

STEP 1 – Preliminary Approval from Leadership

Completed?	Form Required	Instructions	Signatures Required From
	Exhibit B - Request and Attestation of Granted Approvals for Sponsor's Invitation	Observer/sponsor signatures will be obtained by the Department – CMO/CNO approval will be obtained by the Office of Observership Credentialing.	Observer Sponsor CMO CNO (optional)

STEP 2 – Application Submission

Applicant submits completed via Department or Electronic application to the Nursing Office of Credentialing.

Completed?	Form/Documents Required	Instructions	Signatures Required From
	Exhibit C – HIPAA Confidentiality and Non-Disclosure Statement	Completed by applicant	Observer
	Exhibit D – Immunization Verifying Documentation	Completed by applicant	Observer
	Exhibit E – Health Screen	Completed by applicant	Observer
	Exhibit F – Sponsor Supervision Agreement	Completed by sponsor	Sponsor Designated Supervisor
	Exhibit G – Release of Waiver of Liability	Completed by sponsor	Observer Sponsor
	Exhibit H – Observership Code of Conduct	Emory Healthcare Pledge included for reference, not for submission.	Observer
	Exhibit I – Observer Required Regulatory Courses	Completed by applicant	Observer
	Government issued photo ID of observer	Passport or driver's license. Attestation form provided for Emory department designee to verify.	Observer Designee
	Exhibit J – (Invasive Procedure Only) – HIPAA authorization	Patient's signed consent to Observership (filed in patient's medical record)	Sponsor Patient
	Observership Credentialing Fee (\$150)	Payable to Emory Healthcare via check, money order, credit card or department smart key	Waived

STEP 3 – Final Approval Granted by the Office of Observership Credentialing

The Office of Observership Credentialing will notify the observation site's Security Office to issue an Emory Healthcare photo ID badge. Observer picks up ID badge from Security Office on day of arrival. **(Applicants EHC and EU badge may not be used while observing.)**

Security Office Locations:

Emory University Hospital
2nd floor, D wing, Room D-215
Office: 404-712-5599

Emory University Hospital Midtown
Orr Building, 1st floor
Office: 404-686-4485

Emory Saint Joseph's Hospital
5665 Peachtree Dunwoody
Office: 678-843-7568



EXHIBIT B
Request and Attestation of Granted Initial Approvals for
Observership

This document is a preliminary approval of the invitation only to be completed a month in advance of the start date. Following this approval, other requirements must be submitted to the Office of Observership Credentialing prior to the final authorization, start date, and badge distribution.

Applicant Name: _____

Date of Birth: _____ Age at time of Observership: _____

Home Address: _____

Home/Cell Phone Number: _____

Email Address: _____

Name of School/College: _____

Purpose and Goal of Observership (please write 1-5 sentences):

Sponsor: _____

Observation Site: _____

Observation Period: Start: _____ End: _____

NOTE: Clinical and non-clinical authorizations for an observership must be linked to an affiliation with an EHC Executive or Medical Staff Member with active, Emory clinical privileges. If not linked with a physician, the sponsoring affiliation may also be with a professor or clinical researcher from Emory University School of Medicine or Emory's Nell Hodgson Woodruff School of Nursing with approved, Emory clinical access.

The following individuals must print, sign, and date, signifying the Observer is APPROVED to begin the application process:

Any requested exceptions to the policy herein must be noted on this sheet and approved by the parties listed below.

Observer:	_____	Date: _____
	(Print) (Signature)	
Sponsor:	_____	Date: _____
	(Print) (Signature)	
Dept. Chair/Chief of Service or Designee:	_____	Date: _____
	(Print) (Signature)	
Site Chief Nursing Officer (when appropriate):	_____	Date: _____
	(Print) (Signature)	
Site Chief Medical Officer:	_____	Date: _____
	(Print) (Signature)	



EXHIBIT C
HIPAA Confidentiality and Non-Disclosure Statement

I, _____, the Observer visiting Emory Healthcare, am aware of the Hospital's Regulations and Policies that are issued under the Health Insurance Portability and Accountability Act of 1996 (also known as the HIPAA Privacy Rule).

I understand that all patient information, including medical records, other medical information, billing and financial data, is confidential.

I agree to comply with all Hospital policies and procedures, including and without limitation to the Non-Staff Observer Handbook and the Privacy Policies and Procedures implementing the HIPAA Privacy Rule.

I understand that if I violate patient confidentiality by using or disclosing patient information improperly, I may be subject to disciplinary action including having my Observership immediately terminated and I may be held personally responsible.

I understand that if I have any questions or concerns about the Privacy Rule and/or the proper use or disclosure of patient information, I shall ask my supervising attending, the Hospital Privacy Officer, or the Hospital Compliance Officer.

I have read and understand Emory Healthcare's Privacy and Security Training Materials and signed the acknowledgement statement. I understand and agree that the Hospital Privacy Policies and Procedures will apply to all patient information even after my Observership has been completed.

I certify that I have read Emory's HIPAA Policy Regarding Confidentiality of Patient Health Information and have completed the associated Privacy and Security Regulatory Course, outlined on the Non-EHC Staff Regulatory Courses form provided herein.

I understand that no information about any patients I may observe or hear discussed while on the Observership or at any time thereafter may be transmitted to any third party or person via personal recording device, email, text message, posting on any social network or another online site, or via any other written or verbal communication. **Exceptions must be reviewed and approved through Legal, the CMO, and the respective sponsor.*

I understand that photography and videotaping are prohibited.

As a condition of my Observership, I agree to abide by the prohibition on discussing my Observership and agree that Emory Healthcare has the authority to terminate the Observership at any time in its sole discretion. I further agree to indemnify and defend Emory Healthcare and its affiliates for all damages or losses incurred related to my participation as an Observer.

Print Name

Signature

Date

Provide Verifying documentation for one option per category.

I. Measles, Mumps, and Rubella (MMR)

Option A Two live attenuated MMR vaccines Vaccine #1 _____ Vaccine #2 _____

Option B Proof of individual titers – attach titer document (Positive titers represent immunity)

Rubeola Titer Date _____

Mumps Titer Date _____

Rubella Titer Date _____

II. Tuberculosis (TST=PPD)

Option A T-Spot Serology and/or QuantiFERON TB Gold Blood Test. The result must be current within 3 months of observership start date Last Serology Date _____

For Positive serology, provide documentation with a negative/clear chest x-ray report, treatment received, and a TB symptom questionnaire

Option D For history of bacilli Calmette-Guerin (BCG) vaccination: provide documentation of a T-Spot/QuantiFERON Gold Blood test result within 3 months of observership start date.

III. Varicella (Chicken Pox, VZV) Childhood history of disease is not sufficient.

Option A (two live VZV vaccines) Varivax Date #1 _____ Varivax Date #2 _____

Option B VZV Serologies (attach titer documentation) VZV Titer Date _____
Positive titer = immune, Negative titer = not immune (option A required)

IV. Hepatitis (HBV)

Option A Hepatitis B Vaccination (provide documentation) (three (3) doses required or titers)

Option B Hepatitis B Surface Antibody (HBVSAB) Test Results (provide serology documentation)
Serology Date _____ (positive=immune, negative=non-immune)

Option C Declination of Hepatitis Vaccination – After consultation with an Emory Healthcare Representative

V. Annual Mandatory Flu Vaccine (October-March) please submit influenza verification documentation or submit Emory Healthcare waiver signed by physician or religious leader.

Immunization clearance is required prior to observing in Emory hospitals or clinics.



EXHIBIT E
Health Screen Form

Applicant Name _____

1. Have you been around anyone with any of the following diseases within the past 30 days?

- | | | | | |
|--------------------------|-----|--------------------------|----|--------------------------|
| Chicken pox | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| Measles | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| German Measles (Rubella) | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| Mumps | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |
| Influenza | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> |

2. Have you had the following symptoms in the past 72 hours?

- | | | | | | |
|----------------------------|-----|--------------------------|----|--------------------------|-------------------------------|
| Fever | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> | If yes, temp degrees F: _____ |
| Conjunctivitis/pink eye | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> | |
| Vomiting | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> | |
| Diarrhea | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> | |
| Cough | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> | |
| Congestion/runny nose/cold | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> | |
| Skin sores | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> | |
| Rash | Yes | <input type="checkbox"/> | No | <input type="checkbox"/> | |

3. Have you had any chronic cough (lasting greater than 3 weeks), night sweats, unexplained fevers, loss of appetite, sudden weight loss, blood tinged secretions from the nose or mouth or coughed up? Yes No

Please describe:

4. In the past 21 days, have you traveled to other countries? Yes No

Please list all countries you have traveled in:

5. Have you had any contact or exposure to someone ill who has traveled in another country in the past 21 days?

Yes No

*If any of the above are answered **yes**, the individual must be cleared by the Department of Occupational Injury Management (OIM)*

I certify that the above information is correct.

Print Name	Signature	Date
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(OFFICE USE ONLY)

Applicant has provided verifying documentation for the following: (as outlined in Exhibit D)

- MMR TB Varicella Hep B or Waiver Seasonal Flu



**EXHIBIT F
Sponsor Supervision Agreement**

I, the undersigned, agree to be responsible for supervising _____ (Observer) while he/she observes the activities of the _____ (Clinical/Non-clinical services) during the period of _____ to _____ .

I acknowledge and agree to accept the above named Observer under my supervision and consent that he/she will not be present in any patient care area without me being with him/her or with my designated non-student, non-resident supervisor.

I agree to ensure that the above named Observer shall engage in observation activities only and shall not participate in any patient care activities within Emory Healthcare. These activities include:

<ul style="list-style-type: none"> • Touching patients • Writing on the medical record 	<ul style="list-style-type: none"> • Advising other care providers, patients or visitors • Scrubbing in the Operating Room or any other procedural area
<ul style="list-style-type: none"> • Accessing the patient medical record • Answering questions posed by patients, family, or care providing staff concerning treatment 	<ul style="list-style-type: none"> • Performing any professional duties • Receiving badge access to open doors of clinical areas

I also understand that he/she is not covered by Emory's Liability Program.

I understand it is the expectation that an Observer will leave patient or procedure rooms during emergency situations and am aware that, if in the best interest of the patient, I have the latitude to ask an Observer to leave the patient or procedure room at anytime without explanation.

I understand that should an Observer under my supervision enter into an Emory Hospital or affiliated clinic intoxicated/impaired, it is my responsibility to prevent the Observer from entering patient care areas and immediately inform the respective hospital or clinic CMO who will move forward with the termination of the individual's Observership.

I understand that the entity CMO has the ultimate authority and discretion to terminate the described Observership at any point in time.

I understand that at no point in time will access capability to the patient medical record be granted for Observers.

Should the Observer observe direct patient care or view medical records with the sponsoring physician, a HIPAA waiver/release form (attached hereto) must be signed by that patient. It is the responsibility of the sponsoring physician to that patient to obtain such documentation and file with the department under which the procedure or patient care is performed.

Sponsor Name and Title

Sponsor Signature

Date

Sponsor Email Address

Sponsor Phone Number

Designated Supervisor Name and Title (non-student, non-resident)

Designated Supervisor Signature

Date

Designated Supervisor's Email Address

Designated Supervisor's Phone Number



EXHIBIT G
Release and Waiver of Liability

I, _____, wish to observe the activities of the _____ service or department within Emory Healthcare, Inc. (EHC) from _____ to _____ in furtherance of my personal or educational goals (observership).

I understand that I will not be allowed to perform any clinical activities or other work, including without limitation the touching of any patient, documenting on any medical record, scrubbing in the EHC Operating Room or any other EHC procedural area, and advising of care providers or patients. I further understand that I will be under the supervision of attending physician _____ and agree to remain with the attending physician at all times during my Observership. I agree to adhere to the EHC policies and procedures.

I understand I am not to be involved in the provision of patient care at any time and will remain with my assigned sponsor at all times. I understand that my sponsor can ask me to leave the room at anytime without explanation. It is the expectation that all observers will leave during emergency situations.

I understand that I am not an employee, agent or contractor of Emory Healthcare and as such, I am not authorized to conduct any business on its behalf and am not entitled to receive payment or benefits from Emory Healthcare.

I understand that Emory Healthcare does not provide insurance coverage including, but not limited to, the following: professional medical malpractice, general liability, workers' compensation, or health insurance benefits. I understand that I am not an Emory employee and do not receive employee benefit. I concur that any injury that I may sustain in connection with my participation in the observership shall be covered by my personal medical insurance.

I understand that even though I will only be observing activities in the _____ clinical services I may be exposed to certain risk of bodily injury and other dangers, including but not limited to, exposure to blood born pathogens, biological waste, and dangerous chemicals. I am aware of these risks and voluntarily assume these risks. I release and agree to indemnify and defend EHC from all damages, liability or loss arising from any injury that I sustain related to my participation in the observership.

For and in consideration of EHC allowing me to observe the activities of the _____ services to further my professional and educational goals, I hereby release and forever discharge and agree to indemnify and defend EHC and it's parent and affiliate entities and their respective officers, agents and employees from all claims, losses, demands, rights and causes of action of whatever kind or nature arising out of my observership or observation activities, including but not limited to, those specific risks enumerated above. In addition, I understand and take sole responsibility for any personal belongings I bring with me to Emory.

I understand that EHC may terminate my observership: (i) at any time in its sole discretion; or (ii) if I violate the terms of this agreement or EHC Policies or Procedures.

I have read this document carefully and I voluntarily choose to participate in the observership activities described herein. I hereby certify that I am at least 18 years of age, I am legally competent, and I am signing this document with full knowledge of its significance.

Observer Name (print)

Signature

Date

When participating in the observership, I will...

- Arrive promptly
- Accurately represent my position and role
- Appreciate the limits of my role as an Observer
- Ensure patients give informed consent for shadowing freely and without undue influence
- Respect patients' right to refuse to have visitors present
- Treat all patients and staff with respect and dignity, regardless of age, gender, race, ethnicity, national origin, religion, disability, or sexual orientation
- Maintain strict confidentiality about patient information
- Maintain honesty and integrity by being forthright in my interactions with patients, peers, physician supervisors, and staff
- Ensure patient safety by remaining at home if I am ill
- Report concerns about patient safety to the appropriate individual
- Behave in an appropriate, professional, courteous manner at all times
- Not initiate or accept patients' invitations to engage in social relationships
- Dress and act professionally
- Not abuse drugs or alcohol
- Be aware of and follow the policies, procedures and guidelines of my sponsoring institution
- Wear the Observer's ID Badge at all times
- Maintain patient and employee confidentiality

I agree to follow the Code of Conduct described above and to adhere to Emory Healthcare's Pledge attached hereto

Observer Name (print)

Signature

Date



Our Pledge

<p>We will treat each other the way we want to be treated.</p> <p>We will...</p> <ul style="list-style-type: none"> • treat everyone as professionals and with respect and dignity • greet each other by name • welcome and encourage new team members • be honest and open in all interactions • be respectful of everyone’s privacy • be culturally and racially sensitive <p>We will not...</p> <ul style="list-style-type: none"> • raise our voices in anger or use sarcasm or profanity • be passive-aggressive • make culturally or racially derogatory remarks • undermine each other’s work • criticize each other and Emory in public spaces <p>We will cultivate a spirit of inquiry.</p> <p>We will...</p> <ul style="list-style-type: none"> • ask “why” when we have questions or concerns, especially about safety • ask for a pause when we think someone is about to make a mistake or do something unsafe • thank each other for raising concerns • declare our openness to the inquiry of others <p>We will not ...</p> <ul style="list-style-type: none"> • respond with anger or sarcasm when someone requests a pause • intentionally belittle or respond in a threatening or condescending manner when someone asks a question • tolerate rudeness • stifle learning 	<p>We will defer to each other’s expertise.</p> <p>We will...</p> <ul style="list-style-type: none"> • encourage each other to offer different perspectives • recognize that all members make important contributions to the team • seek help when we don’t know the answer <p>We will not ...</p> <ul style="list-style-type: none"> • belittle or ignore the ideas and perspectives offered by each other • assume that expertise is overruled by age, profession, or rank <p>We will communicate effectively.</p> <p>We will...</p> <ul style="list-style-type: none"> • listen thoughtfully and ask for clarification when we don’t understand • check that others have understood when we say something important • remain respectful with our body language and tone of voice • remain calm when confronted with or responding to stressful situations • use scripts, read-back, repeat-back, or other techniques where appropriate to reduce the chance of misunderstanding <p>We will not ...</p> <ul style="list-style-type: none"> • stifle clarifying questions • interrupt our team members unnecessarily • say “it’s not my job” or “it’s not my responsibility” <p>We will commit to these behaviors in support of Emory Healthcare Care Transformation</p> <p>We will...</p> <ul style="list-style-type: none"> • encourage and support each other • hold each other accountable for the behaviors identified in this Pledge
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EXHIBIT I
Observer Required Regulatory Courses

The following regulatory courses (found as an attachment to this page) must be reviewed by the applicant prior to the Observer's start date. After reading through the two applicable courses, the applicant must sign below, verifying that he/she has read, understands, and accepts accountability for complying with all material through the entirety of their time with Emory Healthcare.

Topics include, but are not limited to:

1. Hazard Communication
2. Standard Precautions

*Additional training for clinical areas may be required and will be specified prior to the individual's start date.
The regulatory courses may be accessed by using the link below:*

I, _____, confirm that I have read all the required Regulatory Courses, as outlined above. I understand that I will be held accountable for complying with these rules, regulations, and practices, and am aware that any breach of rules may result in immediate termination of my visitation/Observership.

(Print) Observer Name


Signature

Date

EHC Hazard Communication

1. EHC Hazard Communication

1.1 Introduction: Lesson 1



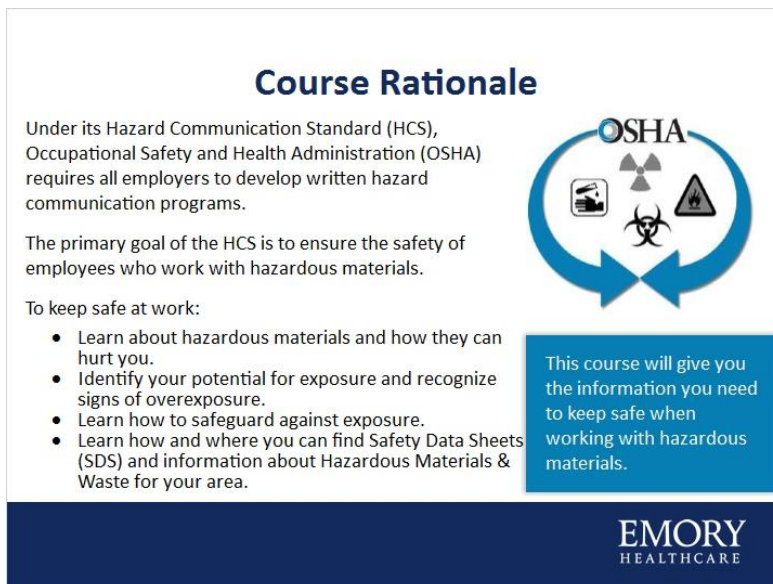
EHC Hazard Communication

Splash Spatters Environmental Infectious Disease Contamination Exposure Airborne OSHA HIV SARS

Welcome to the introductory lesson on hazard communication.

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1.2 Course Rationale



Course Rationale

Under its Hazard Communication Standard (HCS), Occupational Safety and Health Administration (OSHA) requires all employers to develop written hazard communication programs.

The primary goal of the HCS is to ensure the safety of employees who work with hazardous materials.

To keep safe at work:

- Learn about hazardous materials and how they can hurt you.
- Identify your potential for exposure and recognize signs of overexposure.
- Learn how to safeguard against exposure.
- Learn how and where you can find Safety Data Sheets (SDS) and information about Hazardous Materials & Waste for your area.

This course will give you the information you need to keep safe when working with hazardous materials.

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1.3 Course Goals

Course Objectives

After completing this course, you should be able to:

- Define hazardous materials that include a description of why certain materials are hazardous to healthcare workers.
- Explain the requirements and how to interpret a chemical container label that will help ensure healthcare worker safety.
- Explain where you find Safety Data Sheets (SDS).
- Cite the importance of using personal protective equipment that can assist in improving healthcare worker safety.

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1.4 Course Outline

Course Outline

Lesson 1 provided the course rationale and goals.

Lesson 2 will focus on hazardous materials.

Lesson 3 will discuss safety data sheets.

Lesson 4 will cover labeling of hazardous materials.

Lesson 5 will discuss personal protective equipment.

Lesson Map

Lesson 1: Introduction
Lesson 2: Hazardous Materials
> Physical hazards
> Health hazards
> Hazardous chemicals
Lesson 3: Safety Data Sheets
> Responsibilities
> SDS Sections
Lesson 4: Labeling of Hazardous Chemicals
> Container labels
> Hazard warnings
> Symbols
Lesson 5: Personal Protective Equipment
> Purpose
> Responsibilities
> Types

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1.5 Introduction: Lesson 2

Introduction

Welcome to the lesson on hazardous materials.


This lesson will review:

- Physical and health hazards of chemicals.
- Potential routes of exposure to hazardous chemicals.
- The three different forms of hazardous chemicals.

Lesson Map

Lesson 2: Hazardous Materials

- > Physical hazards
- > Health hazards
- > Hazardous chemicals



1.6 What Makes a Chemical Hazardous?

What Makes a Chemical Hazard?


A chemical is hazardous if it is likely to cause harm.

Chemicals can have two types of hazards:

- Physical hazards
- Health hazards

References 1

Click on each type of hazard to learn more.



Physical hazards (Slide Layer)

What Makes a Chemical Hazard?

A chemical is hazardous if it is likely to cause harm.

Chemicals can have two types of hazards:


- Physical hazards
- Health hazards

Physical hazards are related to the way that a chemical interacts with other substances or the environment. A chemical that is physically hazardous can harm you by:

- Exploding
- Igniting
- Reacting violently with other substances

References 1

Click on each type of hazard to learn more.



Health hazards (Slide Layer)

What Makes a Chemical Hazard?

A chemical is hazardous if it is likely to cause harm.

Chemicals can have two types of hazards:


- Physical hazards
- Health hazards

Health hazards are related to the way that a chemical interacts with your body. If you are exposed to a chemical hazardous to human health, you could suffer:

- Death
- Long-term damage
- Short-term injury or illness

References 1

Click on each type of hazard to learn more.



1.7 Physical Hazards: Examples


Physical Hazards: Examples

Examples of chemicals that are physical hazards include:

- ▶ [Trinitrotoluene](#)
- ▶ [Compressed gas in a cylinder](#)
- ▶ [Isopropanol and other alcohols](#)

References 2

Roll over each example for more information.

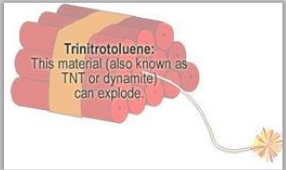


Trinitrotoluene (Slide Layer)

Physical Hazards: Examples

Examples of chemicals that are physical hazards include:


- ▶ [Trinitrotoluene](#)
- ▶ [Compressed gas in a cylinder](#)
- ▶ [Isopropanol and other alcohols](#)



Trinitrotoluene

References 2

Roll over each example for more information.



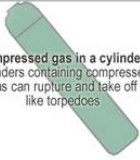
Compressed gas in a cylinder (Slide Layer)

Physical Hazards: Examples

Examples of chemicals that are physical hazards include:

- ▶ [Trinitrotoluene](#)
- ▶ [Compressed gas in a cylinder](#)
- ▶ [Isopropanol and other alcohols](#)

References 2



Compressed gas in a cylinder:
Cylinders containing compressed gas can rupture and take off like torpedoes.

Compressed gas in a cylinder

Roll over each example for more information.

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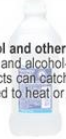
Isopropanol and other alcohols (Slide Layer)

Physical Hazards: Examples

Examples of chemicals that are physical hazards include:

- ▶ [Trinitrotoluene](#)
- ▶ [Compressed gas in a cylinder](#)
- ▶ [Isopropanol and other alcohols](#)

References 2



Isopropanol and other alcohols:
Alcohol and alcohol-based products can catch fire, if exposed to heat or sparks.

Isopropanol and other alcohols

Roll over each example for more information.

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1.8 Health Hazards: Examples

Health Hazards: Examples

Examples of chemicals that are health hazards include:

- Lead
- Mercury
- Formalin
- Glutaraldehyde



References 3-6

Click on each example to learn more.

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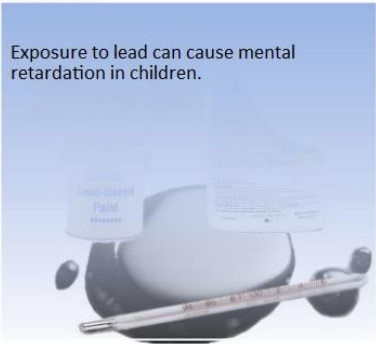
Lead (Slide Layer)

Health Hazards: Examples

Examples of chemicals that are health hazards include:

- Lead
- Mercury
- Formalin
- Glutaraldehyde

Exposure to lead can cause mental retardation in children.



References 3-6

Click on each example to learn more.

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Mercury (Slide Layer)

Health Hazards: Examples

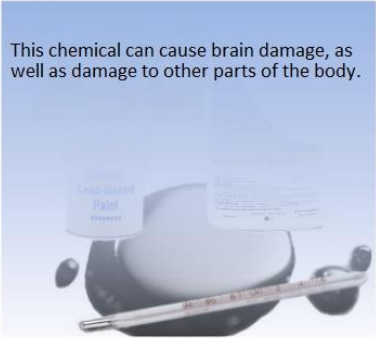

Examples of chemicals that are health hazards include:

- Lead
- Mercury
- Formalin
- Glutaraldehyde

This chemical can cause brain damage, as well as damage to other parts of the body.

References 3-6

Click on each example to learn more.



Formalin (Slide Layer)

Health Hazards: Examples

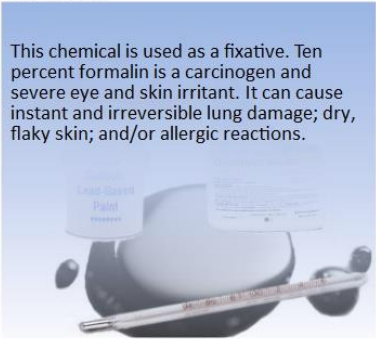

Examples of chemicals that are health hazards include:

- Lead
- Mercury
- Formalin
- Glutaraldehyde

This chemical is used as a fixative. Ten percent formalin is a carcinogen and severe eye and skin irritant. It can cause instant and irreversible lung damage; dry, flaky skin; and/or allergic reactions.

References 3-6

Click on each example to learn more.



Glutaraldehyde (Slide Layer)

Health Hazards: Examples

Examples of chemicals that are health hazards include:


- Lead
- Mercury
- Formalin
- Glutaraldehyde

This chemical is used to disinfect and clean heat-sensitive equipment such as surgical instruments and endoscopes. Glutaraldehyde can cause:

- Throat and lung irritation
- Asthma-like symptoms and breathing difficulty
- Nose irritation and bleeding
- Headache
- Nausea
- Skin and eye irritation
- Other allergic reactions

References 3-6

Click on each example to learn more.



1.9 Health Hazards: Routes of Exposure

Health Hazards: Routes of Exposure


You must be exposed to the chemical for it to harm you.

Routes of exposure include:

- > Eyes
- > Skin
- > Inhalation
- > Ingestion
- > Injection

Reference 7

Roll over each route of exposure to learn more.



Eyes (Slide Layer)

Health Hazards: Routes of Exposure

You must be exposed to the chemical for it to harm you.


Routes of exposure include:

- > Eyes
- > Skin
- > Inhalation
- > Ingestion
- > Injection

Reference 7

Eyes:
Many chemicals can burn or irritate the eyes. In some cases, chemicals may be absorbed through the eyes and enter the bloodstream.

Roll over each route of exposure to learn more.



Skin (Slide Layer)

Health Hazards: Routes of Exposure

You must be exposed to the chemical for it to harm you.


Routes of exposure include:

- > Eyes
- > Skin
- > Inhalation
- > Ingestion
- > Injection

Reference 7

Skin:
Some chemicals can burn the skin. Other chemicals may pass through the skin and enter the bloodstream.

Roll over each route of exposure to learn more.



Inhalation (Slide Layer)

Health Hazards: Routes of Exposure

You must be exposed to the chemical for it to harm you.

Routes of exposure include:

- > Eyes
- > Skin
- > Inhalation
- > Ingestion
- > Injection

Reference 7

Roll over each route of exposure to learn more.

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Inhalation:
The most common type of exposure occurs when chemicals are inhaled into the lungs. Inhaled chemicals may:

- Irritate the nose or throat
- Damage the lungs
- Enter the bloodstream through the lungs

Ingestion (Slide Layer)

Health Hazards: Routes of Exposure

You must be exposed to the chemical for it to harm you.

Routes of exposure include:

- > Eyes
- > Skin
- > Inhalation
- > Ingestion
- > Injection

Reference 7

Roll over each route of exposure to learn more.

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Ingestion:
You may ingest hazardous chemicals while:

- Smoking
- Eating
- Drinking

It is never safe to eat, drink, or smoke near hazardous chemicals. Always wash your hands after working with hazardous chemicals. Wash your hands before eating, drinking, or smoking.

Injection (Slide Layer)

Health Hazards: Routes of Exposure

You must be exposed to the chemical for it to harm you.


Routes of exposure include:

- > Eyes
- > Skin
- > Inhalation
- > Ingestion
- > Injection

Injection:
Injection may occur if you are cut with a tool, instrument, or needle that has been contaminated with a chemical.

Reference 7

Roll over each route of exposure to learn more.



1.10 Health Hazards: Types of Damage

Health Hazards: Types of Damage

Toxic chemicals can have local and /or systemic health effects.


Local Health Effects **Systemic Health Effects**

Key Thought

A local effect, such as a chemical burn, can provide warning of exposure, alerting you that you may be at risk for systemic injury.

Many chemicals, however, do not produce noticeable local effects. Certain toxic gases, for example, can be inhaled without causing irritation or other local effects. Nevertheless, these gases may produce serious systemic effects.

Click on each example to learn more.



Local Health Effects (Slide Layer)

Health Hazards: Types of Damage

Toxic chemicals can have local and /or systemic health effects.

Local Health Effects **Systemic Health Effects**

Key Thought

A local effect, such as a chemical burn, can provide warning of exposure, alerting you that you may be at risk for systemic injury.

Many chemicals, however, do not produce noticeable local effects. Certain toxic gases, for example, can be inhaled without causing irritation or other local effects. Nevertheless, these gases may produce serious systemic effects.

A local effect occurs when the chemical causes damage at the point where it first contacts the body. For example:

- Eyes
- Skin
- Nose

Click on each example to learn more.

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Systemic Health Effects (Slide Layer)

Health Hazards: Types of Damage

Toxic chemicals can have local and /or systemic health effects.

Local Health Effects **Systemic Health Effects**

Key Thought

A local effect, such as a chemical burn, can provide warning of exposure, alerting you that you may be at risk for systemic injury.

Many chemicals, however, do not produce noticeable local effects. Certain toxic gases, for example, can be inhaled without causing irritation or other local effects. Nevertheless, these gases may produce serious systemic effects.

A systemic effect occurs when the chemical enters the bloodstream and travels throughout the body. The organs most commonly harmed include:

- Liver
- Kidneys
- Heart
- Brain
- Reproductive organs

Click on each example to learn more.

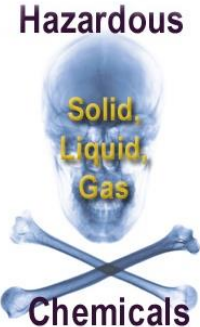
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1.11 Forms of Hazardous Chemicals

Forms of Hazardous Chemicals

Hazardous chemicals come in the forms of:

- Solid
- Liquid
- Gas



Click on each example to take a closer look.

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Notes:

Solid (Slide Layer)

Solids are not usually hazardous. This is because solid materials are not readily absorbed into the body. Certain forms of solids, however, can be highly hazardous. These include:

- Solid
 - Dust
 - Fumes
 - Fibers
- Liquid
- Gas

Click on each item to learn more.
Roll over the sub-terms to learn more.

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Liquid (Slide Layer)

Many hazardous chemicals are liquids at normal temperatures and pressures.

Hazardous liquids may:

- Damage the skin
- Enter the body through the skin
- Evaporate, forming toxic gases that can be inhaled

Solid

Liquid

Gas

Mists

A mist consists of liquid particles produced by agitating or spraying a liquid. Mists can be hazardous if inhaled or sprayed on the skin.

Click on each item to learn more.
Rollover the sub-terms to learn more.

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Gas (Slide Layer)

Gases can be:

- Flammable
- Explosive
- Toxic

Hazardous gases can be difficult to detect. Many gases do not have a distinctive color or odor.

Solid

Liquid

Gas

Vapor

Vapor is the gaseous form of a substance that is primarily a liquid at normal temperatures and pressures, but evaporates readily.

For example, alcohol is a liquid at room temperature, but evaporates rapidly to form vapors.

Vapors can:

- Be inhaled.
- Irritate the eyes, skin, or respiratory tract.
- Be flammable, explosive, and/or toxic.

Click on each item to learn more.
Rollover the sub-terms to learn more.

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Fumes (Slide Layer)

- Dust
- Fumes
- Fibers

Fume consists of very small, fine solid particles, suspended in the air. Fume is created when solid chemicals (often metals) are heated to very high temperatures. After they evaporate to the gaseous state, they re-solidify. Fume is easily inhaled. Metal fumes can be highly toxic. An example of hazardous fume is lead oxide, which can be produced during soldering.

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Fibers (Slide Layer)

- Dust
- Fumes
- Fibers

A fiber is long, thin solid particle. Small fibers can be inhaled. Very small fibers can lodge in the lungs and cause damage. An example of hazardous fiber is asbestos.

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Dust (Slide Layer)



Dust consists of very small solid particles. These are suspended in the air. Hazardous dust is created when certain solids are pulverized, or settled dust becomes airborne. Dust can:

- Be inhaled.
- Enter the bloodstream through the lungs.
- Explode or react violently with other substances.

An example of hazardous dust is silica.

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1.12 Knowledge Check

(Multiple Choice, 10 points, unlimited attempts permitted)

Knowledge Check



All of the following are true EXCEPT:

Select the answer that best fits the question.

- Trinitrotoluene is a physical hazard.
- Physical hazards are defined by the way in which a chemical interacts with other substances or the environment.
- A chemical with physical hazards can harm you by exploding, igniting, or reacting violently with other substances.
- All of the above are true.

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Correct Choice

Trinitrotoluene is a physical hazard.

Physical hazards are defined by the way in which a chemical interacts with other substances or the environment.

A chemical with physical hazards can harm you by exploding, igniting, or reacting violently with other substances.

X All of the above are true.

Feedback when correct:

That's right! All of these statements are true.

Feedback when incorrect:

All of these statements are true.


Notes:

Correct (Slide Layer)

The screenshot shows a slide titled "Knowledge Check" with a red checkmark icon in the top right corner. The question text reads: "All of the following are true EXCEPT: Select the answer that best fits the question." Below the question are four radio button options: "Trinitro...", "Physical other su...", "A chemi reacting...", and "All of the above are true." The "All of the above are true." option is selected. A grey feedback overlay box is centered on the slide, containing the text "Correct" and "That's right! All of these statements are true." with a "Continue" button below it. The Emory Healthcare logo is visible in the bottom right corner of the slide.

Incorrect (Slide Layer)

Knowledge Check




All of the following are true EXCEPT:
Select the answer that best fits the question.

- Trinitrotoluene (TNT) is a powerful explosive.
- Physical changes are reversible, while chemical changes are not.
- A chemical reaction always involves a change in color, temperature, or state.
- All of the above are true.

Incorrect


All of these statements are true.

Continue



Try Again (Slide Layer)

Knowledge Check




All of the following are true EXCEPT:
Select the answer that best fits the question.

- Trinitrotoluene (TNT) is a powerful explosive.
- Physical changes are reversible, while chemical changes are not.
- A chemical reaction always involves a change in color, temperature, or state.
- All of the above are true.

Incorrect

That is incorrect. Please try again.

Try Again



1.13 Summary

Summary

You have completed the lesson on hazardous materials.

Remember:

- Chemicals can have physical and/or health hazards.
- Physical hazards are related to the way a chemical interacts with other substances or the environment.
- Health hazards are related to the way a chemical interacts with your body.
- Routes of exposure to hazardous chemicals include the eyes, the skin, inhalation, ingestion, and injection.
- Toxic chemicals can have local or systemic health effects.
- Hazardous chemicals may be solids, liquids, or gases.
- Solids are not usually hazardous. Dust, fume, and fibers, however, can be highly hazardous, depending on the material.
- Many hazardous chemicals are liquids at normal temperatures and pressures.
- Gases can be flammable, explosive, and/or toxic.

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1.14 Introduction: Lesson 3

Introduction

Welcome to the lesson on safety data sheets.

This lesson will review:

- The responsibilities of:
 - Manufacturers and distributors of hazardous chemicals
 - Employers
 - Employees
- How to read a safety data sheet and understand its contents
- The importance of following all storage and use instructions contained in a safety data sheet

Lesson Map

Lesson 3: Safety Data Sheets

- Responsibilities
- SDS Sections

References 1

EMORY
HEALTHCARE

1.15 The Manufacturer's Responsibility

The Manufacturer's Responsibility

The HCS requires that all manufacturers of hazardous materials determine the specific physical and health hazards of their products.

The manufacturer must record all hazard information for the product in a Safety Data Sheet (SDS).

Finally, the manufacturer (or distributor) is responsible for providing the relevant safety data sheet to those who purchase the product.



References 1

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HEALTHCARE

1.16 Your Employer's Responsibility

Your Employer's Responsibility

The HCS requires your facility to compile a list of all hazardous chemicals used in the facility.

Each of the chemicals on the list must have a safety data sheet.

This file must be readily available to all workers in their work areas at all times.



Chemical Stuff GHS SAFETY DATA SHEET	
Identification	
Product Name:	Chemical Stuff
Synonyms:	MyCompany Solution
CAS Number:	500-00-0
Product Use:	Engine Synthesis
Manufacturer/Supplier:	My Company
Address:	123 Street, Houston, TX 00000
General Information:	713-000-0000
Transportation Emergency Number:	CHEMTREC: 800-424-9300
Commuting & Environmental Hazards	
Key Thought	
Your employer is responsible for acquiring and maintaining a file of safety data sheets for all hazardous chemicals used in your facility	
Hazard Identification	
GHS Label:	

References 1

EMORY
HEALTHCARE

1.17 Your Responsibility

Your Responsibility

All employees must know how to obtain information on any chemical they use.

You should know:

- Which hazardous chemicals are used in your work area.
- How to read a safety data sheet.
- Know where to find the safety data sheet

The safety data sheets are located on EHC Intranet Explorer at <http://www.msdsonline.com> or go to Quick Links at the bottom of the main page and click on Resources.

You must be trained by your employer when you are assigned to work with any hazardous chemical.

You are responsible for reading all safety data sheets before using a hazardous chemical.

Key Thought

You are responsible for knowing where to find SDSs, and how to read them.

Always follow safety data sheet instructions for chemical use and storage.



References 1

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1.18 Format

Format

OSHA's Hazard Communication Standard specifies the information that has to be on the safety data sheet, but no specific format is required. A 16-section format has been developed and is recommended by OSHA.

16 Sections recommended by OSHA:

Identification	Physical and chemical properties
Hazard(s) identification	Stability and reactivity
Composition	Toxicology information
First-aid measures	Ecological information
Fire-fighting measures	Disposal considerations
Accidental release measures	Transport information
Handling & storage	Regulatory information
Personal Protection	Other information

References 9

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1.19 Safety Data Sheet Sections

Sections

Information in a safety data sheet is divided into sections:

- 1 Identification
- 2 Hazard(s) identification
- 3 Composition/information on ingredients
- 4 First-aid measures
- 5 Fire-fighting measures
- 6 Accidental release measures
- 7 Handling and storage
- 8 Exposure controls/personal protection
- 9 Physical and chemical properties
- 10 Stability and reactivity
- 11 Toxicological information
- 12 Ecological information
- 13 Disposal considerations
- 14 Transport information
- 15 Regulatory information
- 16 Other information

Chemical Stuff GHS SAFETY DATA SHEET								
Identification								
Product Name	: Chemical Stuff							
Synonyms	: Methyloxy Solution							
CAS Number	: 000-00-0							
Product Use:	: Organic Synthesis							
Manufacturer/Supplier	: My Company							
Address	: My Street, Mytown, TX 00000							
General Information	: 713-000-0000							
Transportation Emergency Number	: CHEMTREC: 800-424-9300							
Composition / Information on Ingredients								
Component CAS Number Weight %								
Methyloxy 000-00-0 80								
(See Section 8 for Exposure Limits)								
Hazard Identification								
GHS Classification:								
Health	Environmental	Physical						
Acute Toxicity - Category 2 (Oral), Category 3 (Dermal)	Aquatic Toxicity - Acute 2	Flammable Liquid - Category 2						
Eye Corrosion - Category 1								
Skin Corrosion - Category 1								
Skin Sensitization - Category 1								
Respiratory - Category 2								
Carcinogenicity - Category 1B								
Reproductive/Developmental - Category 2								
Target Organ Toxicity (Reproductive) - Category 2								
GHS Label:								
<table border="0"> <tr> <td>Hazard Statements</td> <td>Pictograms</td> <td>Precautionary Statements</td> </tr> <tr> <td> H302: Harmful if swallowed. H312: Harmful in contact with skin. H332: Irritating to the respiratory system. H350: May cause genetic defects in offspring. H410: Very toxic to aquatic life with long lasting effects. </td> <td> </td> <td> P201: Read the label and all precautions on the label. P202: Do not eat, drink or use tobacco when using this product. P273: Do not release into the environment. P301+P312: IF SWALLOWED: Rinse mouth. P302+P352: IF ON SKIN: Wash thoroughly with soap and water. P303+P361+P353: IF ON CLOTHING: Remove contaminated clothing and wash immediately. P304+P340: IF INHALED: Move to fresh air. If breathing is difficult, seek medical attention. P305+P351+P338: IF IN EYES: Hold open. Rinse thoroughly with copious amounts of water for at least 15 minutes. Seek medical attention if irritation persists. P308+P313: IF EXPOSED: Follow the instructions on the label. P501: Dispose of contents and container in accordance with local, state, and federal regulations. </td> </tr> </table>			Hazard Statements	Pictograms	Precautionary Statements	H302: Harmful if swallowed. H312: Harmful in contact with skin. H332: Irritating to the respiratory system. H350: May cause genetic defects in offspring. H410: Very toxic to aquatic life with long lasting effects.		P201: Read the label and all precautions on the label. P202: Do not eat, drink or use tobacco when using this product. P273: Do not release into the environment. P301+P312: IF SWALLOWED: Rinse mouth. P302+P352: IF ON SKIN: Wash thoroughly with soap and water. P303+P361+P353: IF ON CLOTHING: Remove contaminated clothing and wash immediately. P304+P340: IF INHALED: Move to fresh air. If breathing is difficult, seek medical attention. P305+P351+P338: IF IN EYES: Hold open. Rinse thoroughly with copious amounts of water for at least 15 minutes. Seek medical attention if irritation persists. P308+P313: IF EXPOSED: Follow the instructions on the label. P501: Dispose of contents and container in accordance with local, state, and federal regulations.
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Click on each term to take a closer look at each section. Click on the to return to this view. A check mark will appear after you review each section to show your progress.

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Section 1: Identification (Slide Layer)

Section 1: Identification

The Identification section contains general information such as the:

- Product identifier used on the label.
- Name and address of the product manufacturer.
- Emergency phone number for questions regarding product toxicity and other hazards.
- Recommended use of the chemical and restrictions on use.

Chemical Stuff GHS SAFETY DATA SHEET								
Identification								
Product Name	: Chemical Stuff							
Synonyms	: Methyloxy Solution							
Identification								
Product Name	: Chemical Stuff							
Synonyms	: Methyloxy Solution							
CAS Number	: 000-00-0							
Product Use:	: Organic Synthesis							
Manufacturer/Supplier	: My Company							
Address	: My Street, Mytown, TX 00000							
General Information	: 713-000-0000							
Transportation Emergency	: CHEMTREC: 800-424-9300							
Hazard Identification								
Health	Environmental	Physical						
Acute Toxicity - Category 2 (Oral), Category 3 (Dermal)	Aquatic Toxicity - Acute 2	Flammable Liquid - Category 2						
Eye Corrosion - Category 1								
Skin Corrosion - Category 1								
Skin Sensitization - Category 1								
Respiratory - Category 2								
Carcinogenicity - Category 1B								
Reproductive/Developmental - Category 2								
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References 10

Section 2: Hazard Identification (Slide Layer)



Section 2: Hazard Identification

This section should include:

- The **hazard class** of the chemical.
The nature of the physical or health hazards such as flammable solid, carcinogen, or oral acute toxicity.
- The **hazard category** of the chemical.
Divisions within each hazard class that compare hazard severity within the class.

GHS Classification:			GHS Label:	
Health	Environmental	Physical	Symbols: flame, skull and crossbones, corrosion, health hazard	
Acute Toxicity - Category 2 (inhalation), Category 3 (oral/dermal) Eye Corrosion - Category 1 Skin Corrosion - Category 1 Skin Sensitization - Category 1 Mutagenicity - Category 2 Carcinogenicity - Category 1B Reproductive/Developmental - Category 2 Target Organ Toxicity (Repeated) - Category 2	Aquatic Toxicity - Acute 2	Flammable Liquid - Category 2	Hazard Statements DANGER! Highly Flammable Liquid and Vapor. Fatal if inhaled. Causes severe skin burns and eye damage. May cause allergic skin reaction. Toxic if swallowed and in contact with skin. May cause cancer. Suspected of damaging the unborn child. Suspected of causing genetic defects. May cause damage to cardiovascular, respiratory, nervous, and gastrointestinal systems and liver and blood through prolonged or repeated exposure. Toxic to aquatic life.	Precautionary Statements Do not eat, drink or use tobacco when using this product. Do not breathe mist/vapors. Keep container tightly closed. Keep away from heat/sparks/open flame. No smoking. Wear respiratory protection, protective gloves and eye/face protection. Use only in a well-ventilated area. Take precautionary measures against static discharge. Use only non-sparking tools. Store container tightly closed in cool/well-ventilated place. Wash thoroughly after handling.

References 10

Section 3: Composition/Information on Ingredients (Slide Layer)



Section 3: Composition/Information on Ingredients

Except for trade secrets, this section

lists:

- **Chemical name**
- **Common name and synonyms**
- **CAS number and other unique identifiers**
- **Impurities or additives**

For mixtures, the name and concentration of all ingredients which are classified as health hazards is required.

Chemical Stuff GHS SAFETY DATA SHEET	
Identification	
Product Name	: Chemical Stuff
Synonyms	: Methyloxy Solution
CAS Number	: 000-00-0
Product Use:	: Organic Synthesis
Manufacturer/Supplier	: My Company
Address	: My Street, Mytown, TX 00000
General Information	: 713-000-0000
Transportation Emergency Number	: CHEMTREC: 800-424-9300
Composition / Information on Ingredients	
Component CAS Number	Weight %
Methyloxy 000-00-0 80	
Composition / Information on Ingredients	
Component CAS Number	Weight %
Methyloxy 000-00-0 80	
(See Section 8 for Exposure Limits)	

CAS number

A unique number assigned to every chemical by the Chemical Abstracts Service

References 10

Section 4: First Aid Measures (Slide Layer)

Section 4: First Aid Measures



First aid measures are based on exposure route:

- [Eyes](#)
- [Skin](#)
- [Inhalation](#)
- [Ingestion](#)

The most important symptoms or effects should be listed, as well as immediate and delayed reactions.

Specific advice to health care personnel should be provided.

Roll over each route with your mouse for examples.

Ingestion
Get immediate medical attention. Do not induce vomiting unless directed by medical personnel.

References 10

Section 5: Fire-fighting Measures (Slide Layer)

Section 5: Fire-fighting Measures



This section provides information about [flammability](#) of the product. It also lists how to properly extinguish fires involving the product.

Information includes:

- [Extinguishing media](#)
- [Fire-fighting procedures](#)
- [Fire or explosion hazards](#)

Roll over each item to learn more.

Fire or explosion hazards:
Conditions that may cause this product to explode or ignite. Be certain to avoid these conditions. Never smoke in areas where chemicals may be present. A match, lighter, or cigarette could set off an explosion or start a fire.

Flammability
The measure of a material's ability to burn

References 10

Section 6: Accidental Release Measures (Slide Layer)

Section 6: Accidental Release Measures



This section covers spills and leaks:

- Personal precautions, protective equipment, and emergency procedures.
- Methods and materials for containment and clean up.

Component CAS Number Weight %
Methuloxyl 500-00-8 80
(See Section 9 for Exposure Limits)

4. First Aid Measures

Eye: Eye irritation. Flush immediately with large amounts of water for at least 15 minutes. Eye held away from the eyeball to ensure thorough rinsing. Get immediate medical attention.

Skin: Itching or burning of the skin. Immediately flush the skin with plenty of water while removing contaminated clothing and shoes. Get immediate medical attention. Wash contaminated clothes.

Inhalation: Nasal irritation, headache, dizziness, nausea, vomiting, heart palpitations, breathlessness, tremors, weakness, red flushing of face, irritability. Remove exposed person from exposure area. Get immediate medical attention.

6: Accidental Release Measures

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. (Also see Section 8).

Vapor protective clothing should be worn for spills and leaks. Shut off ignition sources; no flares, smoking or flames in hazard area. Small spills: Take up with sand or other noncombustible absorbent material and place into containers for later disposal. Large spills: Dike far ahead of liquid spill for later disposal.

Do not flush to sewer or waterways. Prevent release to the environment if possible. Refer to Section 15 for spill/release reporting information.

6. Accidental Release Measures

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas.

Vapor protective clothing should be worn for spills and leaks. Shut off ignition sources; no flares, smoking or flames in hazard area. Small spills: Take up with sand or other noncombustible absorbent material and place into containers for later disposal. Large spills: Dike far ahead of liquid spill for later disposal.

Do not flush to sewer or waterways. Prevent release to the environment if possible. Refer to Section 15 for spill/release reporting information.

References 10

Section 7: Handling and Storage (Slide Layer)

Section 7: Handling and Storage



This section provides precautions for safe handling and storage, including any incompatibilities.

7. Handling and Storage

Handling

Do not get in eyes, on skin or on clothing. Do not breathe vapors or mists. Keep container closed with adequate ventilation. Use good personal hygiene practices. Wash hands before eating, drinking, smoking. Remove contaminated clothing and clean before re-use. Destroy contaminated belts and shoes that cannot be decontaminated.

Keep away from heat and flame. Keep operating temperatures below ignition temperatures of non-sparking tools.

Storage

Store in tightly closed containers in cool, dry, well-ventilated area away from heat, sources of ignition and incompatibles. Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion. Store at ambient or lower temperature. Store out of direct sunlight. Keep containers tightly closed and upright when not in use. Protect against physical damage.

Empty containers may contain toxic, flammable and explosive residue or vapors. Do not cut, grind, drill, or weld on or near containers unless precautions are taken against these hazards.

References 10

Section 8: Exposure Controls and Personal Protection Information (Slide Layer)

Section 8: Exposure Controls and Personal Protection Information

This section provides information about **exposure limits** and required personal protective equipment (PPE).

7. Handling and Storage

8. Exposure Controls / Personal Protection

Exposure Limits
Component, Methyltoxy - TWA: 3 ppm (skin) - STEL: C 15 ppm (15 min.)

Engineering Controls: Local exhaust ventilation may be necessary to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source. Provide mechanical ventilation for confined spaces. Use explosion-proof ventilation equipment.

Personal Protective Equipment (PPE)

Eye Protection: Wear chemical safety goggles and face shield. Have eye-wash stations available where eye contact can occur.

Skin Protection: Avoid skin contact. Wear gloves impervious to conditions of use. Additional protection may be necessary to prevent skin contact including use of apron, face shield, boots or full body protection. A safety shower should be located in the work area. Recommended protective materials include: Butyl rubber and for

ceeded, NIOSH
A NIOSH approved
ble for
concentrations,
atmospheres, use a
ing controls are the
es. Respiratory
rgency situations.
ance with OSHA 29

Exposure limit

The maximum concentration of a chemical to which most people can be exposed without experiencing harmful effects

References 10

Section 9: Physical and Chemical Properties (Slide Layer)

Section 9: Physical and Chemical Properties

This section lists physical properties of the product. For example:

- Appearance
- Odor
- Odor threshold
- pH
- Melting point/freezing point
- Boiling point and range
- Flash point
- Evaporation rate
- Flammability
- Vapor pressure and density
- Solubility
- Partition coefficient: in octanol
- Auto-ignition temperature
- Decomposition temperature
- Viscosity

9. Physical and Chemical Properties

Flash point: 200.0 mm Hg @ 23°C

Boiling point: 100.0 mm Hg @ 23°C

Water solubility: 100.0 g/l @ 23°C

Lower Flammability Limit: >3.00%

Upper Flammability Limit: <15.00%

Specific Gravity: 0.82g/ml @ 20°C

% Volatile: 100

Evaporation Rate (Water=1): 5 (Butyl Acetate =1)

Viscosity: 0.3 cP @ 25°C

Octanol/Water Partition Coefficient: log Kow: 0.5

pH: 7, 8% aqueous solution

Molecular Weight: Mixture

Decomposition

Chemical separation of a substance into two or more products; the products may differ from each other and from the original substance

References 10

Section 10: Stability and Reactivity (Slide Layer)

Section 10: Stability and Reactivity

The reactivity data section provides information about the product's stability. It also contains any special storage or use instructions. Follow these instructions.

Specific information in this section includes:

- Chemical Stability
- Possibility of hazardous reactions
- Conditions to avoid
- Incompatible materials
- Hazardous decomposition

Roll over Hazardous decomposition: Chemical separation of a substance into two or more products that may differ from each other and from the original substance

Hazardous Decomposition:
Chemical separation of a substance into two or more products that may differ from each other and from the original substance

Hazardous decomposition products:
Products created from the original substance

References 10

Section 11: Toxicological Information (Slide Layer)

Section 11: Toxicological Information

A description of the various health effects and how to identify them should be listed, including:

- Information on likely routes of exposure.
- Symptoms related to the physical, chemical, and toxicological characteristics.
- Delayed and immediate effects and also chronic effects from short- and long-term exposure.

The most common routes of exposure are inhalation, ingestions, skin and eye contact.

9. Physical and Chemical Properties
11. Toxicological Information
Signs and Symptoms of Overexposure: Eye and nasal irritation, headache, dizziness, nausea, vomiting, heart palpitations, difficulty breathing, cyanosis, tremors, weakness, itching or burning of the skin.
Acute Effects:
Eye Contact: may cause severe conjunctival irritation and corneal damage.
Skin Contact: may cause reddening, blistering or burns with permanent damage. Harmful if absorbed through the skin. May cause allergic skin reaction.
Inhalation: may cause severe irritation with possible lung damage (pulmonary edema).
Ingestion: may cause severe gastrointestinal burns.
Target Organ Effects: May cause gastrointestinal (oral), respiratory tract, nervous system and blood effects based on experimental animal data. May cause cardiovascular system and liver effects.
Chronic Effects: based on experimental animal data, may cause changes to genetic material; adverse effects on the developing fetus or on reproduction at doses that were toxic to the mother. Methyloxy is classified by IARC as group 2B and by NTP as reasonably anticipated to be a human carcinogen. OSHA regulates Methyloxy as a potential carcinogen.
Medical Conditions Aggravated by Exposure: preexisting diseases of the respiratory tract, nervous system, cardiovascular system, liver or gastrointestinal tract.
Acute Toxicity Values
Oral LD50 (Rat) = 100 mg/kg
Dermal LD50 (Rabbit) = 225-300 mg/kg
Inhalation LC50 (Rat) = 200 ppm/4 hr., 1100 ppm vapor/1 hr

References 10

Section 12-15: Non-mandatory Information (Slide Layer)



Section 12-15: Non-mandatory Information

Information on ecological, disposal, transport, and regulatory considerations is outside the jurisdiction of OSHA. While not required by OSHA, this information may be necessary for GHS compliance.



References 11

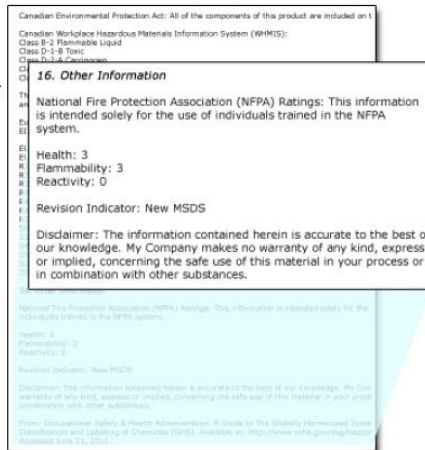
References 10

Section 16: Other Information (Slide Layer)



Section 11: Other Information

The date of preparation of the safety data sheet, or its most recent revision, should be listed here.



References 10

1.20 Summary


Summary

Scroll down

You have completed the lesson on safety data sheets.

Remember:

- The manufacturer of any hazardous chemical must research, develop, and distribute an SDS.
- Your employer must acquire and maintain a file of SDSs for all hazardous chemicals used in your facility. This file must be readily available to all workers.
- Employees must know where to find SDSs. You must know how to read them. You should also follow SDS instructions for chemical use and storage.
- Information in an SDS is divided into sections.
- The Identification section contains general information about the product and the manufacturer.
- The Hazards Identification section lists the hazard class and category of the product.
- The Composition section details the chemical name and common name of the



1.21 Introduction: Lesson 4

Introduction

Welcome to the lesson on labeling of hazardous chemicals.


This lesson will review:

- Who is responsible for labeling hazardous chemicals.
- The proper contents of a container label.
- The importance of following all storage and use instructions contained in a safety data sheet.

Lesson Map

Lesson 4: Labeling of Hazardous Chemicals

- Container labels
- Hazard warnings
- Symbols



1.22 Container Labels: Manufacturer Responsibilities

Container Labels: Manufacturer Responsibilities

OSHA standards require chemical manufacturers and importers to label all containers of hazardous materials.

Labels must be written in English.

A label must include the following information:

- Product identifier
- Signal word
- Hazard statement(s)
- Pictogram(s)
- Precautionary statement(s)
- Name, address, and telephone number of the manufacturer



References 12

EMORY
HEALTHCARE

1.23 Product Identifier

Container Labels: Product Identifier

The Product Identifier on the label should match that used on the SDS.



References 13

EMORY
HEALTHCARE

1.24 Container Labels: Signal Word

Container Labels: Signal Word

The signal word indicates the relative level of the hazard. "Danger" is used for more severe hazard categories and "Warning" for less severe.



References 13

EMORY
HEALTHCARE

1.25 Container Labels: Hazard Statement

Container Labels: Hazard Statement

Hazard statements are assigned to a hazard class and category to describe the nature and degree of the hazard.

Examples include:

- Fatal if swallowed.
- Toxic if swallowed.
- Harmful if swallowed.
- May be harmful if swallowed.

References 14










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1.26 Container Labels: Pictograms

Container Labels: Pictograms

Nine pictograms are in use. Some are used for more than one class of hazard. A label may contain more than one pictogram.

Click on each image to learn more and a check mark will appear for each label you review.

 <ul style="list-style-type: none">• Oxidizers <input type="checkbox"/>	 <ul style="list-style-type: none">• Flammables• Self Reactives• Pyrophorics• Self-Heating• Emits Flammable Gas• Organic Peroxides <input type="checkbox"/>	 <ul style="list-style-type: none">• Explosives• Self Reactives• Organic Peroxides <input type="checkbox"/>
 <ul style="list-style-type: none">• Acute toxicity (severe) <input type="checkbox"/>	 <ul style="list-style-type: none">• Corrosives <input type="checkbox"/>	 <ul style="list-style-type: none">• Gases Under Pressure <input type="checkbox"/>
 <ul style="list-style-type: none">• Carcinogens• Respiratory Sensitizers• Reproductive Toxicity• Target Organ Toxicity• Mutagens• Aspiration Toxicity <input type="checkbox"/>	 <ul style="list-style-type: none">• Environmental Toxicity <input type="checkbox"/>	 <ul style="list-style-type: none">• Irritant• Skin Sensitizer• Acute Toxicity (harmful)• Narcotic Effects• Respiratory Tract• Hazardous to Ozone Layer <input type="checkbox"/>




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oxidizers (Slide Layer)

Container Labels: Pictograms

Nine pictograms are in use. Some are used for more than one class of hazard. A label may contain more than one pictogram.

Click on each image to learn more and a check mark will appear for each label you review.

 <ul style="list-style-type: none">• Oxidizers <input type="checkbox"/>	 <ul style="list-style-type: none">• Flammables• Self Reactives• Pyrophorics <input type="checkbox"/>	 <ul style="list-style-type: none">• Explosives• Self Reactives• Organic Peroxides <input type="checkbox"/>
--	--	--

The "Flame Over Circle" picture is used to identify an oxidizing agent.

Oxidizing agent:




Chemical that can act as an electron acceptor; often a very reactive chemical; may form unstable mixtures that create a risk of fire or explosion when in contact with combustible material

skull and cross bones (Slide Layer)

Container Labels: Pictograms

Nine pictograms are in use. Some are used for more than one class of hazard. A label may contain more than one pictogram.

Click on each image to learn more and a check mark will appear for each label you review.

	<ul style="list-style-type: none">• Oxidizers		<ul style="list-style-type: none">• Flammables• Self Reactives• Pyrophorics		<ul style="list-style-type: none">• Explosives• Self Reactives• Organic Peroxides
---	---	---	---	---	---




The "Skull and Crossbones" identifies products with the potential for severe, acute toxicity.

health_hazard (Slide Layer)

Container Labels: Pictograms

Nine pictograms are in use. Some are used for more than one class of hazard. A label may contain more than one pictogram.

Click on each image to learn more and a check mark will appear for each label you review.

	<ul style="list-style-type: none">• Oxidizers		<ul style="list-style-type: none">• Flammables• Self Reactives• Pyrophorics		<ul style="list-style-type: none">• Explosives• Self Reactives• Organic Peroxides
---	---	---	---	---	---

This picture is titled "Health Hazard" and is used to label the following products:




- Carcinogens
- Mutagens
- Reproductive Toxins
- Respiratory Sensitizers
- Products with target organ toxicity
- Products with aspiration toxicity

flames (Slide Layer)

Container Labels: Pictograms

Nine pictograms are in use. Some are used for more than one class of hazard. A label may contain more than one pictogram.

Click on each image to learn more and a check mark will appear for each label you review.

	<ul style="list-style-type: none">• Oxidizers		<ul style="list-style-type: none">• Flammables• Self Reactives• Pyrophorics		<ul style="list-style-type: none">• Explosives• Self Reactives• Organic Peroxides
---	---	---	---	---	---

The "Flame" representation is used to identify:

- Flammables
- **Pyrophorics**
- Self-Heating
- Emits
- Flammable Gas
- Self Reactive chemicals
- Organic Peroxides

References 14




Pyrophoric:
A substance that will ignite spontaneously in air

corrosive (Slide Layer)

Container Labels: Pictograms

Nine pictograms are in use. Some are used for more than one class of hazard. A label may contain more than one pictogram.

Click on each image to learn more and a check mark will appear for each label you review.

	<ul style="list-style-type: none">• Oxidizers		<ul style="list-style-type: none">• Flammables• Self Reactives• Pyrophorics		<ul style="list-style-type: none">• Explosives• Self Reactives• Organic Peroxides
---	---	---	---	---	---

Corrosives are identified by the "Corrosion" pictogram.




Corrosives:
A substance that will destroy or damage another substance it comes in contact with

environments (Slide Layer)

Container Labels: Pictograms

Nine pictograms are in use. Some are used for more than one class of hazard. A label may contain more than one pictogram.

Click on each image to learn more and a check mark will appear for each label you review.

	<ul style="list-style-type: none">• Oxidizers	<input type="checkbox"/>		<ul style="list-style-type: none">• Flammables• Self Reactives• Pyrophorics	<input type="checkbox"/>		<ul style="list-style-type: none">• Explosives• Self Reactives• Organic Peroxides	<input type="checkbox"/>
---	---	--------------------------	---	---	--------------------------	---	---	--------------------------




The "Environment" pictogram indicates environmental or aquatic toxicity. Since environmental concerns are outside the scope of OSHA, this pictogram is not mandatory.

exploding bomb (Slide Layer)

Container Labels: Pictograms

Nine pictograms are in use. Some are used for more than one class of hazard. A label may contain more than one pictogram.

Click on each image to learn more and a check mark will appear for each label you review.

	<ul style="list-style-type: none">• Oxidizers	<input type="checkbox"/>		<ul style="list-style-type: none">• Flammables• Self Reactives• Pyrophorics	<input type="checkbox"/>		<ul style="list-style-type: none">• Explosives• Self Reactives• Organic Peroxides	<input type="checkbox"/>
---	---	--------------------------	---	---	--------------------------	---	---	--------------------------

The "Exploding Bomb" pictogram is used to indicate:




- Explosives
- Self Reactives
- Organic Peroxides

glass cylinder (Slide Layer)

Container Labels: Pictograms

Nine pictograms are in use. Some are used for more than one class of hazard. A label may contain more than one pictogram.

Click on each image to learn more and a check mark will appear for each label you review.

	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
---	--------------------------	---	--------------------------	---	--------------------------




The "Gas Cylinder" picture is used to label gases under pressure.

exclamation mark (Slide Layer)

Container Labels: Pictograms

Nine pictograms are in use. Some are used for more than one class of hazard. A label may contain more than one pictogram.

Click on each image to learn more and a check mark will appear for each label you review.

	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
---	--------------------------	---	--------------------------	---	--------------------------

The "Exclamation Mark" is used for these properties:

- Irritant
- Skin Sensitizer
- Acute Toxicity (harmful)
- Narcotic effects
- Respiratory Tract Irritation
- Hazardous to Ozone Layer

1.27 Summary

Summary

You have completed the lesson on chemical container labeling.

Remember:

- The manufacturer must label all containers in English. The label must contain the product identifier, signal word, hazard statement(s), pictogram(s), precautionary statement(s), and contact information for the manufacturer.
- Your employer must make sure that all chemical containers are labeled properly. Incoming chemicals should be inspected to verify proper labeling. If a chemical is transferred to a new container, the new container must be labeled appropriately.
- Employees must read product labels carefully. Follow all instructions. Heed all warnings.
- The 8 mandatory and 1 optional pictograms are used to identify the class of the hazard.

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1.28 Introduction: Lesson 5

Introduction

Lesson Map

Lesson 5: Personal Protective Equipment

- > Purpose
- > Responsibilities
- > Types

Welcome to the lesson on personal protective equipment (PPE).

We will discuss the responsibilities of employers and employees, with regard to PPE and the various types of PPE that may be required.

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1.29 PPE: Purpose

PPE: Purpose

The purpose of PPE is to shield workers from physical and health workplace hazards. These hazards include:

- Chemical
- Radiological
- Physical
- Electrical
- Mechanical
- Other



References 15

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HEALTHCARE

1.30 PPE: Employer Responsibilities

PPE: Employer Responsibilities

Your employer is responsible for selecting the types of PPE. It must provide appropriate PPE for all hazards in your work area.

Your employer must train all workers required to use PPE. Training should educate employees about:

- When to use PPE
- Which types of PPE to use
- How to put on PPE
- How to use PPE
- How to remove PPE
- How to store and maintain reusable PPE
- How to dispose of single-use PPE
- Understanding the limitations of PPE



References 15

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1.31 PPE: Employer Responsibilities

PPE: Employer Responsibilities

Trained employees are responsible for following facility procedures for PPE.

Reusable PPE should be decontaminated, cleaned, and stored after each use.

Single-use PPE should be disposed of according to facility protocol. This is also true for heavily contaminated reusable PPE.

Key Thought

Always select adequate PPE, but not too much.

Excess PPE can create hazards such as:

- Heat stress
- Physical and psychological stress
- Impaired vision
- Impaired mobility
- Impaired communication

References 16

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HEALTHCARE

1.32 Types of PPE

Types of PPE

Types of PPE may include:

- Protective clothing
- Respiratory equipment
- Eye protection



References 16

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HEALTHCARE

1.33 Types of PPE

Types of PPE

Protective clothing may include:



- Gloves
- Suits/gowns
- Coveralls
- Hoods
- Boots

Choose a glove material appropriate for the chemical. Latex gloves are permeable to many chemicals. They do not provide adequate protection.

Gowns, coveralls, and other protective clothing should be worn if hazardous chemicals might splash or spill on your clothes.

Choose protective clothing appropriate for the chemical. Some chemicals require impermeable gowns for adequate protection.

References 16



1.34 Types of PPE: Respiratory Equipment



Types of PPE: Respiratory Equipment

Respirators cover the mouth and nose. They prevent inhalation of hazardous substances.

Respirators are only effective if:

- The proper respirator for the chemical/situation is selected.
- The worker is trained in use of the respirator.
- The respirator fits properly.
- The respirator is properly maintained.

References 17



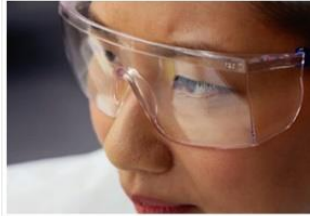
1.35 Types of PPE: Eye Protection

Types of PPE: Eye Protection

Goggles protect the eyes from hazardous chemical splashes.

Face shields protect the entire face.

Prescription glasses are not a substitute for goggles. Glasses may break. They also do not shield the eyes from all angles.



Employee wearing goggles as protective equipment.

References 17

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HEALTHCARE

1.36 Summary

Summary

You have completed the lesson on PPE.

Remember:

- Employers must select and provide appropriate PPE for all hazards in the work environment.
- Employers must train workers in the safe and effective use of PPE.
- Trained employees must follow facility procedures and protocols for the selection, use, storage, maintenance, and disposal of PPE.
- Choose protective clothing appropriate for the chemical.
- Use respirators appropriately.
- Use goggles or a face shield when there is a risk of splash or splatter from a hazardous chemical.

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HEALTHCARE

1.37 Resources

References

Scroll down

12. Occupational Safety & Health Administration. The Globally Harmonized System for Hazard Communication. OSHA GHS Proposal, Appendix C: Allocation of Label Elements. Available at: http://www.osha.gov/dsg/hazcom/appendix_c.pdf.

13. Occupational Safety & Health Administration. Comparison of Hazard Communication Requirements. OSHA Hazard Communication Standard 29 CFR 1910.1200 (HCS). Globally Harmonized System (GHS). Available at: <http://www.osha.gov/dsg/hazcom/ghshacomparison.html>.


14. Occupational Safety & Health Administration. A Guide to The Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

15. Occupational Safety & Health Administration. OSHA Fact Sheet Personal Protective Equipment.

16. Occupational Safety & Health Administration. Personal Protective Equipment.

17. Occupational Safety & Health Administration. OSHA Bulletin. General Respiratory Protection Guidance for Employers and Workers.

Please remember that compliance is the responsibility of each organization. Provision of this list does not imply that the content of this course wholly or partially addresses the guidelines and references provided here.




1.38 END


END

Congratulations!

You have completed...
EHC Hazard Communication

Thank you for taking time to complete this course. Please click on the **EXIT** button below to return to the main HLC course page. Complete and pass the **posttest** to receive credit for this course.





Standard Precautions

This course provides essential information that will help you to know:

- What bloodborne pathogens are
- What the symptoms of disease are from bloodborne and airborne pathogens, and
- Safe work practices, known as "standard precautions," when working with blood and body fluids, or around possible airborne pathogens.



Standard Precautions

Exposure Control Plan

Could the performance of your duties as an employee potentially expose you to blood or other infectious materials?

If the answer is yes, then your employer has created and implemented an exposure control plan. This is a written plan that helps maintain a safe workplace by outlining specific work practices to eliminate or minimize employee exposure.



Standard Precautions

Other Questions

If you have questions about any of the material presented in this course on **Standard Precautions**, or any questions about the Infection Prevention and Control Programs for Emory Healthcare, we encourage you to discuss your question with your supervisor, and to use the Infection Prevention and Control web site (on the Emory Healthcare intranet under *Departments > Office of Quality & Risk > Infection Prevention and Control*).

The purpose of this site is to support Emory Healthcare's mission to promote patient safety by eliminating preventable health care associated infections.

Contacts

To contact Infection Prevention and Control, please see the "Contacts" link on the web site which includes current Infection Prevention and Control Coordinators for each EHC facility as well as Leadership Contacts. If you are a staff member at a facility that is newly affiliated with Emory Healthcare, you may also ask your supervisor to help you contact your facility's Infection Prevention and Control Coordinator.

More Details

More information about the bloodborne pathogens standard also may be found on the web at www.osha.gov.

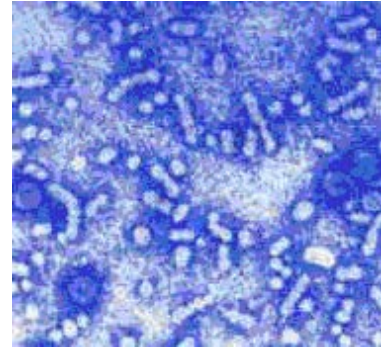


Standard Precautions

Common Bloodborne Pathogen

The most common bloodborne pathogens include, among others:

- Hepatitis B virus (HBV)
- Hepatitis C virus (HCV)
- Human immunodeficiency virus (HIV)



Standard Precautions

Hepatitis B Virus and Hepatitis C Virus

Hepatitis B virus (HBV) and Hepatitis C virus (HCV) both can cause potentially life-threatening infections. Both of these hepatitis viruses invade the liver and can cause long-term liver damage. Eighty-five percent (85%) of those infected with HCV become chronic carriers of the disease.



Standard Precautions

Hepatitis B Vaccine

If you are an Emory Healthcare employee who is at risk for occupational exposure to blood or infectious materials, Emory Healthcare offers you the opportunity to receive the Hepatitis B vaccine, free of charge. The immunity provided by the vaccine appears to last a lifetime. The Centers for Disease Control and Prevention (CDC) currently has no recommendations for providing boosters for HBV on a routine basis. In the case of a high-risk exposure to a patient with HBV, Emory Healthcare may recommend a booster at that time.

If you decide to decline the HBV vaccine, you will be asked to sign a form stating that you were offered the vaccine and voluntarily declined the series of inoculations. If you initially decide to decline the vaccine, you can change your mind at any time and still receive the vaccine free of charge.

For more information, contact our Employee Health Department.

Unfortunately, there is no vaccine for the Hepatitis C virus at this time.



Standard Precautions

Symptoms of Infection with Hepatitis B Virus and Hepatitis C Virus

Symptoms of HBV and HCV infection often are confused with those of other illnesses, such as the flu. As a healthcare professional, you must be able to recognize the signs and symptoms of HBV and HCV infection. Symptoms include:

- Fatigue
- Nausea and vomiting
- Loss of appetite
- Jaundice
- Mild fever
- Dark urine
- Aching muscles/joints
- Light colored stools
- Diarrhea
- Itching



Standard Precautions

Human Immunodeficiency Virus

The human immunodeficiency virus (HIV) also can cause a potentially life-threatening infection. HIV attacks the immune system and causes the disease commonly known as AIDS. Without a strong, healthy immune system, the body becomes susceptible to many infections and illnesses. Many AIDS patients do not die from HIV, itself, but rather from cancers or pneumonias that develop as a result of a weakened immune system.



Standard Precautions

Symptoms of Infection with Human Immunodeficiency Virus (HIV)

Symptoms of HIV infection often are confused with those of other illnesses, such as the flu. Signs and symptoms include:

- Swollen lymph nodes
- Visual changes
- Diarrhea
- Night sweats
- Unexplained weight loss
- Rash
- Fatigue
- Flu-like symptoms
- Frequent pneumonias or shortness of breath



Standard Precautions

Modes of Disease Transmission

Bloodborne pathogen diseases may be transmitted in a number of ways, including through:

- Sexual contact
- Organ transplantation
- Sharing needles to inject drugs
- Mother-to-baby exchange of bodily fluids
- Accidental needle-stick injury
- Transfusion of infected blood products
- Contact through mucous membranes or non-intact skin



Standard Precautions

Transmission Among Healthcare Workers


The leading cause of transmission of bloodborne pathogen disease to healthcare workers is through needle-stick injury. Other common modes of transmission include splashes or punctures with contaminated sharps such as glass or scalpels.



Standard Precautions

Exposure and Transmission

As healthcare workers, we are at greatest risk of contracting hepatitis B virus, in the event of exposure. Our risk of contracting HIV is quite small.



On average, if you have been exposed to a patient with a bloodborne pathogen, the risk of transmission is:

- Hepatitis B Virus (HBV): 6% to 30%
- Hepatitis C Virus (HCV): 1.8%
- Human Immunodeficiency Virus (HIV): 0.3%

Standard Precautions

Risk of Transmission

Risk of disease transmission following exposure varies according to a number of factors, including:

- Amount of exposure (for example, a large splash into the mouth presents a higher risk than a small splash)
- Route of exposure (for example, a needle-stick injury presents a higher risk than a splash)
- Amount of virus in the patient's blood (for example, the relatively high concentration of hepatitis virus generally present in a hepatitis-infected patient presents a higher risk than the relatively small amount of human immunodeficiency virus present in an AIDS patient)



Standard Precautions

Exposure

In the workplace, we may be exposed to bloodborne pathogens in a number of different ways, including through puncture wounds, through contact with broken skin, or through mucous membranes (eyes, nose, and mouth).

Even a hangnail or a rash can be an entry point for pathogens if you do not wear gloves while handling blood or other infectious materials.

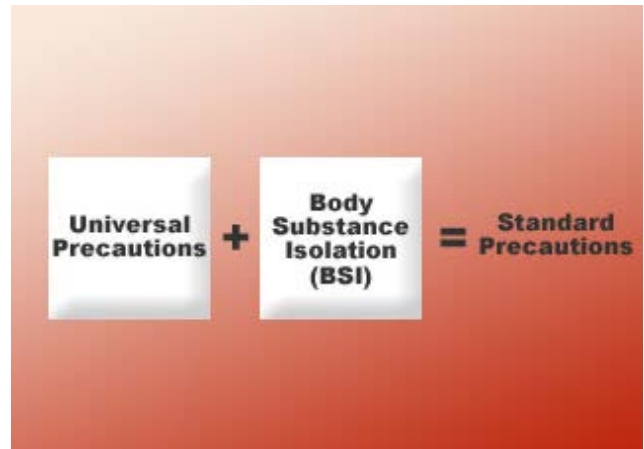


Standard Precautions

Standard Precautions

Standard precautions are used in your workplace to help protect you from exposure to blood and other potentially infectious materials.

Standard precautions apply to blood and all body fluids, secretions, and excretions except sweat (regardless of whether or not they contain visible blood).



Standard Precautions

Body Fluids

Contact with blood is NOT the only way you can be exposed to a bloodborne disease. Other body fluids also may carry bloodborne pathogens. These other fluids may include, but are not limited to:

- Semen
- Vaginal secretions
- Fluid from around an unborn baby
- Fluid from any human body cavity
- Unfixed tissue or organ
- Miscellaneous cell, tissue, or organ culture
- Saliva from a dental procedure

Any other body fluid visibly contaminated with blood should be treated as if it is potentially infectious. Regardless of the body fluid, following standard precautions will help protect you from exposure to bloodborne diseases.





Standard Precautions

The next set of information will review practices that will help protect you from exposure. These include:

- Hand hygiene
- Engineering controls
- Work practice controls
- Housekeeping controls
- Personal protective equipment (PPE)

Standard Precautions

Protecting Yourself

Emory Healthcare has put engineering and work practice controls in place to eliminate or minimize your potential exposure to blood or other potentially infectious materials. [Personal protective equipment](#) (PPE) also is available to help protect you against certain hazards. Refer to your department/section's exposure control plan for more information about these safeguards.

EHC has reviewed the tasks and procedures that put you at risk of potential exposure. Safeguards have been put into place to protect you when you perform these tasks and procedures. Documentation of exposure risks and safeguards is part of your department/section's exposure control plan.



Standard Precautions

Hand Hygiene

Cleaning your hands is your single most important defense against the spread of disease. To wash properly, lather your hands vigorously with soap or an antimicrobial agent, rub the hands together for 15 seconds, rinse with a continuous stream of warm water, and dry with a paper towel. A clean paper towel should be used as a barrier to turn off the faucet.



Standard Precautions

Hand Hygiene

For your protection, wash your hands at these times:

- Before and after your work shift
- After using the toilet, blowing your nose, covering a sneeze, etc.
- Whenever hands become obviously soiled
- Before eating, drinking, or handling food



Standard Precautions

Hand-Sanitizing

Hand-sanitizing with an alcohol-based hand rub is appropriate when your hands appear to be clean (are not visibly soiled or contaminated with protein matter) but need degerming.

Hand-sanitizing is appropriate:

- Upon entering and exiting patient exam rooms, "Foam in/Foam Out."
- Before and after physical contact with each patient or touching intact skin;
- After touching surfaces or handling contaminated items or equipment such as bedpans, dressings, urinary drainage bags;
- After removing your gloves; and
- When a hand-washing sink is not readily accessible.



Standard Precautions

How to Sanitize the Hands

The total time for the hand-sanitizing process, leaving the hands dry enough for gloving, is 15 seconds.

Dispense enough hand sanitizer to wet the hands thoroughly. Rub the hands together, wetting the entire surface of both hands, including the nails. Continue rubbing hands together to facilitate drying. Hand sanitizers should NOT be used with water or rinsed off after application.

Remember! After cleaning your hands, avoid touching surfaces that might be contaminated with germs.



Standard Precautions

Engineering Controls

Engineering controls have been put into place by Emory Healthcare to eliminate hazards at their source. Examples of engineering controls include safety device needles, sharps disposal boxes, and autoclaves.



Standard Precautions

Work Practice Controls

Proper work practice controls also can help minimize or eliminate hazards in your workplace:

- Clean your hands correctly and at appropriate times.
- Dispose of sharps in proper sharps disposal containers.
- Familiarize yourself with EHC procedures for the handling of contaminated linen. Contaminated linen should be handled, transported, and processed in a manner that prevents:
 - Skin and mucous membrane exposure
 - Contamination of clothing
 - Transfer of microorganisms to other patients or environments



Standard Precautions

Work Practice Controls

To help minimize or eliminate hazards, also:

- Do not eat or drink in patient care or laboratory areas.
- Do not apply lip balm or cosmetics, or handle contact lenses, in areas of potential exposure.
- Do not store your lunch or snacks in refrigerators that contain patient nourishments or products used in patient care or medical procedures.
- Do not recap or bend needles.



Standard Precautions

Housekeeping Practices

Good housekeeping practices also can help protect you:

- Keep a clean and sanitary workplace.
- Use only approved disinfectants when cleaning contaminated areas or spills.
- Use tongs or forceps to pick up contaminated glass or sharps.
- Recognize containers or bags that have contaminated items in them.
- Recognize the standard BIOHAZARD label (fluorescent orange or orange-red with lettering and symbols in a contrasting color).



Standard Precautions

Personal Protective Equipment

Personal protective equipment (PPE) is specialized clothing or equipment worn to protect against a hazard. Examples of PPE include gloves, masks, eye protection, face shields, shoe covers, and lab coats. Emory Healthcare will provide these items if you need them to perform your job, and you will be trained in their use.



Standard Precautions

Types of Personal Protective Equipment

Gloves should be worn when touching blood, body fluids, secretions, excretions, or other potentially contaminated items.

Masks, eye protection, face shields, and bench shields are used to protect the mucous membranes of the eyes, nose, and mouth during procedures and patient-care activities likely to generate splashes or sprays of blood, body fluids, secretions, or excretions.



Standard Precautions

Types of Personal Protective Equipment

Protective clothing (gowns, hoods, surgical caps, shoe covers, lab coats) should be worn to protect skin and prevent soiling of clothing during procedures and patient-care activities likely to generate splashes or sprays of blood. Body fluids, secretions, and excretions also may soil clothing.

Barrier devices such as mouthpieces or pocket masks should be used when performing CPR.

Remember to remove all personal protective equipment before leaving your work area.



Standard Precautions

Training

Training on how to protect yourself from blood and body fluid exposure is provided by EHC when you begin your job. This training must be repeated once a year.

EHC will provide additional information, as well as training for new exposure tasks, when new information and training become available.

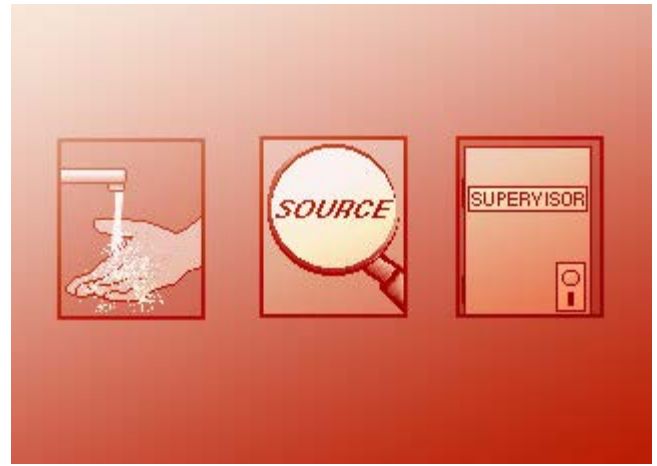


Standard Precautions

Exposure Incident

If you are exposed to bloodborne pathogens, remember to **WIN** :

- **W**ash the exposed area immediately with soap and water.
- **I**dentify the source of the exposure.
- **N**otify your supervisor and Occupational Injury Management (OIM) immediately.



Standard Precautions

Take Action Quickly

Quick action could lower your chances of contracting a disease. For very high-risk exposures, time can be important to help prevent possible disease transmission.



Standard Precautions

Confidential Evaluation

If you are an Emory Healthcare employee who sustains an occupational exposure to blood, other potentially infectious material, tuberculosis, or other communicable diseases, you must notify your supervisor, complete an Employee Incident Report in e-Vantage, and notify Occupational Injury Management. As an Emory employee you will be offered a free, confidential post-exposure evaluation and follow-up coordinated by Employee Health.

A medical exam will be performed by or under the supervision of a licensed physician or other licensed healthcare professional. Any associated laboratory tests will be conducted by an accredited laboratory at no cost to you.



Standard Precautions

Elements of the Evaluation

Your confidential medical evaluation and follow-up will consist of the following elements:

- Documentation of the route of exposure and the circumstances under which the exposure occurred
- Identification and documentation of the source individual (unless identification is prohibited by state or local law)
- HIV, HCV, and HBV testing of source patient
- Blood tests will be performed on you according to Occupational Injury Management Protocols

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Standard Precautions

Elements of the Evaluation

The following elements also are part of every post-exposure follow-up:

- Consideration for post-exposure prophylaxis
- Counseling
- Evaluation of reported illnesses

OIM (Occupational Injury Management) will obtain and provide the employee with a copy of the evaluating healthcare professional's written report within 15 days of completion of the evaluation.

Standard Precautions: Course Completed!

Thank you for taking time to complete this course. Please exit the course now and take the exam to get credit for the course.

