WEEKLY SAFETY MEETING

All Euramax Subsidiaries

FLAMMABLE LIQUID SAFETY

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

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WEEKLY SAFETY MEETING NOTICE

THIS WEEK, OUR SAFETY MEETING WILL COVER

FLAMMABLE LIQUID SAFETY

TIME: _____

DATE: _____

PLACE: _____

WEEKLY SAFETY MEETING

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FLAMMABLE LIQUID SAFETY

Leaders Guide

EURAMAX PROCEDURE REFERENCE:
F-3.0: Flammable Liquids Safety Program

MEETING OBJECTIVE:
Flammable and combustible liquids are extremely hazardous. Your employees need to be thoroughly familiar with their safe storage and handling. The purpose of this meeting is to define the properties of flammable and combustible liquids, to explain why they are so hazardous, and to describe the steps employees must take to prevent fire or explosion.

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

Make a list of the flammable and combustible liquids at your facility. Note where they're located, how they're used, and what precautions must be taken when handling them. Bring this list to the meeting and be prepared to discuss this information.

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.

MATERIALS CHECKLIST:
List of flammable and combustible liquids
Flip chart and marking pens

MEETING
INTRODUCTION
Flammable and combustible liquids pose special hazards that you should all be aware of. Accidents with these liquids anywhere in our facility could put us all at risk and cause a lot of damage to the plant. Today, we're going to discuss those hazards and the steps you must take to protect yourself and others from being injured by these potentially dangerous liquids.

The lowest temperature at which a liquid releases enough vapor to start burning is called the flash point. Flammable liquids have a flash point below 100°F (they will release enough vapor to form ignitable mixtures with air at temperatures below 100°F). Examples of flammable liquids include methyl ethyl ketone (MEK), acetone, gasoline, xylene, toluene, and turpentine. Combustible liquids have flash points at or above 100°F before they will release enough vapor to

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Leaders Guide

form an ignitable mixture with air). Examples of combustible liquids included heating fuel oils, kerosene, and several hydraulic and lubricating oils.

***Question*:** **Why are these liquids so hazardous?**

Answer: Flammable liquids vaporize and form flammable gas mixtures when they are left in open containers, when leaks or spills occur, or when they are heated. Flammable and combustible liquids can form flammable concentrations in closed containers when heat is applied. The vapors also tend to collect in low spots.

***Question*:** **What determines the degree of danger?**

Answer: A number of factors, including…
The flash point of the liquid
The concentration of vapors in the air
The possibility of a source of ignition nearby, such as…

- Hot surfaces (hot plates, electric coils, overheated bearings)
- Open flames (pilot lights, smoking materials)
- Hot particles and embers (grinding, welding)
- Sparks (static electricity from rotating pulleys and belts or while transferring liquids, sparks from electrical tools, etc.

Question: **What happens if an ignition source comes in contact with the right combination of vapor and air?**

Answer: Fire or explosion can result, causing serious injury or loss of life.

Explain how such an incident might occur at your facility. Use the flammable or combustible materials your employees work with as examples.

***Question*:** **What are some effects of overexposure to flammable liquids and their vapors?**

Answer: Irritation of the skin
Irritation and/or damage to the lungs and the mucous membranes from inhalation
Irritation and/or damage to the eyes.
Damage to the central nervous system and internal organs.

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Question: **What precautions must you take to prevent a fire involving flammable liquids?**

Answer: Keep liquid vapors confined so they can't mix with air; or ventilate the area with fresh air. When liquids are sprayed indoors (e.g., spray painting), ventilated booths or rooms must be used.

Remove all possible ignition sources (prohibit smoking, ground equipment, etc.)

Use fire protection devices, such as sprinklers or chemical suppressors.

Ground containers and bond them when transferring flammables and combustible to prevent sparks.

Question: **What safe handling and storage procedures must be followed?**

Answer: Use the proper equipment such as safety cans with spring-loaded closures, covered bench cans, safety disposal cans, etc., so that excess vapors don't escape. Never use open containers, buckets, cans, tanks, or drums for flammable and combustible liquid.

Check to be sure that quantities stored are within regulated limits.

Isolate flammable and combustible liquids in a special room or cabinet with fire-resistant walls, doors, ceilings, and floors. Other requirements may include ventilation, sprinklers, and containment.

Know the location and operation of the appropriate fire extinguishing equipment. Know the emergency response plan at your facility.

Make sure all flammable and combustible liquids are properly labeled.

Try to keep only one day's supply of flammable and combustible liquids at the worksite; the reserve should be kept in a proper storage room or cabinet.

Review your list of the flammable and combustible liquids that are handled or stored at your facility.

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Leaders Guide

Discuss specific precautions you must take with these potentially dangerous liquids.

SUMMARY:

All it takes is one spark to one small spill to set off a highly dangerous situation when you are working with or around flammable and combustible liquids. Keep the information you learned today firmly in mind. We can't afford mistakes when dealing with these materials.

EMPLOYEE HANDOUT

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

QUIZ ANSWERS:

1. True
2. B, C
3. True
4. True
5. True
6. True
7. True
8. True
9. False
10. False

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Employee Handout

Flammable liquids, although very common in almost every workplace, are dangerous. Flammable liquids can explode or burn very fast. The fire gives off a lot of heat and often thick, black, toxic smoke. Special care and attention are a must when using, storing or disposing of flammable liquids.

Solvents, thinners, cleaners, oil-based paints and gasoline are all considered flammable liquids — liquids that can burn. However, it is not the liquid that burns; it is the vapors in the air that burn if they come into contact with an ignition source.

Classification of flammable liquids is determined by their flashpoint. Flashpoint is the lowest temperature at which vapors from the liquid can be ignited. Gasoline, for example, has a flashpoint of –40C or –40F, which means gasoline vapors can ignite in just about any climate.

It takes four components to make a fire. These are oxygen, a source of ignition, fuel and a chemical reaction.

- Oxygen is always present in the air.
- The source of ignition can be a spark, static electricity, friction, a match or a hot surface.
- Fuel can be the vapors given off by a flammable liquid such as gasoline or benzene.
- When these elements come together, they create a chemical reaction and fire is the result.
- The best way to avoid fire with flammable liquid is to keep these components separate. Here are some suggestions on how to do that:
- Keep flammable liquids in approved, closed containers when not in use. A proper container should have a self-closing cover, a venting device and a flame arrester. The container should also be leak-proof and resistant to corrosion. Storage areas must be designated, cool, dry, well-ventilated and easily accessible.
- Promptly clean up all spills of flammable liquids. Dispose of waste in approved containers.
- Carefully read the material safety data sheets (MSDS) accompanying the flammable liquid you are working with. The MSDS will indicate the proper personal protective equipment to wear. If you do not understand the MSDS, ask your supervisor to go over it with you.
- Use the least hazardous material to do your job.
- Work in well-ventilated areas, especially when dealing with flammable liquids.
- Keep flammable liquids away from all possible sources of ignition including static electricity or sparks and hot equipment such as furnaces or steam pipes.
- Containers of flammable materials must be totally purged or flushed to remove vapors. Then and only then can the container be considered empty.
- Flammable liquids must only be used as they are intended. For example, never use gasoline as a cleaner.
- Don't smoke around flammable liquids.
- Do not dispose of flammable liquids by dumping them down the drain. Most communities have strict environmental laws in place that will guide you in the best possible way to dispose of flammable liquids.

Flammable liquids are dangerous and should never be taken for granted. Learn all you can about the flammable liquids you come in contact with. Know how to handle them properly and how to use them safely.

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Employee Quiz

Answer the following questions to see what you know about flammable liquid safety.

1. Explosions and fires are hazards of flammable liquids.
   True or False

2. Which of the following are examples of flammable liquids?
   a. water b. gasoline c. solvents

3. Flashpoint is the lowest temperature at which vapors from a flammable liquid can be ignited.
   True or False

4. Oxygen is required to make a fire.
   True or False

5. A source of ignition is needed to start a fire.
   True or False

6. Fuel is needed to start a fire.
   True or False

7. In a flammable liquid fire, it's the vapors that actually burn.
   True or False

8. A spark or a hot surface are examples of ignition sources.
   True or False

9. You should use the most hazardous material available to do the job.
   True or False

10. Gasoline can be safely used as a cleaner.
    True or False

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Meeting Sign In Sheet

LOCATION _____

MEETING DATE _____ **MEETING CONDUCTED BY** _____

CONTENTS OF MEETING
(Attach Handouts, etc.) _____

_____

ATTENDEES:

	Name (Print)	Signature		Name (Print)	Signature
1			22		
2			23		
3			24		
4			25		
5			26		
6			27		
7			28		
8			29		
9			30		
10			31		
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20			41		
21			42		

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Employee Puzzle

O T T E E P H U I G Q J L F N
Y R N D L B Q R X T S D Y O E
Q E I A S B I C O I P X I Y L
V N O U L F I X O R X T F I C
W I P O L E I T E K I E Q V F
L A H Z I C R C S N V U Z X L
S T S A P J A I G U I U K Q A
P N A F S U I I F D B S J U M
A O L M T H U V S V T M S T M
R C F I C A V U M O B Z O T A
K G O O S U O D R A Z A H C B
S N D Q S R V A P O R S S K L
S W Z F F D G H D J P B T B E
U G B E S E M H S R G O E C Z
E Z M F L A M E S G J G N T A

COMBUSTIBLE
CONTAINER
FIRE
FLAMES
FLAMMABLE
FLASHPOINT
HAZARDOUS
IGNITION
LIQUIDS
PRECAUTIONS
SPARKS
SPILLS
STORAGE
TOXIC
VAPORS