



HAZARD COMMUNICATION

Know Your Hazardous Chemicals

If you work with hazardous chemicals, it's important for you to know how to use and work with them safely. Cal/OSHA's Hazard Communication Standard outlines requirements and protection measures for all California employers.

This *Safety Talk* will help you understand the different types of hazardous chemicals, how they can enter your body, and how you can protect yourself.

TYPES OF HAZARDOUS CHEMICALS

Hazardous chemicals are substances or chemicals that pose a health hazard, a physical hazard, or harm to the environment.

There are three types of hazardous chemicals; solids, liquids and gases.

SOLIDS

- **Dust** can be released into the air by cutting, drilling, grinding, or sanding. The dust can settle onto work surfaces, food, and may be ingested. This may lead to potential exposure to silica or lead.



- **Fibers** can be released like dust, but have an elongated shape, such as asbestos or fiberglass.

- **Fumes** are tiny droplets formed because of a chemical reaction to high temperatures, such as metal vaporized when welding.

LIQUIDS

Liquids have the consistency of water or oil, except when sprayed, which forms a mist. Examples include flammable liquids, oxidizers, and pesticides.

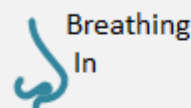


GASES

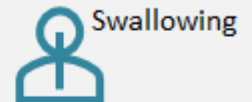
- **Gases** are chemicals in the gas phase at room temperature, such as oxygen, methane, chlorine fluoride.
- **Vapors** evaporate from substances that are liquids or solids at room temperature, such as paint thinner and gasoline.

HOW HAZARDOUS CHEMICALS ENTER YOUR BODY

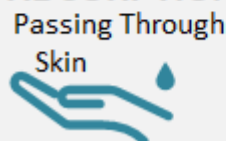
INHALATION



INGESTION

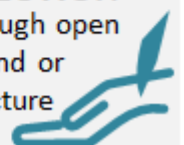


ABSORPTION



INJECTION

Through open wound or puncture



HOW TO PROTECT YOURSELF

Before working with any new hazardous chemical, your supervisor should review the chemical’s label and Safety Data Sheet to ensure you understand the hazards, PPE requirements, and what to do in the event of an exposure.



LABELS

All labels are required to have pictograms, a signal word, hazard and precautionary statements, the product identifier, and supplier identification. A complete list of pictograms is provided on page 3.

SAFETY DATA SHEET (SDS)

The SDS provides critical information about hazardous chemicals. There are 16 required sections in an SDS. A complete list is available at [OSHA SDS Requirements](#). Here are some key sections:

- Section 1:** Identifies the product and provides recommended use and restrictions.
- Section 2:** Outlines all the hazards regarding the chemical, including labeling requirements.
- Section 4:** Outlines first-aid measures and required treatment.
- Section 5:** Provides fire-fighting protocols.
- Section 6:** Outlines emergency procedures, protective equipment requirements, containment and cleanup.
- Section 7:** Describes safe handling and storage requirements.
- Section 8:** Identifies exposure controls and personal protection requirements.










SAMPLE LABEL

<p>CODE _____ Product Name _____</p> <p>Company Name _____ Street Address _____ City _____ State _____ Postal Code _____ Country _____ Emergency Phone Number _____</p>	<p>} Product Identifier</p> <p>} Supplier Identification</p>	<p style="text-align: center;">Hazard Pictograms</p> <div style="text-align: center;"> </div> <p style="text-align: center;">Signal Word Danger</p> <p style="text-align: center;">Highly flammable liquid and vapor. May cause liver and kidney damage. } Hazard Statements</p> <p style="text-align: center;">Precautionary Statements</p> <p style="text-align: center;">Supplemental Information</p> <p>Directions for Use</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Fill weight: _____ Lot Number: _____ Gross weight: _____ Fill Date: _____ Expiration Date: _____</p>
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SAMPLE

UNDERSTANDING HAZARDOUS CHEMICAL PICTOGRAMS

Here are the universal symbols, signal words, and cautionary statements [OSHA Pictogram/Hazards](#)

<p>Health Hazard</p>  <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	<p>Flame</p>  <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides 	<p>Exclamation Mark</p>  <ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
<p>Gas Cylinder</p>  <ul style="list-style-type: none"> • Gases Under Pressure 	<p>Corrosion</p>  <ul style="list-style-type: none"> • Skin Corrosion/ Burns • Eye Damage • Corrosive to Metals 	<p>Exploding Bomb</p>  <ul style="list-style-type: none"> • Explosives • Self-Reactives • Organic Peroxides
<p>Flame Over Circle</p>  <ul style="list-style-type: none"> • Oxidizers 	<p>Environment (Non-Mandatory)</p>  <ul style="list-style-type: none"> • Aquatic Toxicity 	<p>Skull and Crossbones</p>  <ul style="list-style-type: none"> • Acute Toxicity (fatal or toxic)

This *Safety Talk* provides awareness level training on hazardous chemicals. If this information is unclear or if you have any additional questions, please talk to your supervisor.