



# HAZMAT/OSHA TRAINING



# How much & why?

- \$40,000
- Online training for ALL 87 employees
  - In HAZMAT and OSHA
- To allow each employee to have a safe and secure work place.



# HAZMAT

- Breaking it down it means "Hazardous Materials"



- Any thing that can cause harm to living things
- Biological, chemical, or physical items
- Can pose damage to individual health and environment

# HAZMAT

- If people do not have proper training in HAZMAT it may result in (but not limited to):
  - Skin irritation
  - Occupational asthma
  - Chemical poisoning
  - Chemical burns
  - Cancer



# Why?

- The chemicals we deal with here at ACME are dangerous, and some even life threatening. If our employees do not know how to handle them properly it can result in an injury if not death. Chemical spills are possible and all employees should feel comfortable when cleaning up a chemical spill. An employee being injured by something that can be handled by some training, is something that should not happen. Not only will it hurt our company with less employees, but it may also cause a law suit. Environmental effects could pollution and into the air. If clean them up happen.



also happen with toxins being released we know how to properly this wont

# Training Information

- Available online for employees, so they will not lose hours at work.
- Different hour sessions
  - 40 hr
  - 30 hr
  - 10 hr



# Why OSHA?

It's mission is to help employers and employees reduce on the job injuries, illnesses and deaths.

- When employees stay safe and healthy, companies can reduce workers' compensation insurance costs and medical expenses, decreased payout for return-to-work programs, reduce faulty products, and lower costs for job accommodations for injured workers



# What are the OSHA Regulations?



- Maintain conditions and/or adopt practices necessary and appropriate to protect workers on the job.
- Be familiar with and comply with standards applicable to their establishments.
- Ensure that employees have and use personal protective equipment when required for safety and health.



# How do the OSHA regulations apply to a chemical plant?



- Chemical exposure may cause or contribute to many serious health effects such as heart ailments, central nervous system, kidney and lung damage, sterility, cancer, burns, and rashes. Some chemicals may also be safety hazards and have the potential to cause fires and explosions and other serious accidents.

Chemical  
Manufacturers/  
Importers

- Determine the hazards of each product.

Chemical  
Manufacturers/  
Importers/  
Distributors

- Communicate the hazard information and associated protective measures downstream to customers through labels and MSDSs.

Employers

- Identify and list hazardous chemicals in their workplaces.
- Obtain MSDSs and labels for each hazardous chemical, if not provided by the manufacturer, importer, or distributor.
- Develop and implement a written hazard communication program, including labels, MSDSs, and employee training, on the list of chemicals, MSDSs and label information.
- Communicate hazard information to their employees through labels, MSDSs, and formal training programs.



# How do the OSHA regulations apply to a chemical plant?

- Employers must prepare a list of all hazardous chemicals in the workplace. When the list is complete, it should be checked against the collected MSDSs that the employer has been sent.

If there are hazardous chemicals used for which no MSDS has been received, the employer must contact the supplier, manufacturer, or importer to obtain the missing MSDS. A record of the contact must be maintained.

# How do the OSHA regulations apply to a chemical plant?

- Employers must establish a training and information program for employees who are exposed to hazardous chemicals in their work area at the time of initial assignment and whenever a new hazard is introduced into their work area. At a minimum, the discussion topics must include the following:
  - The hazard communication standard and its requirements.
  - The components of the hazard communication program in the employees' workplaces.
  - Operations in work areas where hazardous chemicals are present.
  - Where the employer will keep the written hazard evaluation procedures, communications program, lists of hazardous chemicals, and the required MSDS forms.

# How do the OSHA regulations apply to a chemical laboratory?

The purpose of the Laboratory standard is to ensure that workers in non-production laboratories are informed about the hazards of chemicals in their workplace and are protected from chemical exposures exceeding allowable levels [i.e., OSHA permissible exposure limits (PELs)] as specified in Table Z of the Air Contaminants standard (29 CFR 1910.1000) and as specified in other substance-specific health standards. The Laboratory standard achieves this protection by establishing safe work practices in laboratories to implement a Chemical Hygiene Plan (CHP).

# How do OSHA regulations apply to a Chemical laboratory?

- The Hand Protection standard (29 CFR 1910.138), requires employers to select and ensure that workers use appropriate hand protection when their hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes
- The Personal Protective Equipment (PPE) standard (29 CFR 1910.132) requires that employers provide and pay for PPE and ensure that it is used wherever "hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants are encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact."
- The Eye and Face Protection standard (29 CFR 1910.133) requires employers to ensure that each affected worker uses appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation

# How do OSHA regulations apply to a Chemical laboratory?

- Each laboratory must identify which hazardous chemicals will be encountered by its workers
- At BSL-3, more emphasis is placed on primary and secondary barriers to protect personnel in contiguous areas, the community, and the environment from exposure to potentially infectious aerosols. For example, all laboratory manipulations should be performed in a BSC or other enclosed equipment, such as a gastight aerosol generation chamber
- Specific Engineering Control - Biological Safety Cabinets (BSCs): BSCs protect laboratory workers and the immediate environment from infectious aerosols generated within the cabinet.



Some of the *Chemicals* that we use here at *Acme*.....



# 2-Thiopheneacetyl chloride

- TOXIC; inhalation, ingestion or skin contact with material may cause severe injury or death.
- Contact with molten substance may cause severe burns to skin and eyes. Avoid any skin contact.
  - Effects of contact or inhalation may be delayed.
- Fire may produce irritating, corrosive and/or toxic gases.
  - Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.
- Thiopheneacetyl is a typical substance that is used in Acme, if our employees do not know how to handle this substance dire circumstances will take place. Not can this substance harm our employees if they do not know how to properly handle it, it can also effect our environment by making pollution and toxic chemicals being released into the air.



# 2-Methylthiazoline

- Eye: Causes eye irritation. Lachrymator (substance which increases the flow of tears).
- Skin: Causes skin irritation.
- Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.
- Inhalation: Causes respiratory tract irritation
- Do not allow material to be released to the environment without proper governmental permits.
- This chemical, quite similar to the previous one, can have both harmful effects on both the employees and our environments.

- Allowing employees to have adequate training in HAZMAT and OSHA standards allows the work zone for the employees to be safe and it also allows to help decrease the amount of pollution and hazards that are released into the environment. This training will benefit the workers, the environment and even the owners of this company.