple
- Encourage discussion and questions
WEEKLY SAFETY MEETING NOTICE

THIS WEEK, OUR SAFETY MEETING WILL COVER HAZARDOUS MATERIALS

TIME: __________________________________________________________

DATE: _________________________________________________________

PLACE: ________________________________________________________
HAZARDOUS MATERIALS

Leaders Guide

EURAMAX PROCEDURE REFERENCE:
F-1.0: Hazard Communication and Chemical Safety Program (Hazcom/MSDS)
F-3.0: Flammable Liquids Safety Program

MEETING OBJECTIVE:
Getting people to respect and properly handle hazardous materials may be the most important safety meeting topic you cover this year. Improper handling or inadequate protection while working with hazardous materials can result in explosions, poisoning, long-term health problems, and other serious and potentially fatal illnesses and injuries to individuals and even your facility. The purpose of this meeting is to show your employees steps that they can take to protect themselves and others while handling hazardous materials in the workplace.

MEETING PREPARATION:
Read the Euramax procedure, understand the contents, and ensure compliance.

Make a list of all the hazardous materials used, handled, or stored at your facility. Bring this list to the meeting.

Collect in-house and manufacturer labels for the most commonly used chemicals at your facility.

Collect samples of required PPE for working with hazardous materials. Bring these to the meeting.

Take photographs of common warning signs used at your facility. (For example, “No Smoking,” “Chemical Storage Area,” “Authorized Personnel Only.”)

Select several Material Safety Data Sheets (MSDSs) for chemicals commonly used at your facility. Make copies of at least one MSDS for distribution to employees attending your meeting.

Familiarize yourself with emergency procedures for chemical spills, fires, and medical emergencies involving hazardous materials. Be prepared to discuss this information at the meeting.

Review the employee handout to see if there are any other materials you wish to bring to the meeting.

Use a flip chart during the discussion to write key points and employee responses. This technique visually reinforces your instruction.
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MATERIALS CHECKLIST:
List of hazardous materials used at your facility
Photos of warning signs
Samples of in-house and manufacturer’s labels
Samples of PPE required for handling hazmats
Copies of Material Safety Data Sheets (MSDSs)
Flip chart and marking pens

MEETING
INTRODUCTION
We work with and around a variety of chemicals. Many of them are hazardous under certain circumstances. During this meeting we’re going to identify these hazards and talk about the precautions you can take to protect yourself and your co-workers. Working with chemicals doesn’t have to be hazardous – as long as you follow the established safety procedures and use the personal protective equipment required.

By law, Euramax is required to train employees about the dangers of hazardous materials in the workplace. But it is the responsibility of employees to use this information wisely and follow all safety rules and procedures. Employee awareness and involvement, along with a sound hazmat safety program, can prevent most accidents and injuries from occurring.

1. Review the list of hazardous materials at your facility that you brought to the meeting. Use your flip chart and input from employees to discuss the various chemical hazards specific to your workplace.
2. Explain that there are five (5) types of hazards. Review the description of each with the group (see below).
3. Write the five (5) types of hazards on the flip chart. For each hazard that applies to your workplace, name the type of chemicals with which employees are likely to come into contact.

FIVE (5) TYPES OF CHEMICAL HAZARDS:
Toxic: Most chemicals are toxic at some level of exposure. If allowed to enter the body through the nose, mouth, or skin, they can make you sick. Fumes, dust, and vapors from toxic materials can be especially harmful because they can be inhaled and pass quickly from the lungs into the bloodstream, allowing the poisons to circulate throughout the body.
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Flammable or Combustible: This category includes those materials that catch fire easily, burn rapidly, spread quickly, and give off intense heat. Many materials used and stored in the workplace are flammable, including many solvents and lubricants.

Corrosive: Materials like strong acids and bases can eat right through other substances – including your clothing. If splashed on the skin or eyes, they can cause serious burns. Some of these materials can break down into poisonous gases, making them doubly hazardous.

Reactive: These materials are unstable and undergo rapid or violent chemical reactions. Some can burn simply by being exposed to air or water or when mixed with other substances – they don’t even need to be near heat or flames to burn. These materials can also emit vapors that can be hazardous if inhaled. Therefore, reactive substances must be isolated, stored in special containers, and used with extreme caution.

Explosive: Some materials can explode when they are exposed to heat or flame. Flammable liquids and compressed gases are included in this category, since they can explode under certain conditions.

Display photos of the warning signs posted around the facility. Ask the group to discuss what kind of information these signs contain and why they must be obeyed.

Show your group the sample labels you have brought to the meeting.

Question: What information must all in-house labels provide?

Answer: All in-house labels must identify the chemical and give a hazard warning.

Question: What information does a manufacturer’s label provide?

Answer: Many manufacturer labels provide other information. For example:

- Precautions to take when working with the chemical
- Special storage requirements
- Required PPE to use when handling the chemical
- Symptoms of overexposure
- What to do in case of exposure
- Where to find further information and instruction

Distribute copies of the MSDSs that you have brought to the meeting.
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Question: What information does the Material Safety Data Sheet (MSDS) contain?

Answer: The MSDS provides vital information about hazardous materials in the work area. It gives more information than is contained on the label, including…

Identification. This section tells you the name of the chemical. This is the same name that appears on the container label.

Hazardous ingredients. This section tells you the chemical names of hazardous substances that make up this particular material.

Physical/chemical characteristics. Listed here is important information concerning the material’s appearance and odor, its boiling point, vapor pressure, vapor density, solubility in water, melting point, and evaporation rate.

Fire and explosion hazards. The MSDS also tells you when the material might catch fire or explode and what you can do to deal with these hazards. Special instructions are included here.

Reactivity. Some materials can burn or explode when exposed to air or water – or when mixed with other substances. These materials are reactive and this section of the MSDS tells you the conditions under which these materials become dangerous.

Exposure controls and personal protective equipment. This section specifies ventilation and other necessary controls for working safely with this hazardous material. It also lists the PPE you should wear to protect yourself against exposure.

Health hazards. This is another very important section, because it tells you the acute (short term) and the chronic (long term) effects of overexposure to the material. It also tells you the symptoms and the emergency first-aid procedures to use in case of overexposure.

Precautions for safe handling and storage. This section stresses the special handling and storage precautions you should take based on the unique properties of the material. This includes various safe work practices to help you minimize contact with the material and reduce the risk of fires, explosions, and spills.
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Other sections. It is not uncommon for an MSDS to include up to 16 different categories of information. Other important sections contain information about firefighting methods, accidental release measure, ecological information, disposal considerations, and safe transportation information.

Question: What are some of the symptoms of overexposure to hazmats?

Answer: Dizziness
Nausea
Irritation of eyes, nose, throat
Skin Rashes
Extreme nervousness or agitation
Sluggishness

Question: What types of PPE are needed when handling different hazardous materials to prevent exposure?

Answer: (Tailor to suit your facility)
Goggles
Gloves
Face shields
Aprons
Respirators

Question: What about personal hygiene when working around hazardous materials?

Answer: Wash thoroughly after working with any chemical.
Wash before putting on gloves, taking breaks eating meals, and at the end of your shift.
Never eat, drink, apply makeup, or smoke in an area where hazmats are used or stored.
Keep your PPE and work clothes clean and in good repair.
Practice good housekeeping minimizes contamination of your work area.
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Discuss emergency procedures in the event of a spill or exposure.

**Question:** What should you do if someone gets chemicals in their eyes?

**Answer:** Hold the eyelid(s) open and flush eye(s) with clean water. Continue flushing for 15 to 20 minutes.

Don’t rub the eye(s).

Be careful not to cross-contaminate your eyes. Flush from the inner area (near your nose) to the outside.

Seek further medical attention.

**Question:** What procedure should you follow if you get chemicals on your skin?

**Answer:** Flush area thoroughly with lukewarm water for at least 15 minutes. Be sure to wash chemical away completely.

Remove clothing and jewelry from burn areas. But if clothing sticks to the burn, do not try to remove it.

Seek further medical attention (some chemicals have delayed reactions).

**Question:** What if someone swallows a hazardous material?

**Answer:** Induce vomiting only if instructed by MSDS.

Get immediate medical attention.

**SUMMARY:**
The information you learned here today is vital to your health and safety. If you have any questions about anything we’ve discussed, please speak to any supervisor right away. Hazmat safety is too important to ignore or take lightly. Let’s all work together to prevent hazmat accidents and injuries.
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Leaders Guide

EMPLOYEE HANDOUT

A. Employee Handout
B. Flammable Liquid Quiz
C. Flammable Liquid Puzzle

QUIZ ANSWERS:
1. True
2. B
3. True
4. B
5. D

PUZZLE ANSWERS:
There is much that you can do to prevent a spill or leak, but if one occurs, your safety and that of others depend on your quick and appropriate response.

**Prevention**
Since the best spill is no spill at all, follow these procedures to lessen the chance of one occurring:
- Inspect containers regularly for leaks, corrosion, worn seals.
- Handle containers with care, removing only as much of their contents as you need at a time. Close containers after using them.
- Find out how to dispose of chemicals you no longer need.

**Getting Ready**
"Getting ready" for a spill? Yes-unfortunately spills do happen, and there are certain preparations you should make:
- Be familiar with your company's emergency response plan, evacuation routes for your area and your assigned role in a spill situation.
- Make sure that the phone number of the emergency coordinator to whom you must report a spill is clearly posted.
- Check labels and MSDSs of chemicals you use. You should know the potential hazards-fire, explosion, reactivity, toxicity-that might be present in a spill.

**When a Spill Happens**
If a spill occurs, **try** to avoid touching it, walking in it, or breathing it, whether it has an odor or not. **Report a spill or leak immediately.** Be prepared to tell what is leaking or spilled, where it is, the size of the spill or the leak's rate of flow. You may be asked to clean up a small spill, following company policy and MSDS procedures. For larger spills, your response depends on your assigned responsibility. Unless you are on the spill response team, you should evacuate the area according to your assigned route, warn others to leave and stay out of the area until you are told it's safe to return.

**Containing the Spill**
For all but the smallest spills, the spill response team will step in with procedures and equipment for containing the spill and protecting workers and the environment from exposure to the substance. Team members must wear protective clothing and perhaps respirators. If the spill is flammable, they will avoid using tools that spark. Corrosion-resistant tools must be used with corrosive substances.

The first step is to try to stop the leak or spill by securing a valve, closing a pump, plugging a hole in a leaking container or shifting a container to stop the flow. A barrel may be placed under the leak, or the leaking container may be placed in a larger container or a bag.

Meanwhile, team members work to keep the spill from spreading, putting dikes around drains or reactive chemicals. Once the spill is under control, workers can use a variety of cleanup methods. Absorbent pillows, pads or substances such as clay and vermiculite absorb small spills. Workers may use a vacuum truck or a specially designed squeegee to move the spill to a chemical drain or to special drums for disposal.

**Afterward**
Following cleanup of a spill, clothing and equipment involved in the cleanup must be decontaminated according to company procedures. OSHA regulations require each spill to be reviewed and reported. You can do your part by discussing with your co-workers how the spill could have been prevented and what steps might be taken to keep such spills from happening in the future. By learning from accidents, you can help prevent them.
HAZARDOUS MATERIALS
Employee Quiz

Answer the following questions to see what you know about hazardous materials.

1. All containers carrying Hazardous Materials are marked with signs called “placards”.
   True or False

2. When is it safe to return to a Hazardous Materials spill area?
   A. When the clean-up crews have left
   B. When the authorities say it is ok
   C. When the area looks clean
   D. All of the above

3. There are over 30,000 different Hazardous Materials in the United States.
   True or False

4. How many shipments are there daily of Hazardous Materials?
   A. 400,000
   B. 800,000
   C. 1,200,000
   D. 1,600,000

5. How many Hazardous Materials labels are there in use today?
   A. 5
   B. 15
   C. 25
   D. 35
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Meeting Sign In Sheet

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**CONTENTS OF MEETING**
(Attach Handouts, etc.)

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Employee Puzzle
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Employee Puzzle

Across
1. Recognize as being a source of health or safety risk
3. A room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present. (2 words)
5. Parts Per Million (abbrv)
6. a neurotoxin formed by botulinum and causing botulism
9. Publishes the National Electrical Code and fire codes, promoting fire safety and prevention. (abbrv)
10. A chemical substance that causes an abnormal multiplication of cells that tends to infiltrate other tissues and metastasize (spread). (2 words)
12. U.S. Dept. of Transportation. Regulates transportation of materials to protect the public as well as fire, law enforcement, and other emergency-response personnel. (abbrv.)
13. An elements or compound of a common general type. For example, acetone.
14. Personal protective equipment. Devices or clothing worn to help isolate a worker from direct exposure to hazardous materials. Examples include gloves, respirators, safety glasses, or ear plugs. (abbrv.)
16. This Act controls the exposure to and use of raw industrial chemicals not subject to other laws. Chemicals are to be evaluated prior to use and can be controlled based on risk. The act provides for a listing of all chemicals that are to be evaluated prior to manufacture or use in the U.S. (abbrv.)
17. The condition of being susceptible to harm or injury.
19. A law passed by US Congress to prevent employees from being injured or contracting diseases in the course of their employment. The regulatory and enforcement agency for safety and health in most U.S. industrial sectors.
20. The agency of the Public Health Service that tests and certifies respiratory and air-sampling devices. It recommends exposure limits to OSHA for substances, investigates incidents, and researches occupational safety. (abbrv.)
21. Molecular Compounds. The state in which a substance has no tendency to flow under moderate stress as opposed to liquids or gases.
22. An organization of professionals in governmental agencies or educational institutions engaged in occupational safety and health programs. Develops and publishes recommended occupational exposure limits for chemical substances and physical agents. (abbrv.)
24. The process of identifying, evaluating, and managing existing or potential hazards or conditions that may lead to injury, illness, damage, or liability. For our purposes, a hazard or risk is a potential source of danger
27. A document that provides necessary information about precautions for protecting against known hazards associated with the material and often include useful information on chemical, physical, and toxicological properties, along with suggestions for storing, transporting, and disposing of chemicals. (abbrv.)
29. The state of matter distinguished from the solid and liquid states.
31. A cloud of solid or liquid particles in a gas.
33. A fibrous amphibole; used for making fireproof articles; inhaling fibers can cause asbestosis or lung cancer.
35. Highly or violently reactive.
36. The primary Federal law governing the management of hazardous waste.
HAZARDOUS MATERIALS
Employee Puzzle

Down
1. International Union of Pure and Applied Chemistry (abbrv.)
2. Protective measures for exposed employees. (2 words)
4. The minimum temperature which will initiate a self-sustained combustion of liquid, gas or solid in the absence of a spark or flame: the lower the ____ - ________, the greater the fire hazard. (2 words)
5. Written materials in lieu of affixing labels to individual stationary process containers. Examples: signs, batch tickets or operating procedures.
6. ____________ operations must be located in well-ventilated areas away from manufacturing and service areas. The facilities must include ways for flushing and neutralizing spilled electrolyte, and ventilation to disburse fumes. (2 words)
7. International Agency for Research on Cancer (abbrv.)
8. Gases ejected from an engine as waste products. (2 words)
11. Established in 1978 by the Secretary of Health and Human Services to coordinate toxicology research and testing activities within the Department, to provide information about potentially toxic chemicals to regulatory and research agencies and the public. National Toxicology Program (abbrv.)
15. Ethanol is the only _______ that is "safe" for human consumption. Drinking methanol, isopropanol or denatured ethanol, even amounts as small as an 1 to 2 ounces = 50 ml, can lead to blindness, coma and death.
18. An assigned number used to identify a chemical. (2 words)
20. Causing or able to cause nausea
23. The act or means of getting rid of something.
25. Inert Gas. A simple asphyxiant that has no threshold limit value (TLV).
26. Guidebook developed by the U. S. Department of Transportation for use by firefighters, police, and other emergency services personnel who may be the first to arrive at the scene of a transportation incident involving a hazardous material. (abbrv.)
28. Employ for a particular purpose.
30. The Superfund Amendments & Reauthorization Act requires "Hazardous Chemical Reporting" on the MSDS. (abbrv.)
32. A federal agency established to coordinate programs aimed at reducing pollution and protecting the environment. (abbrv.)
34. Extremely Hazardous Substances your facility at an acceptable threshold. (abbrv.) Example: SULFUR DIOXIDE: 500 LBS