CHAPTER 5: HEALTH AND SAFETY

LEARNING OBJECTIVES:

This unit will help you to learn:

- WHIMS Overview
- OHSA Overview
- JHSC Overview
- MSDS
- Examples of security situations in which OHSA and WHMIS apply
  - Accepting a delivery of hazardous materials,
  - Fire on the premises close to hazardous materials,
  - Security guard on patrol noticing a hazardous container leaking,

To ensure the safety of security guards and those they interact with, it is essential to adhere to the policies and procedures outlined in the Occupational Health and Safety Act and the Workplace Hazardous Materials Information System (WHMIS).

THE OCCUPATIONAL HEALTH AND SAFETY ACT(OHSA)

The Occupational Health and Safety Act came into force on October 1, 1979. This act was put in place to ensure the safety and well-being of workers in the workplace. Revisions to the Act, known as Bill 168, received Royal Assent on December 15, 2009 and came into effect on June 15, 2010.

One of the key requirements of the Act is that employers must prepare policies with respect to workplace violence and harassment, and review these policies at least annually. Additionally, employers are required to develop a program to implement a workplace violence policy.

This program must include measures to control risks of workplace violence and to summon immediate assistance when workplace violence occurs. Workers are also required to report incidents of workplace violence.

The program must also set out how the employer will manage incidents and complaints of workplace violence. The Act requires employers to assess the risks of workplace violence and to report the results of the assessment to the joint health and safety committee or representative. If there is no committee or representative, the results must be reported to the workers.

The risks must be reassessed as often as necessary to protect workers from workplace violence. Employers are also required to take every reasonable precaution to protect workers.

The Occupational Health and Safety Act (OHSA) is a law that ensures the well-being and safety of workers in the workplace.

The act provides three Fundamental Rights to workers:

- The Right to Know about workplace health and safety hazards,
- The Right to Participate in health and safety recommendations through representation on joint health and safety committees, and
- The Right to Refuse work if it endangers health and safety.

1. THE RIGHT TO REFUSE UNSAFE WORK:

Under OSHA, employees have the right to refuse to perform a job task that they believe is unsafe or poses a risk to their health and safety. Employees must report any unsafe conditions to their employer and cannot be subjected to any reprisals for exercising their right to refuse.

As a security guard, you have the right to refuse a work that involves a chemical hazard that could put your health and safety at risk. Chemical hazards in the workplace can come from cleaning products, hazardous substances, and other materials that can cause injury or illness if they are not handled or stored properly.

If you believe that the chemical hazard in your workplace poses an unacceptable risk to your health and safety, you should report this to your employer and refuse to perform the work until the issue is addressed. Your employer must investigate the situation and take appropriate steps to control the hazard, such as:

1. Providing you with the proper protective equipment (PPE) like gloves, goggles, or a respirator to ensure your safety when handling hazardous materials.

2. Ensuring that all hazardous materials are stored in appropriate areas and in accordance with the manufacturer's recommendations.

3. Providing training and information about the safe use of chemicals in the workplace.

If your employer does not take the necessary steps to address the hazardous situation, you may seek assistance from the Occupational Health and Safety Administration (OSHA) or a local regulatory body to file a complaint.

It is important to take the necessary precautions when working with hazardous materials to prevent accidents or injuries. Knowing your right to refuse unsafe work, OSHA regulations, and proper safety procedures can help you ensure your safety while on the job.

2. THE RIGHT TO KNOW:

Employees have the right to be informed about hazards present in their workplace, and they must be trained on how to work safely with any hazardous substances, tools or

equipment. Employers are responsible for providing employees with this information and ensuring that they are aware of any hazards in the workplace.

3. THE RIGHT TO PARTICIPATE:

Employees have the right to participate in safety activities and decision-making processes related to workplace safety. Employers must establish safety policies and safety committees, and employees must be encouraged to actively participate. Employees can suggest safety measures, report safety violations, and work with the employer to identify and address safety concerns.

OHSA: WORKER RESPONSIBILITIES

Workers have a general duty to take responsibility for personal health and safety, which means they should not behave or operate equipment in a way that would endanger themselves or others

The OHSA lists additional responsibilities of workers:

- Work in compliance with the Act and regulations
- Properly use any equipment or protective devices provided by the employer
- Inform the supervisor about any known defective equipment that may be dangerous
- Report any known workplace hazard or violation of the Act to the supervisor
- Do not remove or make ineffective any protective device required by the employer

OHSA: EMPLOYER RESPONSIBILITIES

The Occupational Health and Safety Act assigns numerous general duties that are the responsibility of the employer:

- Take all reasonable precautions to protect the health and safety of workers
- Ensure that equipment, materials and protective gear are maintained in good condition
- Provide information, instruction and supervision to protect worker health and safety
- Establish a positive relationship with the Joint Health and Safety Committee
- Comply with all regulations made under the Act
- Post a visible copy of the Act in the workplace

OHSA: SUPPLIER RESPONSIBILITIES

Persons who produce, import, distribute, repackage, or sell controlled items must comply with the following (Hazardous Products Act; Controlled Products Regulations):

- Determine which items are restricted substances.
- Evaluate risks to health and safety.
- Compile, obtain, and/or transmit a Material Safety Data Sheet (MSDS) before the product is used or sold in Canada, and affix a label to the regulated product or its packaging as a condition of sale/import.

The Act also covers workplace owners, constructors, and suppliers of equipment or materials. It is important for all parties to understand and comply with the Occupational Health and Safety Act to ensure the safety and well-being of workers in the workplace.

You should not be required to work directly with hazardous materials as a Security Guard. You have "The Right To Know" about the hazardous materials being utilized at your **site**, as you may be exposed to them while on patrol or addressing specific situations.

Training is required for anybody who works with hazardous materials or who might be affected by a chemical or biological product leak or accident. Yet, not all employees will need the same amount of education.

JOINT HEALTH AND SAFETY COMITTEE (JHSC)

When a workplace has twenty or more employees, a Joint Health and Safety Committee is required. If there are less than fifty regularly employed employees in the company, the committee must have at least two members. Depending on the size of the regular workforce, there must be at least four members if there are more than fifty employees. It is the responsibility of a qualified member of the JHSC to investigate complaints regarding hazardous conditions in the workplace.

❖ DANGEROUS CIRCUMSTANCE

The JHSC may call for a bilateral work stoppage if three conditions constituting a hazardous situation present. The following are the three conditions:

- A violation of a provision or rule of the Act has occurred.
- The violation creates a risk or danger; and
- This threat or risk must be addressed quickly.

The three criteria of a risky event must be known by security guards. They may be liable for notifying authorities of a potentially hazardous situation necessitating a bilateral work stoppage.

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS)

The Workplace Hazardous Materials Information System (WHMIS) is an important initiative in Canada that aims to ensure the safety and health of workers. The system is designed to provide relevant information about hazardous materials used in the workplace, so that workers can take necessary precautions to avoid injury, illness, and premature death.

The key ELEMENTS OF WHMIS include:

- Cautionary Supplier labeling,
- Material safety data sheets, and
- Worker education and training programs.

WHMIS is implemented through a coordinated effort between federal, provincial, and territorial legislation. The Hazardous Products Act and its associated Controlled Products Regulations set out the requirements for supplier labeling and safety data sheets. These regulations are administered by the Government of Canada's Department of Health, commonly referred to as Health Canada.

WORKER EDUCATION is a crucial component of the WHMIS Information Delivery System. Employers are responsible for educating any employee who works with or near

hazardous materials, so that they are aware of the information available to them and their rights to access that information.

OCCUPATIONAL HEALTH is a vital aspect of workplace safety, and it is important for employees to have a basic understanding of how hazardous materials can affect their health. The human body is made up of cells, each one specialized to perform a specific function.

These cells are vulnerable to damage or disease caused by hazardous materials. It is essential to have knowledge on how materials can enter and interfere with the body's basic systems, in order to protect oneself from the hazards of workplace materials.

In conclusion, WHMIS plays an essential role in ensuring the safety and health of workers by providing relevant information about hazardous materials used in the workplace. Employers have a legal obligation to educate their employees about these materials, so that they can take necessary precautions to avoid injury, illness, and premature death. Additionally, understanding the effects of hazardous materials on the human body is crucial for occupational health and safety.

- ❖ WHIMS: SUPPLIER LABEL

In the absence of an appropriate label, no restricted substance can be used or handled in the workplace. Employers are responsible for ensuring that WHMIS labels are applied to prohibited substances brought into the workplace. If an employer gets a prohibited product from a supplier without the correct label, the product may only be retained for 120 days if the employer is actively seeking the supplier label information. The employer may return the product to the supplier if the required information is not received.

In addition, it is the responsibility of the employer to ensure that supplier labels are not removed, changed, defaced, or altered.

MATERIAL SAFETY DATA SHEETS (MSDS), which provide more detailed information on the drug, are referenced on WHMIS labels.

METHANOL

DANGER

POISON
FLAMMABLE
VAPOUR HARMFUL
MAY CAUSE BLINDNESS IF SWALLOWED

Keep away from heat, sparks and flame. No smoking. Container must be grounded when being emptied. Vapour may travel long distance. Avoid contact with eyes and skin. Do not inhale vapours or mist. Do not take internally. Harmful if absorbed through the skin.

FIRST AID: In case of contact, immediately flush eyes and skin with plenty of water for at least 15 minutes.

If swallowed, induce vomiting by sticking finger down throat, or by giving soapy water to drink. Repeat until vomit is clear.

If affected by vapour, move to fresh air.

If breathing has stopped, apply artificial respiration.

GET MEDICAL ATTENTION IMMEDIATELY.

PRECAUTIONS: Wear chemical-goggles and resistant gloves. Wash thoroughly after handling. Use with enough ventilation to keep below TLV. Keep container closed. Never use pressure to empty container.

MÉTHANOL

DANGER

POISON
INFLAMMABLE
VAPEURS NOCIVES
PEUT PROVOQUER LA CÉCITÉ, SI AVALÉ

Garder loin de la chaleur, des étincelles et des flammes. Ne pas fumer. Brancher le contenant à une prise de terre avant de le vider de son contenu. Les vapeurs peuvent s'étendre sur de longues distances. Éviter tout contact avec les yeux et la peau. Ne pas respirer les vapeurs. Ne pas absorber. Nocif si absorbé par la peau.

PREMIERS SOINS: En cas de contact avec les yeux ou la peau, laver à grande eau pendant au moins 15 minutes.
Si avalé, provoquer le vomissement en introduisant un doigt dans la gorge ou en faisant absorber de l'eau savonneuse à la victime. Répétez jusqu'à cessation du vomissement.

Sortir au grand air, si indisposé par les vapeurs.

Si la respiration est interrompue, recourir à la respiration artificielle.

OBTENIR DES SOINS MÉDICAUX IMMÉDIATS.

PRÉCAUTIONS: Porter des lunettes protectrices (pour produits chimiques) et des gants résistants. Se laver minutieusement après usage. Utiliser dans un endroit bien aéré, afin de maintenir un niveau de vapeurs tolérable. Garder le contenant fermé. Ne jamais user de pression en vidant le récipient.

SEE MATERIAL SAFETY DATA SHEET FOR PRODUCT
VOIR FICHE SIGALÉTIQUE

ABC Company
Anytown, Ontario Telephone 123-4567

❖ COMPONENTS OF WHIMS SUPPLIER LABEL

Supplier labels provide the following details:

WHMIS Perforated Border

Both English and French Text

Product Identifier: Product name

Supplier Identifier: Supplier Name and Address

Hazard Symbol(s): Categorization Images (s)

MSDS Reference

Risk Phrases: Words and Phrases that Describe the Principal Dangers

Precautionary Measures: How to safely use the product

How to administer first aid in an emergency

Items one through six are required on all WHMIS Supplier Labels. When the controlled substance is in a container larger than 100 ml, items seven through nine must be included.

❖ LABELS ON THE JOB

If WHMIS labels become unreadable or are mistakenly removed, a new label can be created on-site if a replacement label from the provider is unavailable. If a chemical is poured from the original container with the supplier label into another container, a label for the new container must be created at the workplace. The workplace label contains the chemical's name, precautions, and an MSDS reference.

❖ BUSINESS CONFIDENTIAL INFORMATION

Secret business information consists of product details concealed from labels and material safety data sheets. Before such information can be withheld, businesses must demonstrate compliance with the requirements specified in the Hazardous Materials Information Review Regulation. This information could be withheld for a limited time period.

❖ CONTROLLED MERCHANDISE

A controlled product is any product, material, or substance designated by the Hazardous Products Act rules (paragraph 15(1)(a) to be included in any of the Classes mentioned in Schedule II of that Act, and includes:

- Compressed Gas;
- Flammable and Combustible Substances;
- Oxidizing Substances;
- Toxic and Infectious Substances;
- Corrosive Substances;

Materials excluded from the hazardous products act

- Explosives under the terms of the Explosives Act;
- Cosmetics, medical devices, pharmaceuticals, or food as defined by the Food and Drugs Act;
- Cosmetics, medical devices, pharmaceuticals, or food as defined by the Food and Drugs Act;
- Hazardous waste;
- Items, materials, or substances included in Part II of Schedule I that are packaged for retail sale;
- Wood or wood products; Tobacco or tobacco products as specified by the Tobacco Control Act
- Products of manufacture; radioactive materials; everything protected by other legislation.

MSDS (MATERIAL SAFETY DATA SHEET)

MSDSs are documents created by the material's supplier or maker that include information such as:

- Hazardous ingredients,
- Preparation information,
- Physical data,
- Toxicological properties, and first aid measures.

These technical publications or bulletins offer in-depth information about potential hazards (such as health, fire, reactivity, and environmental) as well as precautionary information about how to work safely with the product.

They also explain what to expect if MSDS instructions are not followed, what to do if an accident occurs, how to identify symptoms of overexposure, and what to do if an exposure incident occurs. MSDSs also include information on the material's risks, as well as information on its usage, storage, handling, and emergency protocols.

Every three years, MSDS must be updated.

An MSDS must provide the following information in Canada, as defined by the Regulated Products Regulations:

Product information includes the product identification (name), the names and addresses of the manufacturer and suppliers, as well as emergency phone numbers.

- Hazardous Substances
- Physical Data
- Data on Fire or Explosion Hazards
- Reactivity Data: information about a product's chemical instability and the substances it may react with.
- Health Effects of Toxicological Properties
- Preventative Actions
- First Aid Procedures
- Preparation Information: who is responsible for MSDS preparation and when it will be completed

❖ EFFECTS ON HEALTH

Our world is built of chemicals, and we are continuously exposed to them. Certain chemicals are naturally occurring, while others are man-made. Some are harmless, while others are hazardous. When working in an environment where hazardous compounds can possibly poison you, you should be aware of the elements that determine the degree of poisoning caused by a chemical.

Factors affecting the degree of poisoning

- Route of entry into the body
- The quantity or dose that enters the body
- Duration of exposure
- Chemical toxicity
- Metabolism and removal from the body
- Biological or individual variation

❖ TOXICITY

Toxicity is defined as the degree to which a material is poisonous and can harm an organism that is exposed to it. To put it another way, hazardous elements are harmful to people's health. They can be fatal if ingested in a sufficient amount.

- A LOOK AT ROUTES OF ENTRY

Understanding the Dangers of Hazardous Materials in the Workplace:

Workplace safety is an essential aspect of ensuring the health and well-being of employees. One of the most significant hazards in the workplace is exposure to hazardous materials.

These materials can enter the body through various routes, including”

- Inhalation,
- Absorption, and
- Ingestion.

In this article, we will explore the different routes of entry for hazardous materials and the potential health risks associated with each.

INHALATION

Inhalation is the most common route of entry for hazardous materials. When inhaled, substances can damage the respiratory system or be carried throughout the body via the bloodstream. The respiratory system is responsible for absorbing oxygen from the air and delivering it to the blood stream. As a result, the lungs are particularly vulnerable to damage from hazardous materials.

ABSORPTION

Absorption is another common route of entry for hazardous materials. The skin is the largest exposed surface area of the body and can come into contact with harmful substances. Some chemicals can penetrate the skin and reach other areas of the body via the bloodstream. This can cause damage to various organs and systems in the body.

INGESTION

Ingestion is the third route of entry for hazardous materials. Toxic materials may be ingested through contaminated food items. Once swallowed, the substances enter the digestive tract and may enter the bloodstream. This can cause damage to various organs and systems in the body, including the liver and kidneys.

THE CIRCULATORY SYSTEM is not usually in direct contact with hazardous materials, but once in the bloodstream, harmful substances can be transported anywhere in the body. Some substances may affect the tissue the blood is supplying or the blood cells directly.

Major organs such as the liver, kidneys, and nervous system may also be damaged by materials in the workplace. The liver is the chemical factory of the body and produces enzymes that can convert certain toxins into forms that are more easily handled with the body. However, the liver itself can be damaged if it is overwhelmed.

THE KIDNEYS act as a filter to all substances in the blood, cleaning out impurities and depositing them in the urine.

THE CENTRAL NERVOUS SYSTEM controls all functions of the body, and exposure to certain chemicals may interfere with nerve impulses and result in tremors or loss of feeling.

THE REPRODUCTIVE ORGANS are also a target of hazardous materials. Some chemicals can cause miscarriages or birth defects by attacking the genetic material of the cell or the system that controls its functions.

In conclusion, hazardous materials in the workplace can enter the body through various routes, including inhalation, absorption, and ingestion. It is crucial for employers to educate their employees on the potential health risks associated with exposure to these materials, and for workers to take necessary precautions to avoid injury, illness, and premature death.

WHMIS: WORKER EDUCATION PROGRAMS

Workers who receive education are better able to comprehend WHMIS information and work safely with controlled products. This training provides workers with specialized instruction regarding the controlled products they use at their workplace and explains the WHMIS system. Employers must provide WHMIS training to employees.

Worker education in WHMIS teaches them to comprehend:

- The significance of label and MSDS information.
- Worksite identification tools that are employed.
- Detailed instructions on how to handle, use, and store-controlled products safely.
- Steps to take in the event of a controlled product emergency.

Workplace hazards and the Latency Period

Workplace hazards refer to the potential risks and dangers that employees may encounter while on the job.

One aspect of workplace hazards is the concept of latency, which refers to:

- The time lag between the initial exposure to a hazardous material and
- The eventual development of a disease or illness.

For some occupational hazards, the latency period can be significant, with symptoms appearing an average of ten to twenty years after initial exposure.

The effects of exposure can be categorized as either acute or chronic.

ACUTE EFFECTS:

- Acute effects of toxic substances occur immediately or soon after exposure. These effects can be severe and, in some cases, may result in death. However, they are often treatable if caught early. These effects are sudden and dramatic, resulting from the direct action of the hazardous materials on the cells in the body.

CHRONIC EFFECTS:

- Chronic effects are long-term and potentially more serious. They often result from the body's attempt to repair or compensate for the acute effects of a substance. These effects may not become evident until severe damage has been done, and they are often not treatable.

The latency period has a number of important implications for employees. A worker who is exposed to a dangerous substance may not experience any immediate ill effects, and therefore may not feel the need to inform their supervisor or employer.

Furthermore, symptoms may be misdiagnosed or believed to have been caused by something else. It is important for employees to be aware of the potential risks and to report any exposure to hazardous materials to their employer.

RECOGNIZING HAZARDS

1) SLIPS AND FALLS
2) HAZARDOUS MATERIALS
3) CONSTRUCTION AND REPAIR WORK
4) SECURITY GUARD SITUATIONS

❖ SLIPS AND FALLS

Remember to call maintenance to properly clean any visible spills. Mark the area with a cone, or remain standing near it until maintenance arrives to prevent any accidents.

- Make frequent floor checks.
- Look for overturned, torn or worn carpets.
- Note worn out floor surfaces that have become very uneven.
- Keep an eye out for broken or missing floor tiles.
- Check the interior and exterior of entrances for ice, snow, slush and water build up.
- Look for wobbly handrails or other broken fixtures.
- Ensure there is adequate lighting in corridors and parking lots.
- Ensure extension cords are out of the way or secured properly.

HAZARDOUS MATERIALS

Hazardous materials are classified into six classes or categories by the Workplace Hazardous Materials Information System (WHMIS) based on the type of hazard they constitute. Controlled products are another name for these materials. Each category has its own hazard sign, and security guards must be able to distinguish these as well as the risks they represent.
The graphic below is commonly used to identify WHMIS material:

Proponents of WHMIS also used this logo to designate WHMIS-related informative, promotional, or educational materials.

❖ CLASS A – COMPRESSED GAS

A compressed gas is a substance that is a gas at standard room temperature and pressure (20 C), but is packaged as a pressurized gas, dissolved gas, or gas liquefied by compression or refrigeration.

In addition to the chemical composition of these substances, malfunctioning or compromised tanks can be hazardous. When a compressed gas cylinder ruptures, it can become a projectile that has the potential to cause substantial damage. Oxygen and acetylene are examples. Because these materials are under pressure, they are hazardous.

If the cylinder is damaged, the container can 'rocket' or 'torpedo' at great velocity, making it hazardous to anyone standing nearby. If the cylinder is heated (by fire or an increase in temperature), the gas may expand and cause it to explode.

The gas emitted by leaking cylinders is extremely cold and can induce frostbite if it comes into touch with skin (for example: carbon dioxide or propane).

Compressed air, carbon dioxide, propane, oxygen, and welding gases are examples of common gases.

❖ CLASS B: COMBUSTIBLE AND FLAMMABLE MATERIALS

If exposed to a flame or other source of ignition, combustible or flammable materials will ignite and burn indefinitely. Methane, acetone, aniline, and lithium hydride are a few examples.

When a substance is flammable, it easily burns or catches fire at room temperature (below 37.8 degrees C or 100 deg F).

The majority of the time, combustible materials need to be heated before they catch fire at temperatures above normal (between 37.8 and 93.3 deg. C or 100 and 200 deg. F).

When exposed to air or water, reactive flammable materials may suddenly start burning, or they may react with the two to create a flammable gas.

The various subcategories of this class are based on the varying formats of these materials, which can be solid, liquid, or gaseous**.** Butane, acetylene, ethanol, turpentine, kerosene, Stoddard solvent, spray paints, and varnish are typical examples of Class B products.

Class B - Flammable and Combustible Material has further SIX divisions:

Division 1: Flammable Gas

Division 2: Flammable Liquid

Division 3: Combustible Liquid

Division 4: Flammable Solid

Division 5: Flammable Aerosol

Division 6: Reactive Flammable Material

❖ CLASS C : OXIDIZING MATERIAL

Even if an oxidizing chemical may or may not burn, it will release oxygen or another oxidizer, which will either start or assist in the combustion of other substances. These substances are extremely reactive and will maintain a fire. Examples include nitrogen dioxide, chlorine, and ozone.

In some circumstances, merely the presence of an oxidizer—a source of ignition—is required for a substance to catch fire.

WHAT DO OXIDIZERS DO?

Oxidizers either initiate or accelerate oxidization. Rust formation is often referred to as oxidization. In other words, something is oxidizing when we say it is rusting. Oxidizing substances provide oxygen to a target substance, which results in the formation of new compounds or oxides, such as iron oxide. Another method of oxidation is electron transfer.

- ❖ CLASS D: POISONOUS AND INFECTIOUS MATERIAL

Materials in the Class D category have the potential to harm your body.

Three main categories are used to group these materials.

Division 1**:** Material causing immediate and serious toxics

Division 2: Material causing other toxic effects

Division 3: Bio hazardous infectious materials

Division 1: Materials Causing Immediate and Serious Toxic Effects

Based on facts such as LD50 (lethal dose) or LC50, these items may be classed as hazardous or very toxic (lethal concentration). Styrene and hydrogen cyanide are two examples of extremely poisonous chemicals.

These substances are extremely hazardous and pose an immediate risk to one's life and health. This category includes materials that cause serious health effects such as burns, loss of consciousness, coma, or death within minutes or hours of exposure. Most D-1 materials will also have long-term effects, which may not be visible for months or even years.

Division 2: Materials Causing Other Toxic Effects

These substances are toxic. Their impacts aren't usually immediate. And even if the results are quick, they are just temporary.
These materials are pure chemicals or mixes that may be a carcinogen (causes cancer), teratogen (causes birth defects), reproductive toxin, respiratory tract sensitizer, irritant, or persistent toxic hazard. *Asbestos (a carcinogen), ammonia are two examples (irritant)*

Division 3: Biohazardous Infectious Material

This category comprises any organisms, as well as the toxins produced by these organisms, that have been shown or are suspected of causing sickness in humans or animals. A blood sample containing the Hepatitis B virus, for example, is a biohazardous infectious material because it can cause hepatitis in anyone who are exposed to it. At hospitals, health care facilities, laboratories, veterinary clinics, and research institutes, biohazardous infectious materials are commonly discovered.

- ❖ CLASS E - CORROSIVE MATERIAL

Corrosive materials are those that can cause serious burns to skin and other human tissues such as the eyes or lungs, as well as attack clothing and other materials such as metal.

Corrosives are classified as such because their effects are permanent (irritants whose effects may be similar but temporary are grouped in Class D-2).Acids such as nitric acid, bases such as ammonium hydroxide and caustic soda, and other materials such as chlorine and nitrogen dioxide are examples of common corrosives.

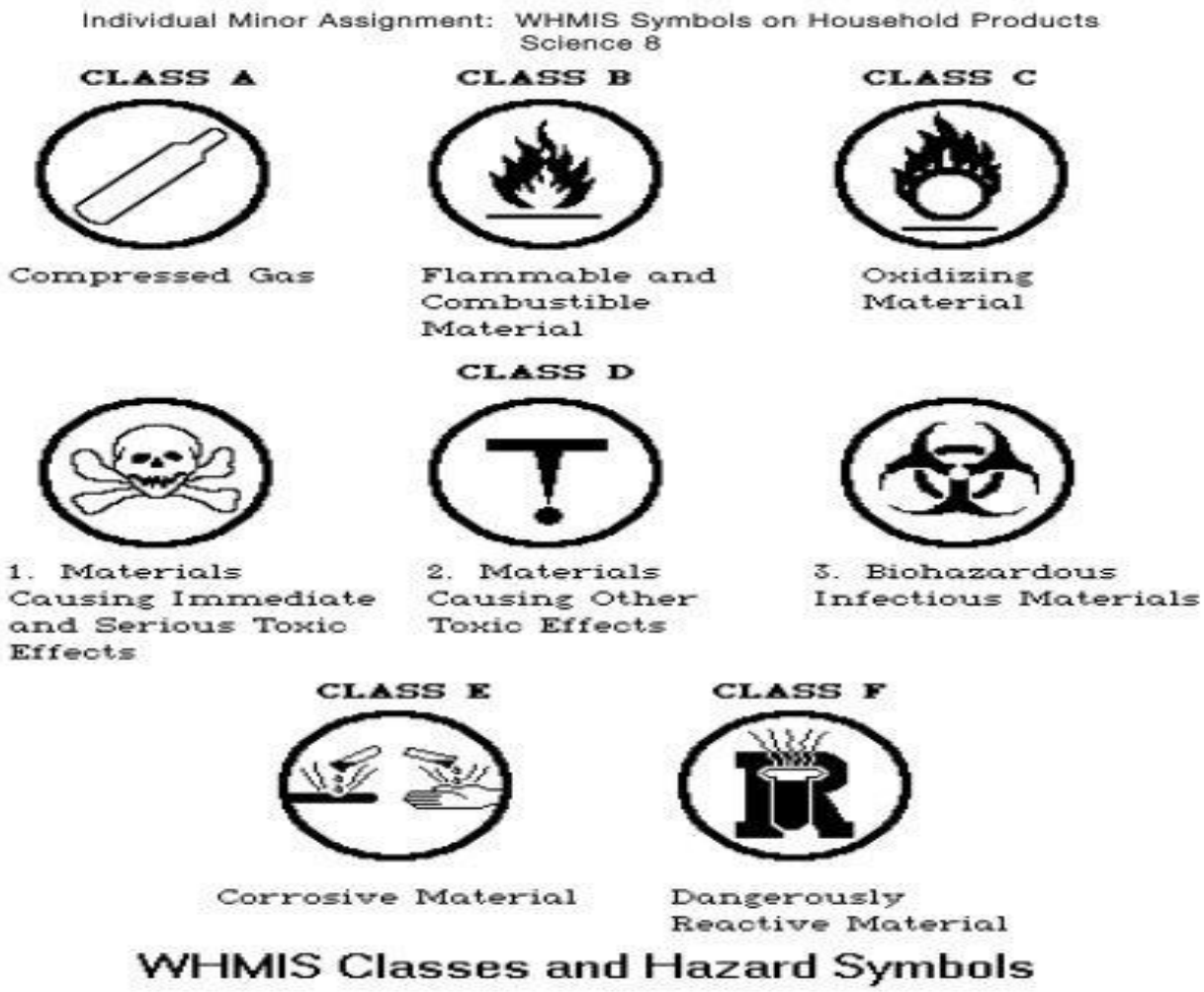
- ❖ CLASS F – DANGEROUSLY REACTIVE MATERIAL

A material is considered dangerously reactive if it exhibits three distinct traits or abilities:

- ➢ If it reacts with water very forcefully and fast ("vigorously") to produce a hazardous gas

If it reacts to being shocked (bumped or dropped), or if the temperature or pressure rises.

- If it can vigorously attach to itself to form larger molecules (polymerization), decompose (decomposition), or lose extra water to become a denser material (condensation).
- The term "unstable" refers to a material that is dangerously reactive.



❖ CONSTRUCTION AND HAZARDOUS MATERIAL

- Ensure worksites have the appropriate barriers.
- Confirm that there is adequate safety signage.
- Check for the availability of fire extinguishers on the site.
- Verify that builders are holding to open flame restrictions.
- Ensure all flammables are stored in the designated area.
- Ensure materials, equipment and vehicles are not blocking unauthorized areas.

SECURITY GUARD SITUATIONS

Hazardous materials (hazmat) can be useful if they are moved, stored, and utilized correctly. In reality, these materials are utilized often in daily life. Some of the most well-known hazardous substances include oxygen, gasoline, propane, and ammonia.

The risks that exist inside a facility must be known to security guards. The explanation for this is straightforward: they will contain the area, trigger the emergency plan, and evacuate the area in the event of an emergency.

❖ LEKAGE OF A DANGEROUS CONTAINER

Hazardous materials are often used and kept on work sites. A spill is any uncontrolled release of a harmful substance. Authorities must act rapidly to stop the release of hazardous materials so that there is less danger to people, property, and the environment. The release needs to be stopped, confined, and cleaned up—usually at a significant expense.

Those who have had extensive training and experience respond to hazmat accidents. They have received training in hazmat identification, wearing protective gear, testing for hazardous using specific equipment, and employing protocols to control and contain materials. These people consist of law enforcement, firefighters, police, and environmental and health experts.

Security guards will be crucial in launching the emergency response plan in the event of a hazardous situation, as well as in securing the facility and sending emergency personnel to the proper area. Hazmat spills need to be reported right away to authorities with hazardous response experience.

Hazmat response is dangerous and can be fatal without the right training and tools. Whenever there is a chemical, biohazardous, or radioactive leak, the area needs to be

evacuated right away. Equipment needs to be turned off. Reentry should be prohibited and the site isolated. Once you leave, it's crucial to shut doors to prevent gas leaks. Activating the fire alarm while there is a gas leak could also result in an explosion.

Procedure to call 911 for the Hazardous leakage:

- Introduce yourself
- Clearly state the reason for your call, such as a spill.
- Provide details about the extent of the damage and your location. The address, floor, department, room number, injuries, etc.
- Describe the disaster's specifics in detail: Which type of spill is it? a radioactive liquid, solvent, chemical name, quantity, risks, etc.
- Only hang up when the operator allows you
- Keep an eye out for emergency personnel outside the entryway.
- Be ready with the necessary information, such as MSDS, for the emergency responders when they arrive.
- Make calls to your supervisor and the client

❖ DELIVERS OF DANGEROUS MATERIALS

Hazardous materials may be received by security guards posted at drop-arm barriers and reception areas.

Hazardous materials must be handled with the utmost care during transit, delivery, and shipping. The federal Transportation of Dangerous Goods (TDG) regulations set forth the requirements for labelling dangerous items when they are in transit, delivered to, or transported from the workplace.

The Nuclear Safety & Control Act governs how radioactive chemicals and nuclear devices are labelled (NSCA).

There are policies and procedures in place for deliveries of hazardous products at the agencies, clients, and companies where security guards are employed. Furthermore, since the delivery of hazardous products is done by appointment only, shipping and receiving departments usually let security guards know when shipments are coming and

who to contact when they do. In some places, the package is rejected if the security guard has not been informed.

Procedure after receiving the deliveries

- Identity and paperwork need to be thoroughly examined.
- Check the shipping papers, the driver's name with two forms of identification, the license number, and the vehicle identification number.
- Depending on the method, you may also need to confirm with the vendor.
- A vehicle log has a record of this information.

Please take note that an escort or guard may occasionally be present with high-hazard shipments. Keep an eye out for strange behavior and report anything worrisome right away

❖ FIRE AND HAZARDOUS MATERIALS

You have already learned that the foundation of security is asset protection. Companies create policies and processes in an attempt to protect their assets. As part of their responsibility to protect assets, security must implement these policies and procedures.

Fire prevention and hazard detection are essential components of asset protection and policy enforcement because they pose a serious risk to the security of the general public, personnel, and assets.

Over the course of their regular responsibilities, security guards take numerous steps to avoid fires. Let's take a quick look at a few methods' security guards prevent fires.

- To ensure safe egress from an area or building in case of a fire or other emergency, all exits (including doors, stairways, and corridors) are kept free of obstructions and hazards. This includes removing equipment that obstructs people and door movement at exits and in corridors. It also includes garbage that accumulates around outside doors as this itself is a fire hazard.
- During patrol, security may notice signs that people have been smoking in prohibited areas. Smoking is prohibited in areas where flammable substances are used or stored. Unsafe areas include less obvious places, for instance areas where

air is venting. Be aware that dust can be extremely combustible. Even the dust in dryer vents is combustible.

- Security guards often routinely inspect extinguishers to ensure that they are operational. They also ensure free access to hose cabinets, fire alarm pull stations and other firefighting equipment. Access must not be obstructed and the equipment.
- Security guards inspect fire doors, ensuring that they have not been tampered with. Self-closing mechanisms must be operational.
- Security guards log any contract workers entering the premises who will be conducting hot work. Work order and identification are inspected before workers are admitted.
- During patrol, security inspects electrical boards for signs of damaged wires, turns off and reports any equipment such as coffee pots that have been left on, and examines the fire panel for trouble lights.
- Leaks from pipes, valves, joint seals and gas cylinders take place not only while the system is idle, but during repairs, normal operations, system start-up and shut down. Security guards can avert explosions and fire when they observe signs of leakage or improper storage through the following: containment, activation, evacuation and reporting.

Security guards play a crucial part in ensuring the safety of a facility. Wherever security is deployed, they should be familiar with the hazards specific to that location. Numerous factors can endanger your safety. Anything from horseplay to slick surfaces, broken fire doors to staff not wearing protective gear. Any potential risk should be eliminated.

Flammable or dangerous products should be stored in secure areas. Workers and tenants must keep the surroundings clean and take all necessary precautions. Security guards should be aware of potential fire threats and be ready to minimize the harm caused by a potential fire.