

Delta Services HSE Procedure		Document No: HSEP 1.3	Page: 1 of 7
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1.0 PURPOSE AND SCOPE

The purpose of this Health, Safety, and Environment Procedure (HSEP) is to provide minimum guidelines to enable individual projects to establish and implement a site-specific Hazard Communication Program for all operations and activities performed by Delta Services.

This HSEP applies to all company projects. All Delta Services offices and project sites where there are workplace chemicals will implement a site-specific Hazard Communication Program.

2.0 RESPONSIBILITIES

General responsibilities for HSE procedures implementation are stated in HSEP 1.5. Additional responsibilities specific to this HSEP include the following.

2.1. Site Management

Site Management is responsible for ensuring that any site-specific addendums or procedures have been developed and effectively communicated to all employees assigned to the site.

Site Management must ensure that an effective Safety Data Sheet (SDS) management system has been established and that SDSs are readily accessible by all employees.

2.2. Site Supervision

It is the responsibility of each Supervisor, Foreman or other person who supervises employees, to:

- Maintain a list of all workplace chemicals,
- Label workplace chemical containers,
- Maintain Safety Data Sheets for the workplace chemicals,
- Implements a training program to communicate the hazards of chemicals and appropriate protective measures,

- Ensure that employees are properly trained on the contents of this procedure and the site-specific Hazard Communication Program,
- Ensure that employees are trained in the recognition of hazardous materials and the methods and means to protect themselves from these hazards,
- Continuously monitor the work to assure compliance with this procedure and the site-specific Hazard Communication Program, and
- Confirm that each job is properly prepared and that employees are aware of any hazardous substances that may be encountered as part of their work or as a result of someone else's work in the area.

2.3. Employees

Employees must know and be able to recognize hazards associated with their work and to ensure that these hazards are properly addressed according to this procedure and the training received.

Employees must know where the SDSs are located for chemicals used in the workplace.

Employees must be able to understand all forms of labeling and warning for hazards in the workplace.

2.4. Site HSE Representative

The Site Safety Representative shall assist Site Management and Supervisors in compliance with this Corporate Health, Safety, and Environment Procedure (HSEP).

It is the responsibility of the Site HSE Representative along with the Foreman, Supervisor and Project Manager to assure that all new products brought onto a site have an appropriate SDS added to the on site binder.

3.0 DEFINITIONS

Acute	Severe, often dangerous conditions in which relatively rapid changes occur.
Acute Exposure	An intense exposure over a relatively short period of time.
Aerosols	Means any non-refillable receptacles made of metal, glass or plastics and containing a gas compressed, liquefied or dissolved under pressure, with or without a liquid, paste or powder, and fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or in a liquid state or in a gaseous state. Aerosol includes aerosol dispensers;
Alloy	means a metallic material, homogeneous on a macroscopic scale, consisting of two or more elements so combined that they cannot be readily separated by mechanical means. Alloys are considered to be mixtures for the purpose of classification under the GHS;
Asphyxiant	A chemical (gas or vapor) that can cause death or unconsciousness by suffocation. Simple asphyxiants, such as nitrogen, either use up or displace oxygen in the air. They become especially dangerous in confined or enclosed spaces. Chemical asphyxiants, such as carbon monoxide and hydrogen sulfide, interfere with the body's ability to absorb or transport oxygen to the tissues.
Boiling Point	The temperature at which the vapor pressure of a liquid equals atmospheric pressure or at which the liquid changes to a vapor. The boiling point is usually expressed in degrees Fahrenheit. If a flammable material has a low boiling point, it indicates a special fire hazard.
"C" or Ceiling	A description usually seen in connection with a published exposure limit. It refers to the concentration that should not be exceeded, even for an instant. It may be written as TLV-C or Threshold Limit Value - Ceiling. (See also Threshold Limit Value.)

Carcinogen	A substance or physical agent that may cause cancer in animals or humans.
C.A.S. Number	Identifies a particular chemical by the Chemical Abstracts Service, a service of the American Chemical Society that indexes and compiles summaries of worldwide chemical literature called "Chemical Abstracts."
CC – Cubic Centimeter	A volumetric measurement, which, in the case of water, is also equal to one milliliter (ml).
Chemical identity	Means a name that will uniquely identify a chemical. This can be a name that is in accordance with the nomenclature systems of the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS), or a technical name;
Chemical Reaction	A change in the arrangement of atoms or molecules to yield substances of different composition and properties. (See Reactivity)
Chronic	Persistent, prolonged, or repeated conditions
Chronic Exposure	A prolonged exposure occurring over a period of days, weeks, or years.
Combustible Liquid	According to the DOT and NFPA, combustible liquids are those having a flash point at or above 100 °F (37.8 °C). Combustible liquids do not ignite as easily as flammable liquids. However, combustible liquids can be ignited under certain circumstances and must be handled with caution. Substances, such as wood, paper, etc., are termed "ordinary combustibles."
"Compressed gas"	A gas which when packaged under pressure is entirely gaseous at -50 °C; including all gases with a critical temperature \leq -50 °C.
Concentration	The amount of one substance mixed with, and in the presence of, another substance. For example, 5 parts (of acetone) per million (parts of air).
Corrosive to metal	Means a substance or a mixture which by chemical action will materially damage, or even destroy, metals;
Dermatitis	An inflammation or irritation of the skin.
Dissolved gas	means a gas which when packaged under pressure is dissolved in a liquid phase solvent;
Dyspnea	Shortness of breath; difficult or labored breathing.
EPA	The Environmental Protection Agency is the governmental agency responsible for administration of laws to control and/or reduce pollution of air, water, and land systems.
EPA Number	The number assigned to chemicals regulated by the EPA.
Explosive article	Means an article containing one or more explosive substances;
Explosive substance	means a solid or liquid substance (or mixture of substances) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. Pyrotechnic substances are included even when they do not evolve gases;
Flammable gas	A gas having a flammable range with air at 20 C and a standard pressure of 101.3 kPa.
Flammable Liquid	A flammable liquid means a liquid having a flash point of not more than 93 C.
Flammable Solid	A flammable solid is a solid which is readily combustible, or may cause or contribute to fire through friction.

Flash point	Means the lowest temperature (corrected to a standard pressure of 101.3 kPa) at which the application of an ignition source causes the vapours of a liquid to ignite under specified test conditions;
Gas	means a substance which (i) at 50 °C has a vapour pressure greater than 300 kPa; or (ii) is completely gaseous at 20 °C at a standard pressure of 101.3 kPa;
Hazard category	means the division of criteria within each hazard class, e.g. oral acute toxicity includes five hazard categories and flammable liquids includes four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally;
Hazard class	means the nature of the physical, health or environmental hazard, e.g. flammable solid carcinogen, oral acute toxicity;
Hazard statement	means a statement assigned to a hazard class and category that describes the nature of the hazards of a hazardous product, including, where appropriate, the degree of hazard;
Ingestion	Taking a substance into the body through the mouth as food, drink, medicine, or unknowingly as on contaminated hands or cigarettes, etc.
Inhalation	The breathing in of an airborne substance that may be in the form of gases, fumes, mists, vapors, dusts, or aerosols.
Irritant	A substance that produces an irritating effect when it contacts the skin, eyes, nose, or respiratory system.
Label	means an appropriate group of written, printed or graphic information elements concerning a hazardous product, selected as relevant to the target sector (s), that is affixed to, printed on, or attached to the immediate container of a hazardous product, or to the outside packaging of a hazardous product;
Label element	means one type of information that has been harmonized for use in a label, e.g. pictogram, signal word;
Liquefied gas	means a gas which when packaged under pressure, is partially liquid at temperatures above -50 °C. A distinction is made between: (i) High pressure liquefied gas: a gas with a critical temperature between -50 °C and +65 °C; and (ii) Low pressure liquefied gas: a gas with a critical temperature above +65 °C;
Liquid	means a substance or mixture which at 50 °C has a vapour pressure of not more than 300 kPa (3 bar), which is not completely gaseous at 20 °C and at a standard pressure of 101.3 kPa, and which has a melting point or initial melting point of 20 °C or less at a standard pressure of 101.3 kPa. A viscous substance or mixture for which a specific melting point cannot be determined shall be subjected to the ASTM D 4359-90 test; or to the test for determining fluidity (penetrometer test) prescribed in section 2.3.4 of Annex A of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR);
Lower Explosive Limit (LEL)	(Also known as Lower Flammable Limit.) The lowest concentration of a substance that will produce a fire or flash when an ignition source (flame, spark, etc.) is present. It is expressed in percent of vapor or gas in the air by volume. Below the LEL or LFL, the air/contaminant mixture is theoretically too "lean" to burn. (See also UEL)
Mixture	means a mixture or a solution composed of two or more substances in which they do not react;

Odor Threshold	The minimum concentration of a substance at which a majority of test subjects can detect and identify the substance's characteristic odor.
OSHA	The Occupational Safety and Health Administration is a Federal Agency under the Department of Labor that publishes and enforces safety and health regulations for most business and industries in the United States.
Oxygen Deficiency	An atmosphere having less than the normal percentage of oxygen found in normal air. Normal air contains 20.8% oxygen at sea level.
Oxidizing gas	means any gas which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does;
Oxidizing liquid	means a liquid which, while in itself not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material;
Oxidizing solid	means a solid which, while in itself not necessarily combustible, may, generally by yielding oxygen, cause, or contribute to, the combustion of other material;
Organic peroxide	means a liquid or solid organic substance which contains the bivalent -O-O- structure and may be considered a derivative of hydrogen peroxide, where one or both of the hydrogen atoms have been replaced by organic radicals. The term also includes organic peroxide formulation (mixtures);
Pictogram	A pictogram means a composition that may include a symbol plus other graphic elements, such as a border, background pattern or colour that is intended to convey specific information.
Precautionary statement	A precautionary statement means a phrase (and/or pictogram) that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous product, or improper storage or handling of a hazardous product.
Product identifier	A product identifier means the name or number used for a hazardous product on a label or in the SDS. It provides a unique means by which the product user can identify the substance or mixture within the particular use setting e.g. transport, consumer or workplace.
Pyrophoric Liquid	A pyrophoric liquid is a liquid which, even in small quantities, is liable to ignite within five minutes after coming into contact with air.
Pyrophoric Solid	A pyrophoric solid is a solid which, even in small quantities, is liable to ignite within five minutes after coming into contact with air.
Pyrotechnic substance	A substance or mixture of substances designed to produce an effect by heat, light, sound, gas or smoke or a combination of these as the result of non-detonative self-sustaining exothermic chemical reactions.
Reactivity	A substance's propensity to under a chemical reaction or change that may result in effects, which can be dangerous, such as explosion, burning, or generation of corrosive or toxic emissions. Reaction initiators, such as heat, other chemicals, dropping, etc., will usually be specified as "Conditions to Avoid" when a chemical's reactivity is described in an SDS.
Readily Combustible Solid	Readily combustible solids are powdered, granular, or pasty substances which are dangerous if they can be easily ignited by brief contact with an ignition source, such as a burning match, and if the flame spreads rapidly.
Self-Heating Substance	A self-heating substance is a solid or liquid substance, other than a pyrophoric substance, which, by reaction with air and without energy supply, is liable to self-heat; this substance differs from a pyrophoric substance in that it will ignite only when in large amounts (kilograms) and after long periods of time (hours or days).

Self-reactive Substance	Self-reactive substances are thermally unstable liquid or solid substances liable to undergo a strongly exothermic decomposition even without participation of oxygen (air). This definition excludes substances or mixtures classified under the GHS as explosive, organic peroxides or as oxidizing.
Signal word	A signal word means a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The GHS uses 'Danger' and 'Warning'.
"Substances which, in contact with water, emit flammable gases"	are solid or liquid substances which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.
Supplemental Label Element	A supplemental label element means any additional non-harmonized type of information supplied on the container of a hazardous product that is not required or specified under the GHS. In some cases this information may be required by other competent authorities or it may be additional information provided at the discretion of the manufacturer/distributor.
Symbol	A symbol means a graphical element intended to succinctly convey information.
Technical name	A name that is generally used in commerce, regulations and codes to identify a substance or mixture, other than the IUPAC or CAS name, and that is recognized by the scientific community. Examples of technical names include those used for complex mixtures (e.g., petroleum fractions or natural products), pesticides (e.g., ISO or ANSI systems), dyestuffs (Colour Index system) and minerals.
Time Weighted Average (TWA)	The average concentration, over a given work period, e.g., 8-hour workday, of a person's exposure to a chemical or a potentially harmful agent. The average is determined by sampling for the contaminant during the period of exposure.
Upper Explosive Limit (UEL)	(Also known as Upper Flammable Limit.) The UEL is the highest concentration of a mixture that will burn or explode when an ignition source is present. Theoretically, above this limit, the mixture is said to be too "rich" to support combustion. The airborne concentration range between the LEL and the UEL constitutes the flammable range or explosive range.

4.0 PROCEDURE

4.1. General

The purpose of Hazard Communication is to communicate the hazards of workplace chemicals and communicate protective measures to control the hazards. Hazard Communication is accomplished by:

- Maintaining a list of all workplace chemicals,
- Labeling workplace chemical containers,
- Maintaining Safety Data Sheets for the workplace chemicals, and
- Implementing a training program to communicate the hazards of chemicals and appropriate protective measures.

Upon completion of Hazard Communication training, Delta Services employees will understand the components of Hazard Communication, will understand the hazards of the chemicals in their workplace and the protective measures to control the hazards

4.2. Hazard Classification

Chemical manufacturers are responsible providing specific criteria for classification of health and physical hazards, as well as classification of mixtures.

- Physical hazards, such as flammability, combustibility, explosion, reaction, radioactivity; and
- Health hazards, such as irritation, corrosion, sensitization, or toxicity.

Safety Data Sheets (SDSs) should be requested for chemicals and products purchased by the Company. The Company relies on the evaluation performed by the chemical manufacturers or importers, who originated the SDS, for the accuracy of this information.

SDSs must be maintained at each Company project or location.

4.3. Written Hazard Communication

For each location where there are hazardous chemicals, a list of the chemicals will be maintained and updated at least annually or when there are new chemicals. The Site Manager is expected to maintain the list of chemicals.

4.4. Labels

Labels and other forms of warnings are to be conspicuously placed on containers so the message is readily visible.

The chemical manufacturer, importer or distributor will label, tag or mark the chemical container identifying the hazardous chemicals, appropriate hazard warnings, and name and address of the chemical manufacturer, importer or responsible party.

Any damaged or defaced label will be replaced with a duplicate of an alternate label containing the following information:

- Product Identifier
- Words or pictograms to communicate the hazards of the substance

4.5. Safety Data Sheets (SDS)

A Safety Data Sheet will be maintained in the workplace for each hazardous chemical used by an employee.

The safety data sheets will be updated annually.

4.6. Work Place Inventory

An up-to-date hazardous chemical inventory must be maintained.

4.7. Employee Information and Training

Employees shall be informed of operations in their work area where hazardous chemicals are present, the location of the written Hazard Communication program, list of hazardous chemicals, and SDSs.

Training will include methods and observations to detect a hazardous chemical in the workplace, the physical and health hazards of the hazardous chemicals in the workplace, the measures employees can take to protect themselves, an explanation of the labeling system and SDSs.

4.8. Trade Secrets

The chemical manufacturer may withhold specific chemical identity from the SDS. For emergency or first aid treatment or non-emergency conditions, the chemical manufacturer will disclose the specific chemical identity to a health professional.

5.0 REFERENCES AND RELATED DOCUMENTS

29 CFR 1910.1200, Hazard Communication

29 CFR 1926.59, Hazard Communication

8 CCR 5194, Hazard Communication

6.0 FIGURES

None