



HAZARDOUS MATERIALS INVENTORY STATEMENT

Product Name	Chemical Name & Percent	Component (Solid, Liquid, Gas)	CAS Number	Location Where Stored or Used	Physical/Health Hazard Classification	Amount in Storage	Amount in use Closed Systems	Amount in use Open Systems

Completed By: _____ Title: _____ Telephone No. _____



Guidelines for completing a Hazardous Materials Inventory Statement (HMIS)

The following information is provided to assist in filling out the Hazardous Materials Inventory Statement (HMIS). The 2018 International Fire Code also provides detailed chapters and appendix material to assist in completing this form. Material Safety Data Sheets (MSDS) shall be available for all chemicals indicated and such MSDS shall be provided to the City of North Las Vegas Fire Prevention.

- **Product Name:** This is the name of the product being utilized. The product name of the chemical can be found on the MSDS.
- **Chemical Name:** The scientific designation of a chemical according to accepted standards, or a name, which will clearly identify a chemical for the purposes of evaluation.
- **Physical State:** Indicate whether the chemical is stored or used in a solid, liquid, or gaseous state.
- **Chemical Abstract Service (CAS) number.** Enter the CAS (chemical abstract service number) found in 29 CFR or on the MSDS. For mixtures, enter the CAS number of the mixture as a whole, if it has been assigned a number distinct from its components. For a chemical that has no CAS number, enter "none."
- **Location Where Stored or Used.** Identify the locations or areas where the chemicals are being stored or used. (Indoor/Outdoor)
- **Physical/Health Hazard Classification.** Chemicals presenting a hazard must be classified, in accordance with each hazard type. **Health Hazard** is a classification of a chemical for which there is statistically significant evidence that acute or chronic health effects are capable of occurring in exposed persons. The term "health hazard" includes chemicals that are toxic, highly toxic, and corrosive. **Physical Hazard** is a chemical for which there is evidence that is a flammable or combustible liquid, cryogenic fluid, explosive, flammable (solid, liquid, or gas), organic peroxide (solid or liquid), oxidizer (solid or liquid), oxidizing gas, pyrophoric (solid, liquid, or gas), unstable (reactive) material (solid, liquid, or gas) or water-reactive material (solid or liquid).
- **Amount in Storage.** Identify the total amount of the chemical being stored.
- **Amount in use – Closed Systems.** Identify the use of a solid or liquid hazardous material involving a closed vessel or system that remains closed during normal operations where vapors emitted by the product are not liberated outside of the vessel or system and the product is not exposed to the atmosphere during normal operations; and all uses of compressed gases. Examples of closed systems for solids and liquids include product conveyed through a piping system into a closed vessel, system or piece of equipment.
- **Amount in use – Open Systems.** Identify the use of a solid or liquid hazardous material involving a vessel or system that is continuously open to the atmosphere during normal operations and where vapors are liberated, or the product is exposed to the atmosphere during normal operations. Examples of open systems for solids and liquids include dispensing from or into open beakers or containers, dip tank and plating tank operations.



Hazardous Materials Inventory Statement – Classifications by Hazard

Note: A material with a primary classification within one class can also present a hazard in another class. Be sure to list all applicable hazards for each material.

Symbol	Physical Hazards	Symbol	Physical Hazards
CL2	Combustible liquid, Class II	OP4	Organic Peroxide, Class IV
CL3A	Combustible liquid, Class III-A	OP5	Organic Peroxide, Class V
CL3B	Combustible liquid, Class III-B	OX4	Oxidizer, Class 4
CF	Combustible Fiber	OX3	Oxidizer, Class 3
CR	Cryogenic, Flammable or Oxidizing	OX2	Oxidizer, Class 2
EXP	Explosive	OX1	Oxidizer, Class 1
FLS	Flammable solid	OG	Oxidizing Gas
FG	Flammable gas	PYR	Pyrophoric
F1A	Flammable liquid, I-A	UR4	Unstable (Reactive), Class 4
F1B	Flammable liquid, I-B	UR3	Unstable (Reactive), Class 3
F1C	Flammable liquid, I-C	UR2	Unstable (Reactive), Class 2
OPD	Organic Peroxide, Unclassified detonable	UR1	Unstable (Reactive), Class 1
OP1	Organic Peroxide, Class I	WR1	Water Reactive, Class 1
OP2	Organic Peroxide, Class II	WR2	Water Reactive, Class 2
OP3	Organic Peroxide, Class III	WR3	Water Reactive, Class 3

Symbol	Health Hazards
COR	Corrosives
HTX	Highly Toxics
TOX	Toxics
SEN	Sensitizers
OHH	Other Health Hazards
IRR	Irritants



NFPA 704 RATING SYSTEM

HEALTH: Read the HEALTH HAZARD INFORMATION section of the MSDS and determine the rating (0-4) which best meets the product. Report the NFPA 704 RATING and all corresponding HAZARD CATEGORIES that apply on the Hazardous Materials Inventory Statement.

RATING	DESCRIPTION	HAZARD CATEGORY
4	Materials, including those that are too dangerous to be approached without specialized protective equipment, which on very short exposure could cause death or major residual injury, even if prompt medical attention is received.	Highly Toxic Radioactive
3	Materials, including those requiring protection from all bodily contact, which after short exposure could cause serious temporary or residual injury, even after prompt medical care is received.	Corrosive Cryogenic Flammable Cryogenic Oxidizing Other Health Hazards Toxic
2	Materials, including those requiring the use of respiratory protective equipment with an independent air supply, which after either intense or short exposure could cause temporary incapacitation or possible residual injury unless prompt care is obtained.	Irritant Other Health Hazards
1	Materials, including those requiring air-purifying respirators, which on short exposure could cause irritation but only minor residual injury if no care, is obtained.	Sensitizer Other Health Hazards
0	Materials that on short exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.	



NFPA 704 RATING SYSTEM

FLAMMABILITY: Read the **FIRE AND EXPLOSION HAZARD DATA** section of the MSDS and determine the rating (0-4) which best meets the product.

Report the NFPA 704 RATING and all corresponding HAZARD CATEGORIES that apply on the Hazardous Materials Inventory Statement.

RATING	DESCRIPTION	HAZARD CATEGORY
4	Materials having flash points below 73 F and a boiling point less than 100 F. This would include materials that ignite spontaneously when exposed to air; also included are flammable gases and flammable cryogenic materials and Class I-A flammable liquids.	Combustible Dust Cryogenic Flammable Flammable Gas (Gaseous or Liquefied) Flammable Liquid I-A Organic Peroxide I Pyrophoric Gas
3	Materials having flash points below 73 F and having a boiling point at or above 100 F and those liquids having a flash point at or above 73 F and below 100 F. This would include Class I-B and Class I-C flammable liquids.	Combustible Fiber Flammable Liquid I-B Flammable Liquid I-C Organic Peroxide II Pyrophoric Solid or Liquid
2	Materials having flash points between 100 F and 200 F. This would include Class II and III-A combustible liquids.	Combustible Liquid II Combustible Liquid III-A Flammable Solid Organic Peroxide III
1	Materials having flash points above 200 F. This includes Class III-B combustible liquids.	Combustible Liquid III-B Organic Peroxide IV
0	Materials that will not burn	



NFPA704 RATING SYSTEM

REACTIVITY: Read the **REACTIVITY DATA** section of the MSDS and determine the rating (0-4) which best meets the product. . Report the NFPA 704 RATING and all corresponding HAZARD CATEGORIES that apply on the Hazardous Materials Inventory Statement.

RATING	DESCRIPTION	HAZARD CATEGORY
4	Materials that are readily able to detonate, or are of explosive decomposition or receive at normal temperatures and pressures.	Explosives Organic Peroxide Unclassified, Detonable Unstable Reactive Class 4 Unstable Reactive Class 3D
3	Materials capable of detonation or explosive decomposition or explosive reaction but require a strong initiating source or that must be heated under confinement.	Organic Peroxide I Organic Peroxide II Unstable Reactive Class 3N Water Reactive Class 3
2	Materials that readily undergo violent chemical change at elevated temperatures or pressures; this includes materials that may react violently with water or form potentially explosive mixtures with water.	Organic Peroxide III Unstable Reactive Class 2 Water Reactive Class 2
1	Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures; which includes materials that change or decompose on exposure to air, light, or moisture.	Organic Peroxide IV Unstable Reactive Class 1 Water Reactive Class 1
0	Materials that in themselves are normally stable even under fire conditions; this includes materials that do not react with water.	



NFPA 704 RATING SYSTEM SPECIAL HAZARD: Read the **HEALTH HAZARD INFORMATION** section, the **FIRE AND EXPLOSION HAZARD DATA** section, and the **REACTIVITY DATA** section of the MSDS and determine the rating, which best meets, the product. Report the NFPA 704 RATING and all corresponding HAZARD CATEGORIES that apply on the Hazardous Materials Inventory Statement.

RATING	DESCRIPTION	HAZARD CATEGORY
W	Water Reactive. Materials that react with water.	Water Reactive Class 3, 2, or 1
OX	Oxidizer. Materials with Oxidizing Properties.	Cryogenic Oxidizing Compressed Gas Oxidizing Liquefied Gas Oxidizing Oxidizer Class 4, 3, 2, or 1
RAD	Radioactive. Materials or combinations of materials that spontaneously emit ionizing radiation	Radioactive
COR	Corrosive. Materials that cause visible destruction of/or irreversible alterations in, living tissue by chemical action at the site of contact.	Corrosive
UD	Unclassified Detonable. Materials that present an extremely high explosion hazard through rapid explosive decomposition and are regulated as explosive materials.	Unclassified Detonable
4D	Class 4 Detonable. Materials, which in themselves are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperatures and pressures.	Class 4 Detonable
3D	Class 3 Detonable. Materials that, in themselves, are capable of detonation or of explosive decomposition or explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation.	Class 3 Detonable
3N	Class 3 Non-Detonable. Materials which explode or decompose explosively, but that do not detonate.	Class 3 Non-Detonable



Definitions

AEROSOL is a product which is dispensed from an aerosol container by a propellant.

Aerosols shall be subdivided as follows:

- Class 1- the Chemical Heat of Combustion for the aerosol mixture is less than 8,600 Btu/lb. (20 kJ/g)
- Class 2- the Chemical Heat of Combustion for the aerosol mixture is greater than 8,600 Btu/lb. (20 kJ/g) and less than 13,000 Btu/lb. (30 kJ/g)
- Class 3- the Chemical Heat of Combustion for the aerosol mixture is greater than 13,000 Btu/lb. (30 kJ/g)

CARCINOGEN is any substance that causes the development of cancerous growths in living tissue. A chemical is considered to be a carcinogen if it:

- Has been evaluated by the International Agency for Research on Cancer (IARC) and found to be a carcinogen or potential carcinogen, or
- Is listed as a carcinogen or potential carcinogen in the latest edition of the Annual Report on Carcinogens published by the National Toxicology Program (NTP), or
- Is regulated by OSHA as a carcinogen.

Chemical mixtures (generally zero-prefixed CAS numbered items) will be indicated as being carcinogenic if the mixture contains a carcinogen in a concentration of 0.1% or more as indicated on the MSDS.

COMBUSTIBLE FIBERS are readily ignitable and free-burning fibers, such as cotton, sisal, henequen, ixtle, jute, hemp, tow, cocoa fiber, oakum, baled waste, baled wastepaper, kapok, hay, straw, excelsior, Spanish moss and other like materials.

COMPRESSED GAS is a material, or mixture of materials, which is a gas at 68 °F (20°C) or less at 14.7 psia (101.3 kPa) of pressure.

CONTROL AREA is a building or portion of a building within which the exempted amounts of hazardous materials are allowed to be stored, dispensed, used or handled.

CORROSIVE is a chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact. A chemical is considered to be corrosive if, when tested on the skin of albino rabbits by the method described in the U.S. Department of Transportation in Appendix A to CFR 49 Part 173, it destroys or changes irreversibly the structure of the tissue at the site of contact following an exposure period of four hours. This term shall not refer to action on inanimate surfaces.



Definitions

CONTROL AREA is a building or portion of a building within which the exempted amounts of hazardous materials are allowed to be stored, dispensed, used or handled.

CRYOGENIC FLUIDS is a fluid that has a normal boiling point below -150°F (-101.1°C).

EXPLOSIVE/BLASTING AGENT

Explosive:

- A chemical that causes a sudden, almost instantaneous release of pressure, gas and heat when subjected to sudden shock, pressure, or high temperatures, or
- A material or chemical, other than a blasting agent, that is commonly used or intended to be used for the purpose of producing an explosive effect.

Blasting Agent:

- A material or mixture consisting of a fuel and oxidizer intended for blasting, not otherwise classified as an explosive, in which none of the ingredients is classified as explosive, provided that the finished product as mixed and packaged for use
- or shipment cannot be detonated by means of a no. 8 test blasting cap when unconfined. Materials or mixtures classified as nitrocarbonitrates by DOT regulations are included in this definition.

FLAMMABLE GAS is a gas, which at ambient temperature and pressure is flammable in mixture of 13 percent or less (by volume) with air, or the flammable range with air is wider than 12 percent, regardless of the lower limit.

FLAMMABLE LIQUEFIED GAS is a liquefied compressed gas which under the charged pressure is partially liquid at a temperature of 70 degrees Fahrenheit and which is flammable.

FLAMMABLE/COMBUSTIBLE LIQUIDS

FLAMMABLE LIQUID is any liquid having a flash point below 100 degrees Fahrenheit and having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100 degrees Fahrenheit. Class I liquids shall include those having flash points below 100 degrees Fahrenheit and may be subdivided as follows:

- CLASS I-A shall include those having flash points below 73 degrees Fahrenheit and having a boiling point below 100 degrees Fahrenheit.
- CLASS I-B shall include those having flash points below 73 degrees Fahrenheit and having a boiling point at or above 100 degrees Fahrenheit.
- CLASS I-C shall include those having flash points at or above 73 degrees Fahrenheit and below 100 degrees Fahrenheit.



Definitions

COMBUSTIBLE LIQUID is a liquid having a flash point at or above 100 degrees F. (37.8C). Combustible liquids are subdivided as follows. The Category of Combustible liquids does not include compressed gases or cryogenic fluids.

- Class II liquids are those having flash points at or above 100 degrees F. (37.8C) and below 140 degrees F. (60C).
- Class III-A liquids are those having flash points at or above 140 degrees F (60C) and below 200 degrees F. (93.3C).
- Class III-B liquids are those liquids having flash points at or above 200 degrees F. (93.3C).

FLAMMABLE SOLID is a solid substance, other than one which is defined in this article as a blasting agent or explosive, that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or as a result of retained heat from manufacture, or which has an ignition temperature below 212 degrees Fahrenheit, or which burns so vigorously or persistently when ignited so as to create a serious hazard. Finely divided solid materials which when dispersed in air as a cloud may be ignited and cause an explosion are flammable solids. A chemical shall be considered to be a flammable solid if, when tested by the method described in 16 CFR 1500.44, it ignites one-tenth of an inch per second along its

HIGHLY TOXIC MATERIAL is a material which produces a lethal dose or lethal concentration which falls within any of the following categories:

- A chemical that has a median lethal dose (LD50) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 or 300 grams each.
- A chemical that has a median lethal dose (LD50) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each.
- A chemical that has a median lethal concentration (LC50) in air of 200 parts per million by volume or less of gas or vapor, or 2 milligrams per liter or less of mist, fume or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

Mixtures of these materials with ordinary materials, such as water, may not warrant a classification of highly toxic. While this system is basically simple in application, any hazard evaluation which is required for the precise categorization of this type of material shall be performed by experienced, technically competent persons.

IRRITANT is a chemical which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. A chemical is a skin irritant if, when tested on the intact skin of albino rabbits by the methods of 16 CFR 1500.41 for four hours' exposure or by other appropriate techniques, it results in an empirical score of 5 or more. A chemical is an eye irritant if so determined under the procedure listed in 16 CFR 1500.42 or other appropriate techniques.



Definitions

LIQUEFIED PETROLEUM GAS (LP-gas) is a material which is composed predominantly of the following hydrocarbons or mixtures of them: propane, propylene, butane (normal butane or isobutane) and butylenes.

NFPA 704 Placard Firefighter warning placard system. This is the “diamond” with blue (health), red (fire), yellow (reactivity), and white (other) fields with numbers that indicate the hazard level of materials present in a building. Most MSDS will provide this information or you can reference the latest edition of NFPA 704 *Standard System for The Identification of the Hazards of Materials for Emergency Response*.

Please note, there are two similar systems currently in use, the NFPA 704 and the HMIS. Please provide the information for the NFPA 704 system, not the HMIS system

ORGANIC PEROXIDE is an organic compound that contains the bivalent -O-O- structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms have been replaced by an organic radical.

- CLASS I peroxides are capable of deflagration, but not detonation. These peroxides present a high explosion hazard through rapid decomposition.
- CLASS II peroxides burn very rapidly and present a severe reactivity hazard.
- CLASS III peroxides burn rapidly and present a moderate reactivity hazard.
- CLASS IV peroxides burn in the same manner as ordinary combustibles and present minimum reactivity hazard.
- UNCLASSIFIED (DETONATABLE) PEROXIDES are peroxides which are capable of detonation. These peroxides present an extremely high explosion hazard through rapid explosive decomposition and are regulated in accordance with the provisions of Article 77 for Class A explosives.

OTHER HEALTH HAZARDS Target organ toxins - substances which cause damage to particular organs or systems. Including: hepatoxins, nephrotoxins, neurotoxins, blood or hematopoietic system toxins, pulmonary damaging agents, reproductive toxins, cutaneous and eye hazards not classified as irritant or corrosive.



Definitions

OXIDIZER is a chemical other than a blasting agent or explosive as defined in 29 CFR 1910.109(a), that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases.

- CLASS 1 An oxidizer whose primary hazard is that it slightly increases the burning rate but does not cause spontaneous ignition when it comes in contact with combustible materials.
- CLASS 2 An oxidizer that will cause a moderate increase in the burning rate or that may cause spontaneous ignition of combustible materials with which it comes in contact.
- CLASS 3 An oxidizer that will cause a severe increase in the burning rate of combustible materials with which it comes in contact or that will undergo vigorous self-sustained decomposition due to contamination or exposure to heat.
- CLASS 4 An oxidizer that can undergo an explosive reaction due to contamination or exposure to thermal or physical shock. In addition, the oxidizer will enhance the burning rate and may cause spontaneous ignition of combustibles.

PYROPHORIC is a chemical that will spontaneously ignite in air or below a temperature of 130 degrees Fahrenheit (54.4 degrees Centigrade).

RADIOACTIVE MATERIAL is any material or combination of materials that spontaneously emits ionizing radiation.

SENSITIZER is a chemical that causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure to the chemical.

TOXIC MATERIAL is a material which produces a lethal dose or a lethal concentration within any of the following categories:

- A chemical or substance that has a median lethal dose (LD50) of more than 50 milligrams per kilogram but not more than 500 milligrams per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.
- (b) A chemical or substance that has a median lethal dose (LD50) of more than 200 milligrams per kilogram but not more than 1000 milligrams per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between two and three kilograms each.

NOTE: Mixtures of these materials with ordinary materials, such as water, may not warrant a classification of highly toxic. While this system is basically simple in application, any hazard evaluation which is required for the precise categorization of this type of material shall be performed by experienced, technically competent persons.



Definitions

UNSTABLE REACTIVE is a chemical which in the pure state or as produced or transported, will vigorously polymerize, decompose, condense, or will become selfreactive under conditions of shock pressure and temperature.

- CLASS 1 materials which in themselves are normally stable but which can become unstable at elevated temperatures and pressures.
- CLASS 2 materials which in themselves are normally unstable and readily undergo violent chemical change but do not detonate. This degree should include materials which can undergo chemical change with rapid release of energy at normal temperatures and pressures and which can undergo violent chemical change at elevated temperatures and pressures.
- CLASS 3 materials which in themselves are capable of detonation or of explosive decomposition or explosive reaction but which require a strong initiating source or which must be heated under confinement before initiation. This degree should include materials which are sensitive to thermal or mechanical shock at elevated temperatures and pressures.
- CLASS 4 materials which in themselves are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperatures and pressures. This class should include materials which are sensitive to mechanical or localized thermal shock at normal temperatures and pressures.

WATER REACTIVE means a chemical that reacts with water to release a gas that is either flammable or presents a health hazard.

- CLASS 1 materials which may react with water with some release of energy but not violently.
- CLASS 2 materials which may form potentially explosive mixtures with water. CLASS 3 materials which react explosively with water without requiring heat or confinement



Hazardous Materials Inventory Statement

Declaration:

Business Name: _____

Address: _____

Declaration:

Under penalty of perjury, I declare the above and subsequent information, provided as part of the hazardous materials inventory statement is true and correct.

Signature: _____ Date: _____

Print Name: _____ Title: _____