



**DESERT SANDS UNIFIED SCHOOL DISTRICT**  
*The Future Is Here!*

**HAZARD COMMUNICATION PROGRAM**  
**FOR**  
**DESERT SANDS UNIFIED SCHOOL DISTRICT**  
**REVISED FEBRUARY 2022**

## **Purpose and Scope**

The Desert Sands Unified School District (DSUSD, District) is committed to providing a safe and healthy working and learning environment for all teachers, staff members, and students. This Hazard Communication (Haz Com) Program is written in compliance with California Code of Regulations, Title 8 Section 5194, and will be updated as District protocols change. The Haz Com program is also sometimes referred to as the “Employee Right to Know” program. The goal of this program is to provide employees information and training pertaining to various health hazards which may be present in the employee’s work area. Elements of the Haz Com program include employee training, maintenance of records pertaining to workplace hazards and chemical inventories, and provision of access to Safety Data Sheets pertaining to chemicals stored in the workplace.

As it pertains to chemical exposure, the primary focus of this Haz Com Program will be directed toward employees who directly handle chemicals (e.g. pouring, mixing, and spraying). Employees who only transport or receive chemicals are exempt from most requirements of this program.

## **Responsibility**

The DSUSD Director of Risk Management is the ***Hazard Communication Program Administrator***. The Safety and Industrial Hygienist Manager, working under the direction of the Director of Risk Management, is responsible for oversight and implementation of various elements of the Haz Com program, such as chemical labeling, access to Safety Data Sheets, and employee training. The Safety and Industrial Hygienist Manager is also responsible for reviewing the Haz Com program at least annually and notifying Department Supervisors of any changes to the program.

***Department Supervisors*** are responsible for identifying District employees who are required to take Haz Com training. They must also provide support for ***Site Coordinators*** in their responsibility scope as it pertains to the Haz Com program (see next paragraph). If there is a need for an employee to be trained, they should contact the Safety and Industrial Hygienist Manager for assistance.

Department Supervisors must also notify Risk Management if they are aware of any third-party Contractors who will come onto a school site or District site and handle hazardous substances on site (either the District's own hazardous substances, or those brought on site by the Contractor).

**Site Coordinators** include all employees (faculty, staff, and management employees) who are engaged in at least one of the following scopes of work:

- 1) Using hazardous substances (chemicals);
- 2) Storing hazardous substances;
- 3) Ensuring that the containers holding such substances are properly labeled.

**Project Managers** include staff members or management employees who engage directly with Contractors to perform work on site where Contractors will, or may, handle hazardous substances. Please refer to the *Third-Party Contractors – Working on District Sites* section of this program for more information.

**All Students, Employees, and Volunteers** are responsible for:

- Understanding and complying with District and school site health and safety policies and procedures;
- Notifying their supervisor or Risk Management if any hazardous conditions are observed on the work site;
- Reviewing Safety Data Sheets (SDSs) to become familiar with the hazardous substances used in their area;
- Utilizing all appropriate safety equipment and clothing properly and routinely.

### **Chemical Inventory**

An inventory of hazardous chemicals located at the District and school sites is maintained by the Department of Risk Management and updated periodically in coordination with Keenan & Associates. Any employee may request a copy of the chemical inventory for their work site by reaching out to the Risk Management department.

## Chemical Labeling

Both primary and secondary containers must be appropriately labeled with information regarding substance identity, hazard identification, and other pertinent details. *Primary* containers are the original containers holding the chemical substance as it was originally purchased or received by the District. *Secondary* containers are provided by the District, often smaller in size than primary containers, and serve as additional storage vessels for chemicals after they have been purchased in bulk.

One exception to the requirement for labeling secondary containers is if the substance in a given container is going to be completely used up during the same working shift in which the substance was poured into that container. A general rule of thumb to follow is that if the employee must walk away from the container, it must be labeled. If in doubt, err on the side of caution, and label the container.

In alignment with the current State and national standards regarding the adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) system, the District will provide labels with GHS pictograms and standardized language for the labeling of secondary containers (and primary containers, if needed). Please refer to **Appendix A** for a list of pictogram categories and images.

The four-colored “diamond” hazard label issued by the National Fire Protection Agency (NFPA) may still be encountered on older bottles of chemicals. (Refer to **Appendix B**.) According to the Haz Com standard, “legacy” containers do not need to be re-labeled with GHS pictograms and language. However, the Site Coordinator should inspect these containers to ensure that labels are still in good condition, and that chemical names, NFPA diamonds, and other pertinent information are legible. If re-labeling is needed, new labels conforming to the GHS standard should be used.

The DSUSD Safety and Industrial Hygienist Manager, working under the direction of the Director of Risk Management, will periodically inspect chemical storage areas throughout the school and District sites to ensure labeling conformity to the Haz Com standard and to ensure that chemical containers and labels are in good condition. Any changes to the District’s hazard labeling protocols will be communicated through the Risk Management department.

For more information regarding proper use and storage of chemicals, please refer to the DSUSD Chemical Hygiene Program.

### **Safety Data Sheets (SDSs)**

All Safety Data Sheets pertaining to hazardous substances stored on District sites must be readily accessible by employees as well as emergency responders. DSUSD Risk Management, in coordination with Keenan & Associates, will maintain a central repository of digital SDSs. The Department Supervisors are responsible for ensuring that SDSs are accessible, and Site Coordinators are responsible for determining how best to maintain the SDSs in their respective work areas.

The California Haz Com standard does not require that SDSs be maintained as hard copies, only that the documents be readily accessible during the work shift. If the employee has access to a computer with Internet access, and the employee is able to access the online SDS database, then they would be considered in compliance with the standard. There may be a few instances where Internet access at a work site is inconsistent or not available, and therefore an SDS binder for that work area should be maintained by the Site Coordinator and stored in the same work area.

If any technical assistance is needed, the Department Supervisor or Site Coordinator can reach out to the Risk Management department (Safety and Industrial Hygienist Manager).

The Site Coordinator is responsible for ensuring that SDSs are either on file or in the central database for all hazardous substances in their work area. If an SDS is not received at the time of first shipment/purchase of the chemical, the Site Coordinator must reach out to the vendor or manufacturer to obtain a copy. If a response is not received from the vendor or manufacturer within 25 days of receiving the item, the Site Coordinator must inform the Risk Management department. The Safety and Industrial Hygienist Manager will then follow up with the State Division of Occupational Safety and Health, as is required by the Haz Com standard.

## **Employee Training**

The Safety and Industrial Hygienist Manager, or their designee, will provide training to employees on hazardous chemicals they are or may be exposed to in the scope of their particular job duties. Training will be conducted in person to the greatest extent possible; however, in light of the COVID-19 pandemic, and in the event of the District reverting to “work from home” conditions, the training will be hosted virtually via Zoom or a similar platform, or an online Haz Com training module will be assigned to the employee via the Keenan Safe Schools portal.

Training will be provided, at minimum:

- For new employees (at the time of initial work assignment);
- When a new hazard is introduced;
- When employees are exposed to chemicals used by other employers.

The Haz Com Program training will cover:

- The requirements of Title 8, Section 5194 of the California Code of Regulations (Hazard Communication);
- Operations where hazardous chemicals are present;
- Location and availability of the written Haz Com Program;
- Location and availability of the Safety Data Sheet central database;
- Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area;
- Common physical and health hazards which may be encountered in the work area;
- Protective measures that employees can take to stay safe from the aforementioned hazards;
- Chemical labeling requirements;
- The rights of an employee:
  - To personally receive information regarding hazardous chemicals to which they may be exposed;
  - For their physician or collective bargaining agent to receive information regarding hazardous chemicals to which the employee may be exposed;

- Against discharge or other discrimination due to the employee's exercise of the rights afforded pursuant to the provisions of the Hazardous Substances Information and Training Act.

### **Non-Routine Tasks**

In the event that employees are required to perform tasks that may be hazardous but not routinely performed by the District or the employee, a special training session will be conducted to inform affected employees of the hazardous chemicals which may be encountered as well as the proper precautions necessary to reduce or eliminate the possibility of exposure.

Any employee being asked to perform a task that they are unfamiliar with, and which involves the potential for chemical exposure, should immediately inform their direct supervisor. The supervisor must then arrange for relevant training prior to requiring the employee to perform the task. If desired, the supervisor may reach out to the Safety and Industrial Hygienist Manager for assistance with training.

### **Employees Working in Laboratories**

Teachers and staff members working in science laboratories must abide by the conditions set forth in California Code of Regulations, Title 8, Section 5191. For more information, please refer to the DSUSD Chemical Hygiene Program.

### **Third-Party Contractors – Working on District Sites**

There may be opportunities when third-party contractors need to handle chemicals or other hazardous substances on a school or District site. Hazard Communication is a two-way street; the onus is on both the District and the Contractor to keep both parties informed as to potential health hazards that District employees and/or Contractor's employees may encounter.

Shipping couriers, e.g. FedEx, UPS, and USPS would not be considered Contractors for the purpose of this section, since their employees would not meet the definition of "handling" chemicals.

### ***Responsibilities of the Contractor***

The Contractor is required to provide the following information to the Project Manager or other District representative prior to starting work:

- A list of hazardous substances which will be used on the job;
- The location of Safety Data Sheets for products used by the contractor within District/school facilities;
- Precautions and appropriate measures District/school site employees should take to reduce the possibility of exposure to these substances;
- Details about the labeling system used for hazardous substances.

The Project Manager is responsible to ensure that this information is disseminated to supervisors and employees of areas that may be impacted by the work.

### ***Responsibilities of the District***

With the health and safety of all outside vendors in mind, the Project Manager is required to provide the following to the Contractor:

- A list of hazardous substances on the site that they may encounter or be exposed to while performing the work;
- The location of Safety Data Sheets for hazardous substances the Contractor may encounter;
- Information regarding the precautions and appropriate protective measures that workers should take to minimize exposure risk;
- Details about the labeling system used for hazardous substances (refer to **Appendix A** and **Appendix B**).

### **Appendices**

- Appendix A – GHS Pictograms
- Appendix B – NFPA Diamond
- Appendix C – Safety Data Sheet – Standardized Sections



# APPENDIX A - GHS PICTOGRAMS



## Hazard Communication Standard Pictogram

The Hazard Communication Standard (HCS) requires pictograms on labels to alert users of the chemical hazards to which they may be exposed. Each pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the label is determined by the chemical hazard classification.

### HCS Pictograms and Hazards

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

For more information:



[www.osha.gov](http://www.osha.gov) (800) 321-OSHA (6742)

OSHA 3491-01R 2016

## APPENDIX B - NFPA DIAMOND

### NFPA's Hazard Rating Diamond

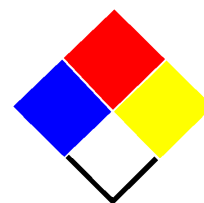
The National Fire Protection Association has developed a rating system to identify and rank hazards of a material. You've probably seen the colorful labels used to communicate these hazards. The label is diamond-shaped, made up of four smaller diamonds, one each blue, red, yellow, and white. A number or special symbol is placed on the four diamonds.

One glance at a NFPA diamond label and you have a wealth of information about the material. The diamond gives useful information if the material is on fire and reactive information. The diamond's hazard information is valid under normal circumstances.



The **blue diamond**, appearing on the left side of the label, conveys Health Hazard information for persons exposed to the material. A number from 0 to 4 is written in the blue diamond. The higher the number the higher the hazard, as follows:

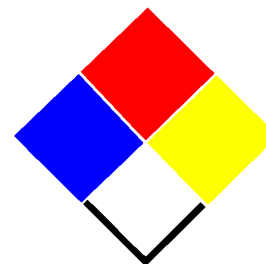
- 0-No hazard.
- 1-Can cause irritation if not treated.
- 2-Can cause injury. Requires prompt treatment.
- 3-Can cause serious injury despite medical treatment.
- 4-Can cause death or major injury despite medical treatment.



The **red diamond**, appearing at the top of the label, conveys **Flammability Hazard** information. Again, the numbers 0 to 4 are used to rate the flammability hazard, as follows:

#### Flashpoints:

- 0-Will not burn.
- 1-Ignites after considerable preheating.
- 2-Ignites if moderately heated.
- 3-Can be ignited at all normal temperatures.
- 4-Very flammable gases or very volatile flammable liquids.



The **yellow** diamond, appearing at the right side of the label, conveys **Reactivity** (or Stability) information. The numbers 0 to 4 are also used to rank reactivity hazards, as follows:

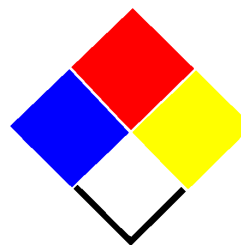
0-Normally stable. Not reactive with water.

1-Normally stable. Unstable at high temperature and pressure. Reacts with water.

2-Normally unstable but will not detonate.

3-Can detonate or explode but requires strong initiating force or heating under confinement.

4-Readily detonates or explodes.



The **white** diamond, appearing at the bottom of the label, conveys **Special Hazard** information. This information is conveyed by use of symbols that represent the special hazard. Some of the common symbols are shown here:

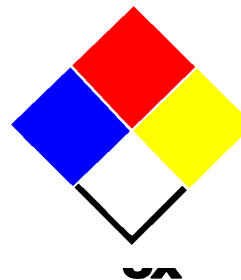
W denotes the material is water reactive

OX denotes an oxidizing agent

COR denotes a corrosive hazard

ALK denotes an Alkali hazard

ACID denotes an Acid hazard



To determine the NFPA Hazard Ratings for a material that does not have the label affixed, check the Material Safety Data Sheet. NFPA Hazard Ratings are commonly displayed there. Guidebooks are also available from safety supply vendors to assist with this task.

# OSHA<sup>®</sup> BRIEF

## Hazard Communication Standard: Safety Data Sheets

The Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)), revised in 2012, requires that the chemical manufacturer, distributor, or importer provide Safety Data Sheets (SDSs) (formerly MSDSs or Material Safety Data Sheets) for each hazardous chemical to downstream users to communicate information on these hazards. The information contained in the SDS is largely the same as the MSDS, except now the SDSs are required to be presented in a consistent user-friendly, 16-section format. This brief provides guidance to help workers who handle hazardous chemicals to become familiar with the format and understand the contents of the SDSs.

The SDS includes information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical. The information contained in the SDS must be in English (although it may be in other languages as well). In addition, OSHA requires that SDS preparers provide specific minimum information as detailed in Appendix D of 29 CFR 1910.1200. The SDS preparers may also include additional information in various section(s).

Sections 1 through 8 contain general information about the chemical, identification, hazards, composition, safe handling practices, and emergency control measures (e.g., fire fighting). This information should be helpful to those that need to get the information quickly. Sections 9 through 11 and 16 contain other technical and scientific information, such as physical and chemical properties, stability and reactivity information, toxicological information, exposure control information, and other information including the date of preparation or last revision. The SDS must also state that no applicable information was found when the preparer does not find relevant information for any required element.

The SDS must also contain Sections 12 through 15, to be consistent with the UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS), but OSHA will not enforce the content of these sections because they concern matters handled by other agencies.

A description of all 16 sections of the SDS, along with their contents, is presented below:

### Section 1: Identification

This section identifies the chemical on the SDS as well as the recommended uses. It also provides the essential contact information of the supplier. The required information consists of:

- Product identifier used on the label and any other common names or synonyms by which the substance is known.
- Name, address, phone number of the manufacturer, importer, or other responsible party, and emergency phone number.
- Recommended use of the chemical (e.g., a brief description of what it actually does, such as flame retardant) and any restrictions on use (including recommendations given by the supplier).

## Section 2: Hazard(s) Identification

This section identifies the hazards of the chemical presented on the SDS and the appropriate warning information associated with those hazards. The required information consists of:

- The hazard classification of the chemical (e.g., flammable liquid, category<sup>1</sup>).
- Signal word.
- Hazard statement(s).
- Pictograms (the pictograms or hazard symbols may be presented as graphical reproductions of the symbols in black and white or be a description of the name of the symbol (e.g., skull and crossbones, flame).
- Precautionary statement(s).
- Description of any hazards not otherwise classified.
- For a mixture that contains an ingredient(s) with unknown toxicity, a statement describing how much (percentage) of the mixture consists of ingredient(s) with unknown acute toxicity. Please note that this is a total percentage of the mixture and not tied to the individual ingredient(s).

## Section 3: Composition/Information on Ingredients

This section identifies the ingredient(s) contained in the product indicated on the SDS, including impurities and stabilizing additives. This section includes information on substances, mixtures, and all chemicals where a trade secret is claimed. The required information consists of:

### Substances

- Chemical name.
- Common name and synonyms.
- Chemical Abstracts Service (CAS) number and other unique identifiers.
- Impurities and stabilizing additives, which are themselves classified and which contribute to the classification of the chemical.

### Mixtures

- Same information required for substances.
- The chemical name and concentration (i.e., exact percentage) of all ingredients which are classified as health hazards and are:
  - Present above their cut-off/concentration limits or
  - Present a health risk below the cut-off/concentration limits.
- The concentration (exact percentages) of each ingredient must be specified except concentration ranges may be used in the following situations:
  - A trade secret claim is made,
  - There is batch-to-batch variation, or
  - The SDS is used for a group of substantially similar mixtures.

### Chemicals where a trade secret is claimed

- A statement that the specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret is required.

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<sup>1</sup> Chemical, as defined in the HCS, is any substance, or mixture of substances.

#### **Section 4: First-Aid Measures**

This section describes the initial care that should be given by untrained responders to an individual who has been exposed to the chemical. The required information consists of:

- Necessary first-aid instructions by relevant routes of exposure (inhalation, skin and eye contact, and ingestion).
- Description of the most important symptoms or effects, and any symptoms that are acute or delayed.
- Recommendations for immediate medical care and special treatment needed, when necessary.

#### **Section 5: Fire-Fighting Measures**

This section provides recommendations for fighting a fire caused by the chemical. The required information consists of:

- Recommendations of suitable extinguishing equipment, and information about extinguishing equipment that is not appropriate for a particular situation.
- Advice on specific hazards that develop from the chemical during the fire, such as any hazardous combustion products created when the chemical burns.
- Recommendations on special protective equipment or precautions for firefighters.

#### **Section 6: Accidental Release Measures**

This section provides recommendations on the appropriate response to spills, leaks, or releases, including containment and cleanup practices to prevent or minimize exposure to people, properties, or the environment. It may also include recommendations distinguishing between responses for large and small spills where the spill volume has a significant impact on the hazard. The required information may consist of recommendations for:

- Use of personal precautions (such as removal of ignition sources or providing sufficient ventilation) and protective equipment to prevent the contamination of skin, eyes, and clothing.
- Emergency procedures, including instructions for evacuations, consulting experts when needed, and appropriate protective clothing.
- Methods and materials used for containment (e.g., covering the drains and capping procedures).
- Cleanup procedures (e.g., appropriate techniques for neutralization, decontamination, cleaning or vacuuming; adsorbent materials; and/or equipment required for containment/clean up).

#### **Section 7: Handling and Storage**

This section provides guidance on the safe handling practices and conditions for safe storage of chemicals. The required information consists of:

- Precautions for safe handling, including recommendations for handling incompatible chemicals, minimizing the release of the chemical into the environment, and providing advice on general hygiene practices (e.g., eating, drinking, and smoking in work areas is prohibited).
- Recommendations on the conditions for safe storage, including any incompatibilities. Provide advice on specific storage requirements (e.g., ventilation requirements).

## Section 8: Exposure Controls/Personal Protection

This section indicates the exposure limits, engineering controls, and personal protective measures that can be used to minimize worker exposure. The required information consists of:

- OSHA Permissible Exposure Limits (PELs), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.
- Appropriate engineering controls (e.g., use local exhaust ventilation, or use only in an enclosed system).
- Recommendations for personal protective measures to prevent illness or injury from exposure to chemicals, such as personal protective equipment (PPE) (e.g., appropriate types of eye, face, skin or respiratory protection needed based on hazards and potential exposure).
- Any special requirements for PPE, protective clothing or respirators (e.g., type of glove material, such as PVC or nitrile rubber gloves; and breakthrough time of the glove material).

## Section 9: Physical and Chemical Properties

This section identifies physical and chemical properties associated with the substance or mixture. The minimum required information consists of:

- Appearance (physical state, color, etc.);
- Odor;
- Odor threshold;
- pH;
- Melting point/freezing point;
- Initial boiling point and boiling range;
- Flash point;
- Evaporation rate;
- Flammability (solid, gas);
- Upper/lower flammability or explosive limits;
- Vapor pressure;
- Vapor density;
- Relative density;
- Solubility(ies);
- Partition coefficient: n-octanol/water;
- Auto-ignition temperature;
- Decomposition temperature; and
- Viscosity.

The SDS may not contain every item on the above list because information may not be relevant or is not available. When this occurs, a notation to that effect must be made for that chemical property. Manufacturers may also add other relevant properties, such as the dust deflagration index (Kst) for combustible dust, used to evaluate a dust's explosive potential.

## Section 10: Stability and Reactivity

This section describes the reactivity hazards of the chemical and the chemical stability information. This section is broken into three parts: reactivity, chemical stability, and other. The required information consists of:

### Reactivity

- Description of the specific test data for the chemical(s). This data can be for a class or family of the chemical if such data adequately represent the anticipated hazard of the chemical(s), where available.

### Chemical stability

- Indication of whether the chemical is stable or unstable under normal ambient temperature and conditions while in storage and being handled.
- Description of any stabilizers that may be needed to maintain chemical stability.
- Indication of any safety issues that may arise should the product change in physical appearance.

### Other

- Indication of the possibility of hazardous reactions, including a statement whether the chemical will react or polymerize, which could release excess pressure or heat, or create other hazardous conditions. Also, a description of the conditions under which hazardous reactions may occur.
- List of all conditions that should be avoided (e.g., static discharge, shock, vibrations, or environmental conditions that may lead to hazardous conditions).
- List of all classes of incompatible materials (e.g., classes of chemicals or specific substances) with which the chemical could react to produce a hazardous situation.
- List of any known or anticipated hazardous decomposition products that could be produced because of use, storage, or heating. (Hazardous combustion products should also be included in Section 5 (Fire-Fighting Measures) of the SDS.)

## Section 11: Toxicological Information

This section identifies toxicological and health effects information or indicates that such data are not available. The required information consists of:

- Information on the likely routes of exposure (inhalation, ingestion, skin and eye contact). The SDS should indicate if the information is unknown.
- Description of the delayed, immediate, or chronic effects from short- and long-term exposure.
- The numerical measures of toxicity (e.g., acute toxicity estimates such as the LD50 (median lethal dose)) - the estimated amount [of a substance] expected to kill 50% of test animals in a single dose.
- Description of the symptoms. This description includes the symptoms associated with exposure to the chemical including symptoms from the lowest to the most severe exposure.
- Indication of whether the chemical is listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest editions) or found to be a potential carcinogen by OSHA.



### Section 12: Ecological Information (non-mandatory)

This section provides information to evaluate the environmental impact of the chemical(s) if it were released to the environment. The information may include:

- Data from toxicity tests performed on aquatic and/or terrestrial organisms, where available (e.g., acute or chronic aquatic toxicity data for fish, algae, crustaceans, and other plants; toxicity data on birds, bees, plants).
- Whether there is a potential for the chemical to persist and degrade in the environment either through biodegradation or other processes, such as oxidation or hydrolysis.
- Results of tests of bioaccumulation potential, making reference to the octanol-water partition coefficient ( $K_{ow}$ ) and the bioconcentration factor (BCF), where available.
- The potential for a substance to move from the soil to the groundwater (indicate results from adsorption studies or leaching studies).
- Other adverse effects (e.g., environmental fate, ozone layer depletion potential, photochemical ozone creation potential, endocrine disrupting potential, and/or global warming potential).

### Section 13: Disposal Considerations (non-mandatory)

This section provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, and safe handling practices. To minimize exposure, this section should also refer the reader to Section 8 (Exposure Controls/Personal Protection) of the SDS. The information may include:

- Description of appropriate disposal containers to use.
- Recommendations of appropriate disposal methods to employ.
- Description of the physical and chemical properties that may affect disposal activities.
- Language discouraging sewage disposal.
- Any special precautions for landfills or incineration activities.

### Section 14: Transport Information (non-mandatory)

This section provides guidance on classification information for shipping and transporting of hazardous chemical(s) by road, air, rail, or sea. The information may include:

- UN number (i.e., four-figure identification number of the substance)<sup>2</sup>.
- UN proper shipping name<sup>2</sup>.
- Transport hazard class(es)<sup>2</sup>.
- Packing group number, if applicable, based on the degree of hazard<sup>2</sup>.
- Environmental hazards (e.g., identify if it is a marine pollutant according to the International Maritime Dangerous Goods Code (IMDG Code)).
- Guidance on transport in bulk (according to Annex II of MARPOL 73/78<sup>3</sup> and the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (International Bulk Chemical Code (IBC Code))).
- Any special precautions which an employee should be aware of or needs to comply with, in connection with transport or conveyance either within or outside their premises (indicate when information is not available).

<sup>2</sup> Found in the most recent edition of the United Nations Recommendations on the Transport of Dangerous Goods.

<sup>3</sup> MARPOL 73/78 means the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, as amended.

## Section 15: Regulatory Information (non-mandatory)

This section identifies the safety, health, and environmental regulations specific for the product that is not indicated anywhere else on the SDS. The information may include:

- Any national and/or regional regulatory information of the chemical or mixtures (including any OSHA, Department of Transportation, Environmental Protection Agency, or Consumer Product Safety Commission regulations).

## Section 16: Other Information

This section indicates when the SDS was prepared or when the last known revision was made. The SDS may also state where the changes have been made to the previous version. You may wish to contact the supplier for an explanation of the changes. Other useful information also may be included here.

### Employer Responsibilities

Employers must ensure that the SDSs are readily accessible to employees for all hazardous chemicals in their workplace. This may be done in many ways. For example, employers may keep the SDSs in a binder or on computers as long as the employees have immediate access to the information without leaving their work area when needed and a back-up is available for rapid access to the SDS in the case of a power outage or other emergency. Furthermore, employers may want to designate a person(s) responsible for obtaining and maintaining the SDSs. If the employer does not have an SDS, the employer or designated person(s) should contact the manufacturer to obtain one.

### References

OSHA, 29 CFR 1910.1200(g) and Appendix D.

United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), third revised edition, United Nations, 2009.

These references and other information related to the revised Hazard Communication

Standard can be found on OSHA's Hazard Communication Safety and Health Topics page, located at:  
<http://www.osha.gov/dsg/hazcom/index.html>.

Disclaimer: This brief provides a general overview of the safety data sheet requirements in the Hazard Communication Standard (see 29 CFR 1910.1200(g) and Appendix D of 29 CFR 1910.1200). It does not alter or determine compliance responsibilities in the standard or the Occupational Safety and Health Act of 1970. Since interpretations and enforcement policy may change over time, the reader should consult current OSHA interpretations and decisions by the Occupational Safety and Health Review Commission and the courts for additional guidance on OSHA compliance requirements. Please note that states with OSHA-approved state plans may have additional requirements for chemical safety data sheets, outside of those outlined above. For more information on those standards, please visit:  
<http://www.osha.gov/dcsp/osp/statestandards.html>.

**This is one in a series of informational briefs highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.**



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