

# Erwin Electric

## Hazard Communication Training

The following is information about Erwin Electric's Hazard Communication Plan. As an employee, you have the right to the following:

Information about the characteristics of the toxic substances found in workplaces.

- ☞ Access to Safety Data Sheets for any toxic substance that you are, have been, or may be exposed to in the workplace.
  - Instruction on the adverse health effects of each toxic substance you work with, proper use of these substances, and emergency procedures.

In order to accomplish this, both management and employees have important roles to play in implementing and maintaining Erwin Electric's Hazard Communication Plan:

**Labels and other warnings:** Erwin Electric's management and supervisors will ensure that products received from outside vendors have complete non-defaced labels. Any chemical transferred from its original container must have a label on the new container that shows the following: Chemical's identity, trade name, and warnings.

**Non-routine task hazards:** prior to beginning any non-routine task, workers will receive training which will include a description of the task, the necessary tools and chemicals and any inherent hazards of the task. Its vitally important that workers wear the proper protective equipment if there are chemicals involved.

**Outside Contractors:** Be aware of any outside vendors or contractors who work around you.

They should be told of any chemicals present near their work area. But they also should inform our employees of any chemicals they have brought into and plan to use in our vicinity.

You have the "Right to Know" about the chemical hazards in your workplace. However, this Hazard Communication Plan works only if you:

- ☞ Read labels and SDS's.
- ☞ Know where to find information about chemicals.
- ☞ Follow instructions and heed all warnings.
- ☞ Use proper protective gear and clothing.
- ☞ Learn emergency procedures.
- ☞ Practice safe, sensible work habits.

Without a doubt the most important thing you can do to protect yourself and fellow workers from hazardous chemicals is to read the SDS of chemicals that you are unsure of, and then wear the proper protective equipment as instructed on the SDS. If you'll do this, you can greatly reduce the chances of being adversely affected by any toxic substances in the workplace.

**The Hazard Communication Standard of 1994** has been revised in order in to provide global standardization of Labeling and Safety Data Sheets.

## **Major changes to the Hazard Communication Standard:**

- **Hazard classification:** Provides specific criteria for classification of health and physical hazards, as well as classification of mixtures. Chemical hazards fall into three major groups: Environmental, Physical and Health.
- **Labels:** Chemical manufacturers and importers will be required to provide a label that includes a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided.
- **Safety Data Sheets:** Will now have a specified 16-section format.
- **Information and training:** Employers are required to train workers by December 1, 2013 on the new label's elements and safety data sheets format to facilitate recognition and understanding.

OSHA is requiring that employees are trained on the new label elements (i.e., pictograms, hazard statements, precautionary statements, and signal words) and SDS format by Dec. 1, 2013. OSHA believes that American workplaces will soon begin to receive labels and SDSs that are consistent with the GHS, since many American and foreign chemical manufacturers have already begun to produce HazCom 2012/GHS-compliant labels and SDSs.

Erwin Electric employees need to familiarize themselves with the pictograms and warning labels as we will begin to see them regularly in the workplace. In addition, employees need to know where the Safety Data Sheets are located and how to access critical information in the event of an emergency.

Remember, everyone has a role to play when it comes to handling, storing, labeling and using hazardous chemicals and products in the workplace.

Labels will require the following elements:

**Pictogram:** a symbol plus other graphic elements, such as a border, background pattern, or color that is intended to convey specific information about the hazards of a chemical. Each pictogram consists of a different symbol on a white background within a red square frame set on a point (i.e. a red diamond). There are nine pictograms under the GHS. However, only eight pictograms are required under the HCS.

**Signal words:** a single word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for less severe hazards.

**Hazard Statement:** a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

**Precautionary Statement:** a phrase that describes recommended measures to be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling of a hazardous chemical.

## **Safety Data Sheets:**

The information required on the safety data sheet (SDS) will remain essentially the same as that in the current standard (HazCom 1994). HazCom 1994 indicates what information has to be included on an SDS but does not specify a format for presentation or order of information. The revised Hazard Communication Standard (HazCom 2012) requires that the information on the SDS be presented using specific headings in a specified sequence.










The format of the 16-section SDS should include the following sections in the following order:

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

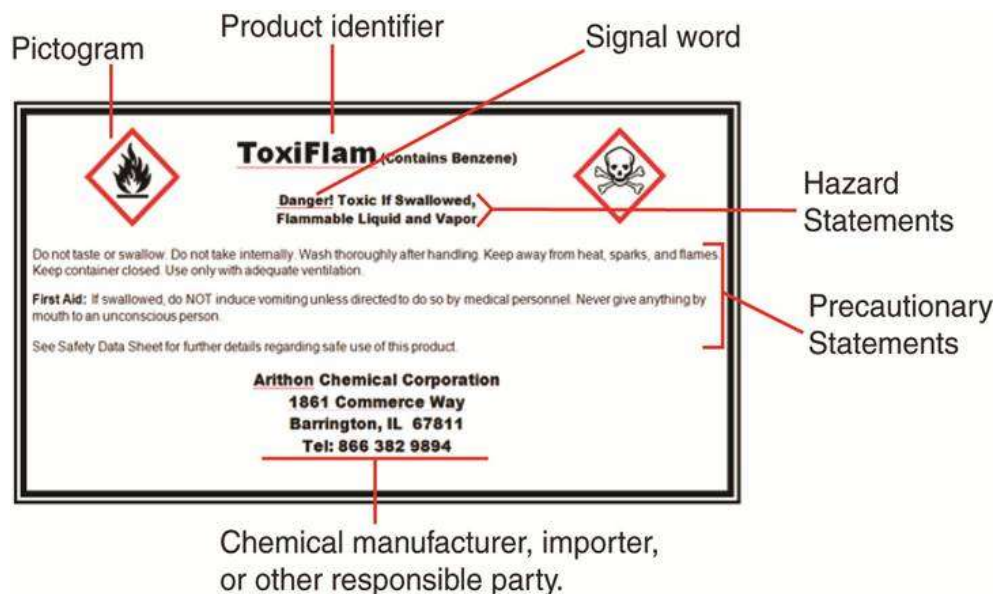
Note: The SDS must also contain Sections 12-15, to be consistent with the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Although the headings for Sections 12-15 are mandatory, OSHA will not enforce the content of these four sections because these sections are within other agencies' jurisdictions.

## **Pictograms & Hazards**

There are nine pictograms under the GHS to convey the health, physical and environmental hazards. The final Hazard Communication Standard (HCS) requires eight of these pictograms, the exception being the environmental pictogram, as environmental hazards are not within OSHA's jurisdiction. The hazard pictograms and their corresponding hazards are shown below.

<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>• Pyrophoric</li> <li>• Self-Heating</li> <li>• Emits Flammable Gas</li> <li>• Self-Reactive</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-Reactive</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>

## SAMPLE LABEL



## SDS INFORMATION

OSHA safe work practices outline the content, but not the exact form, of every Material Safety Data Sheet. Here is what OSHA requires each data sheet to contain:

- **IDENTITY.** The data sheet must contain the name of the chemicals found on the label. In addition, subject to deletion of legitimate trade secrets, it must give the chemical and common name of the substance. If the substance is a mixture and has not been tested as such, the data sheet must give the name of each hazardous constituent.
- **CHARACTERISTICS.** The data sheet must recite the physical and chemical characteristics of the chemical, such as vapor pressure, flash point, etc.
- **PHYSICAL HAZARDS.** Any potential for fire, explosion or reaction must be included in the data sheet.
- **HEALTH HAZARDS.** Signs and symptoms of exposure must be entered, as must all medical conditions that are likely to be aggravated by exposure.
- **ROUTES OF ENTRY.** The data sheet must specify whether the chemical typically enters the system by ingestion, inhalation, dermal exposure or some other route.
- **EXPOSURE LIMITS.** If OSHA has established an exposure limit for the chemical, or if a Threshold Limit Value has been established by the American Conference of Governmental Industrial Hygienists, these must be entered on the data sheet, as must any exposure limit used by the authority preparing the data sheet.
- **CARCINOGENS.** The data sheet must indicate whether the chemical is listed as a carcinogen by the National Toxicology Program, by OSHA, or by the International Agency for Research in Cancer.
- **USE AND HANDLING.** The data sheet must recite any general applicable precautions for safe handling and use that are known to the firm preparing the data sheet, including hygiene practices, protective measures during repair and maintenance of contaminated equipment and procedures for clean-up of spills and leaks. Industrial chemical consumers often might add site-specific procedures to the more general information offered by the chemical manufacturer.
- **EXPOSURE CONTROLS.** The data sheet must include a description of special procedures to be employed in emergencies, as well as a description of appropriate first aid.
- **DATES.** The sheet must bear the date of its preparation or of its latest revision.
- **INFORMATION SOURCE.** Finally, the sheet must recite the name, address and telephone number of the person who prepared the data sheet or of some other person who can provide additional information relating to the chemical, such as citations to scientific literature or specialized emergency procedures.

## REQUEST FOR SAFETY DATA SHEETS

Date of Request \_\_\_\_\_

Department \_\_\_\_\_

To \_\_\_\_\_

From \_\_\_\_\_

I hereby request that I be given the Material Safety Data Sheets on the following hazardous substance(s):

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Date Received \_\_\_\_\_

Acknowledged by \_\_\_\_\_ (Requesting Employee)

Dept. Manager \_\_\_\_\_

Date \_\_\_\_\_

## EXPLANATION OF TERMS USED ON SAFETY DATA SHEETS

### SECTION I

**Chemical Name and Synonyms**—The product identification. The chemical or generic name of single elements and compounds.

**Trade Names and Synonyms**—The name under which the product is marketed and the common commercial name of the product.

**Chemical Family**—Refers to a grouping of chemicals that behave and react with other chemicals in a similar manner.

**Formula**—The chemical formula or single elements or compounds.

**CAS Number**—The Chemical Abstracts Service number, if applicable.

**EPA**—The code number assigned by the Environmental Protection Agency, if applicable.

**DOT Classification**—The appropriate classification as determined by the regulations of the Office of Hazard Material, Department of Transportation.

### SECTION II

**Hazardous Ingredients**—The major components as well as any minor one(s) having potential for harm that are considered when evaluating the product.

**TLV**—Threshold Limit Value (TLV) indicates the permissible exposure concentration, a limit established by a government regulatory agency, or an estimate if none has been established.

### SECTION III

#### **Physical Data**

**Boiling Point (°F)**—The temperature in degrees Fahrenheit at which the substances will boil.

**Vapor Pressure**—The pressure of saturated vapor above the liquid expressed in mm Hg at 20° C.

**Vapor Density**—The relative density or weight of a vapor or gas (with no air present) compared with an equal volume of air at ambient temperature.

**Solubility in Water**—The solubility of a material by weight in water at room temperature. The terms negligible, less than 0.1 percent, 0.1 to 1 percent; moderate 1 to 10 percent, applicable 10 percent or greater.

**Appearance and Odor**—The general characterization of the material, i.e., powder, colorless liquid, aromatic odor, etc.

**Specific Gravity (H<sub>2</sub>O=1)**—The ratio of the weight of a volume of the material to its weight of an equal volume of water.

**Percent, Volatile by Volume (%)**—The percent by volume of the material that is considered volatile. (The tendency or ability of a liquid to vaporize.)

**Evaporation Rate**—The ratios of the time required to evaporate a measured volume of a liquid to the time required to evaporate the same volume of a reference liquid (ethyl ether) under ideal test conditions. The higher the ratio, the slower the evaporation rate.

### SECTION IV

**Flash Point (Method Used)**—The temperature in degrees Fahrenheit at which a liquid will give off enough flammable vapor to ignite in the presence of a source of ignition.

## SECTION V

**Conditions to Avoid**—Conditions that, if they exist with the substance present, could cause it to become unstable.

**Incompatibility (Materials to Avoid)**—Materials that will react with the substance.

**Hazardous Decomposition Products**—Refers to that reaction that takes place at a rate that releases large amounts of energy. Indicates whether it may occur and under what storage conditions.

## SECTION VI

**Health Hazard Data**—Possible health hazards as derived from human observation, animal studies or from the results of studies with similar products.

**Threshold Limit Value (TLV)**—The value for airborne toxic material that are to be used as guides in the control of health hazards and represent concentrations to which nearly all workers may be exposed eight hours per day over extended periods of time without adverse effects.

**Effects of Overexposure**—The effects on or to an individual who has been exposed beyond the specified limits.

**Emergency and First-Aid Procedures**—Gives first-aid and emergency procedures in case of eye and/or skin contact, ingestion and inhalation.

## SECTION VII

**Stability**—Whether the substance is stable or unstable, an unstable substance is one that will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shock, pressure, or temperature.

A copy of the form you may want to use to list your hazardous substances by work area follows this page. This information would be based on the initial survey and subsequent hazard determination.

## SECTION VIII

**Spill or Leak Procedures**—Steps to be taken if material is released or spilled. Method and materials to use to clean up or contain.

**Waste Disposal Method**—Method and type of disposal site to use.

## SECTION IX

### **Special Protection Information**

**Respiratory Protection**—Specific type should be specified, i.e., dust mask, NIOSH-approved cartridge respirator with organic-vapor cartridge.

**Ventilation**—Type of ventilation recommended, i.e., local exhaust, mechanical, etc.

**Protective Gloves**—Refers to the glove that should be worn when handling the product, i.e., cotton, rubber.

**Eye Protection**—Refers to the type of eye protection that is to be worn when handling or around the product.

**Flammable Limits**—The range of gas or vapor concentration (percent by volume in air) that will burn or explode if an ignition source is present. (Lel) means the lower explosive limits and (Uel) the upper explosive limits given in percent.

**Extinguishing Media**—Specifies the fire-fighting agent(s) that should be used to extinguish fires.

**Special Fire-Fighting Procedures/Unusual Fire and Explosion Hazards**—Refer to special procedures required if unusual fire or explosion hazards are involved.