WEEKLY SAFETY MEETING

All Euramax Subsidiaries

WELDING SAFETY / HOT WORK 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

WEEKLY SAFETY MEETING NOTICE

THIS WEEK, OUR SAFETY MEETING WILL COVER

WELDING SAFETY / HOT WORK SAFETY

TIME: _____

DATE: _____

PLACE: _____

WEEKLY SAFETY MEETING

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WELDING SAFETY / HOT WORK SAFETY

Leaders Guide

EURAMAX PROCEDURE REFERENCE:

K-3.0: Welding Safety Procedures
K-4.0: Compressed Gas Cylinder Safety
K-5.0: Hot Work Safety Program

MEETING OBJECTIVE:

Welding is a hazardous activity that can damage property and cause serious injury to both workers and bystanders. Anyone working as a welder, or near one, should familiarize themselves with the basic hazards and safeguards that should be taken before work begins.

MEETING PREPARATION:

Read the Euramax procedure, understand the contents, and ensure compliance.

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:

- Flip chart and marking pens

MEETING

INTRODUCTION

Today we are going to talk about welding safety and hot work safety. Most of you will probably never learn to weld or have a need to weld. Why should we worry? Welding is a hazardous activity that can damage property and cause serious injury to both workers and bystanders. Anyone working as a welder, or near one, should familiarize themselves with the basic hazards and safeguards that should be taken before work begins.

Protective gear and cramped, overheated surrounding can cause someone to work up quite a sweat while welding or cutting. However, the phrase “hot work” has quite a different meaning when applied to these activities. Hot work means working with ignition sources near material that can burst into flame or explode. It’s right up there with toxic fumes, ultraviolet (UV) light, and excessive noise as major hazards of welding.

WEEKLY SAFETY MEETING

All Euramax Subsidiaries

WELDING SAFETY / HOT WORK SAFETY

Leaders Guide

Fire often results when a quick 'five minute job' is done somewhere not intended or protected for hot work. Today we will review the proper safety procedures when welding or performing hot work.

DISCUSSION GUIDE

***Question*: What are some types of accidents or injuries that can happen to you related to welding?**

Answer: Burns to unprotected eyes, known as welding flash.

Burns to the skin from the ultraviolet (UV) radiation in the welding arc – the bright light from welding.

Fires igniting from scrap, stored material or even the buildings where welding is done.

Explosions caused by the ignition of flammable gas or liquid vapors in pipes, tanks and other containers that have not been cleaned before welding.

The inhalation of toxic fumes during the heating or welding of metals in confined spaces or poorly ventilated areas.

Electrocution from equipment that is defective, used improperly or hooked up incorrectly.

***Question*: What PPE should employees who are welding use?**

Answer: Employees who weld must wear filtered eyewear including face shields, goggles and glasses. Workers nearby should also wear appropriate eye protection.

Employees who weld must wear protective clothing including non-flammable head protection, leather jackets and aprons, welding gloves and long-sleeved (buttoned cuff and collar) shirts. Pant legs should cover the tops of high-cut leather safety boots.

***Question*: What is "welding flash"?**

Answer: "Welding flash" is the name given to a painful condition caused by looking at a welding arc without wearing eye protection.

WEEKLY SAFETY MEETING

All Euramax Subsidiaries

WELDING SAFETY / HOT WORK SAFETY

Leaders Guide

***Question*: What kinds of radiation come from welding?**

Answer: There are three kinds of radiation from welding which can damage the eyes. They are visible, ultraviolet, and infrared radiation.

- The first, visible radiation is the very bright visible light. It can cause eye fatigue, or even permanent damage which may lead to blindness.
- Ultraviolet radiation is invisible. It causes burning of the eye. Its main symptom is a feeling of "sand in the eyes" which may develop hours after the exposure. Ultraviolet radiation also causes burning or tanning of the skin.
- Infrared radiation, which is invisible too, may cause burns to the retina of the eye. Cataracts, which cloud the vision, may develop after repeated exposure.

***Question*: Other than your eyes, how can welding hurt other parts of your body?**

Answer: **Skin:** When you are welding, unprotected skin is exposed to hot metal, sparks and UV radiation (arc welding).

Hearing: Welding can generate noise levels which cause hearing loss.

Respiratory: If you perform welding operations in a poorly ventilated area, you are at risk of inhaling fumes, gas and dust present in the air as a result of welding. These elements enter your lungs and can cause flu-like symptoms known as metal fume fever. While metal-fume fever may clear up in a day or two, it is possible for it to cause much more damage to your respiratory system.

Head: Sparks can burn your hair, causing painful damage to your scalp and skin.

Neck and Back: Standing for long periods of time bento over your work can cause stress to your back. The traditional "nodding of the helmet" - - flicking your face shield down with your head and neck just before the arc is struck - - can cause neck strain.

WEEKLY SAFETY MEETING

All Euramax Subsidiaries

WELDING SAFETY / HOT WORK SAFETY

Leaders Guide

***Question*:** **What "Hot Work" precautions must be taken before starting?**

Answer: Permit-required areas are made fire-safe by removing or protecting combustibles from ignition sources.

A permit for hot work is issued by someone authorized by management to do so after being satisfied that proper precautions have been taken.

Those precautions include:

- Making sure all equipment is in good operating order before work starts. Equipment not capable of reliable, safe operation should be repaired by qualified person or withdrawn from use.
- Making sure the crew has the correct number of personnel to do the job and that they are properly trained for their specified task.
- Making sure all lockout / tagout devices are installed properly.
- Inspecting the work area thoroughly to determine if there are combustible materials in structures (partitions, walls, ceilings).
- Sweeping up any combustible materials on floors around the work zone. Combustible floors must be kept wet with water or covered with fire resistant blankets or damp sand.
- Moving all combustible materials away from the work area.
- If combustibles cannot be moved, cover them with fire-resistant blankets or shields. Protect gas lines and equipment from falling sparks, hot materials and objects.
- Blocking off cracks between floorboards, along baseboards and walls, and under door openings, with a fire-resistant material. Doors and windows should be closed.
- Covering wall or ceiling surfaces with fire-resistant and heat-insulating material to prevent ignition and accumulation of heat.

WEEKLY SAFETY MEETING

All Euramax Subsidiaries

WELDING SAFETY / HOT WORK SAFETY

Leaders Guide

- Inspecting the area following work to ensure that wall surfaces, studs, wires, or dirt has not heated up.

- Vacuuming away combustible debris from inside ventilation or other service duct openings to prevent ignition. Prevent sparks from entering into the duct work has concluded.

- Posting a trained fire watcher within the work area during welding and for at least 30 minutes after work has stopped.

All cutting and welding process can produce sparks and spatter. It's essential that you are capable of recognizing and avoiding hazardous situations when performing hot work.

SUMMARY

Welding jobs are necessary, but there are many hazards involved with the task. Protect yourself from these hazards, even when performing welding tasks off-the-job. The few minutes it takes to put on the PPE can prevent injuries that will last a lifetime.

Safety training is a must, whatever your involvement with welding. Understand the hazards associated with the job you are undertaking and ask questions about anything you do not fully understand. Remember, it is your life and the lives of your co-workers at stake.

EMPLOYEE HANDOUT

A. Employee Handout
B. Welding Safety / Hot Work Safety Quiz
C. Welding Safety / Hot Work Safety Puzzle

QUIZ ANSWERS:

1. True
2. Welder's Flash
3. True
4. Fitted
5. True
6. False
7. D
8. False
9. D
10. Safety Rules

WEEKLY SAFETY MEETING

All Euramax Subsidiaries

WELDING SAFETY / HOT WORK SAFETY

Leaders Guide

11. False
12. True
13. False
14. D
15. True

WEEKLY SAFETY MEETING
All Euramax Subsidiaries

WELDING SAFETY / HOT WORK SAFETY
Employee Handout

Welding Hazards And Prevention

Welding is a routine job on many worksites. However, this common task has hazards that can result in serious injury and property damage. Bystanders as well as workers involved directly with welding can be affected. It is important for everyone to have a basic knowledge of welding hazards.

There are different types of welding that use electricity and welding rods or compressed gases, both flammable and nonflammable.

Accidents and injuries related to welding include:
- Burns to unprotected eyes, known as welding flash, and burns to the skin from ultraviolet (UV) radiation in a welding arc - the bright light from welding.

- Fires from ignition of scrap, stored flammable materials or even the buildings where welding is done.

- Explosions caused by ignition of flammable gas and flammable liquid vapors in pipes, tanks and other containers that have not been cleaned or purged properly before welding.

- Inhalation of toxic fumes when metals are heated and welded in confined or poorly ventilated areas.

- Electrocution damaged or defective welding equipment, or equipment hooked up incorrectly or used improperly.

To prevent these types of accidents you must:
- Wear proper Personal Protective Equipment (PPE). Filtered eyewear including face shields, goggles and glasses must be worn to protect the eyes. Both the welder and the workers nearby should have appropriate eye protection. Screens and shields should be placed around the welding to protect nearby workers who are not involved in the work.

Other protective clothing should include non-flammable head protection, leather jackets and aprons, welding gloves and long-sleeved (buttoned cuff and collar) shirts. Pant legs should be coverin the tops of high cut leather safety toed boots.

- Remove or use fireproof material to cover equipment, stock or floors that could be ignited by welding. Post a fire watch and wet down areas when necessary. Always have the right fire extinguishing equipment nearby.

- Clean and purge piping, tanks and other containers properly before welding.

- Keep work areas well-ventilated and use proper respirators correctly if these are required.

- Hook up equipment properly, using the right cable size and proper grounding of the metal being welded. Repair or replace damaged or defective equipment properly and immediately.

For welding involving compressed gases that can burn or explode:
- Be careful with sources of heat, spark or flame. Repair or remove and replace leaking cylinders and connections immediately.

- Keep cylinders upright, secure at all times and stored in well-ventilated areas with the caps threaded on.

- Do not allow grease or oil to contact valves and connections. Oxygen will accelerate a fire involving grease or oil.

Whatever your involvement with welding, you must receive safety training. Most important, if you are not sure of the hazards of welding, then ask for information to protect yourself and others.

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WEEKLY SAFETY MEETING

All Euramax Subsidiaries

WELDING SAFETY / HOT WORK SAFETY

Employee Quiz

Answer the following questions to see what you know about Welding Safety / Hot Work Safety.

1. Fumes and gases produced during welding can cause asphyxiation.
   True or False

2. Eye protection will shield you from sparks, molten metal, and _____ _____.

3. Leather is one good heat-resistant material, useful for aprons or gloves.
   True or False

4. Before using a respirator you should receive proper training and have the respirator properly _____.

5. Confined spaces should be atmosphere-tested before you work in them.
   True or False

6. Welding, cutting, or grinding near dust is not dangerous.
   True or False

7. What should equipment be inspected for before operating?
   a. loose connections
   b. bare wires or cables
   c. proper grounding
   d. all of the above

8. Cables and equipment can be stored on stairways, but only temporarily.
   True or False

9. Which of these are symptoms of metal fume fever?
   a. metallic taste in the mount
   b. joint and muscle pain
   c. chills and nausea
   d. any of the above

10. Taking responsibility for your safety includes wearing the right PPE, maintaining a safe work area and following _____ _____.

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WELDING SAFETY / HOT WORK SAFETY

Employee Quiz

11. Fuel vapors in empty tanks or barrels don't pose serious hazards to welders.
    True or False

12. Any type of fuel tank should be cleaned or purged of combustible materials prior to cutting with a torch.
    True or False

13. You don't need guards to confine heat or sparks as long as you have a fire extinguisher nearby.
    True or False

14. Proper PPE includes:
    a. welder's vest
    b. face shield
    c. gloves
    d. all of the above

15. Cylinders used in welding and cutting operations can explode if they are stored near ignition sources.
    True or False

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All Euramax Subsidiaries

WELDING SAFETY / HOT WORK SAFETY

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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19			40		
20			41		
21			42		

WEEKLY SAFETY MEETING

All Euramax Subsidiaries

WELDING SAFETY / HOT WORK SAFETY

Employee Puzzle

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

ARC
BACK
COMBUSTIBLE
DEBRIS
FUMES
HEAD
HEARING
NECK
PERMIT
RESPIRATORY
SHIELD
SKIN
ULTRAVIOLET
VAPORS
WELDING