

## II. HAZARDOUS MATERIALS SECTION

To be completed by all businesses that handle hazardous materials and/or regulated substances (including extremely hazardous substances)

Be advised that appropriate signatures must be provided on forms.

### THIS SECTION INCLUDES:

#### A. HAZARDOUS MATERIALS INVENTORY - CHEMICAL DESCRIPTION FORM

One chemical per page. Make photocopies as necessary.

CAS Numbers must be provided for each chemical and hazardous component. To obtain the CAS#, refer to the chemical's MSDS (Materials Safety Data Sheet), or contact the chemical's manufacturer, or the Chemical Abstracts Service at (614) 447-3600.

Facilities reporting chemicals subject to **EPCRA** (the federal **E**mergency **P**lanning and **C**ommunity **R**ight-to-Know **A**ct) reporting thresholds must sign each page for each **EPCRA** reported chemical. For more information on **EPCRA**, contact US EPA at (800) 424-9346 or visit US EPA's **EPCRA** website at [www.epa.gov/superfund/contacts/infocenter/epcra.htm](http://www.epa.gov/superfund/contacts/infocenter/epcra.htm).

#### B. REGULATED SUBSTANCE REGISTRATION FORM

#### C. REGULATED SUBSTANCE LIST

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**UNIFIED PROGRAM CONSOLIDATED FORM**  
**City of Vernon Health & Environmental Control Department, 4305 S. Santa Fe Ave., Vernon, CA 90058**  
**Section IIA: HAZARDOUS MATERIALS INVENTORY – CHEMICAL DESCRIPTION PAGE**  
(one page per material per building or area)

<input type="checkbox"/> ADD	<input type="checkbox"/> DELETE	<input type="checkbox"/> REVISE	200
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**I. FACILITY INFORMATION**

BUSINESS NAME (Same as FACILITY NAME or DBA – Doing Business As)			3
CHEMICAL LOCATION		201	CHEMICAL LOCATION CONFIDENTIAL EPCRA <input type="checkbox"/> YES <input type="checkbox"/> NO
FACILITY ID #		MAP# (optional)	GRID# (optional)

**II. CHEMICAL INFORMATION**

CHEMICAL NAME		205	TRADE SECRET	<input type="checkbox"/> Yes <input type="checkbox"/> No	206
COMMON NAME		207	EHS*		
CAS#		209	*If EHS is "Yes", all amounts below must be in lbs.		
FIRE CODE HAZARD CLASSES (Complete if required by CUPA)					
HAZARDOUS MATERIAL TYPE (Check one item only)		<input type="checkbox"/> a. PURE <input type="checkbox"/> b. MIXTURE <input type="checkbox"/> c. WASTE	211	RADIOACTIVE	<input type="checkbox"/> Yes <input type="checkbox"/> No
PHYSICAL STATE (Check one item only)		<input type="checkbox"/> a. SOLID <input type="checkbox"/> b. LIQUID <input type="checkbox"/> c. GAS	214	LARGEST CONTAINER	215
FED HAZARD CATEGORIES (Check all that apply)					
AVERAGE DAILY AMOUNT		217	MAXIMUM DAILY AMOUNT	218	ANNUAL WASTE AMOUNT
UNITS*		<input type="checkbox"/> a. GALLONS <input type="checkbox"/> b. CUBIC FEET <input type="checkbox"/> c. POUNDS <input type="checkbox"/> d. TONS	221	DAYS ON SITE:	
STORAGE CONTAINER					
<input type="checkbox"/> a. ABOVE GROUND TANK <input type="checkbox"/> e. PLASTIC/NONMETALLIC DRUM <input type="checkbox"/> i. FIBER DRUM <input type="checkbox"/> m. GLASS BOTTLE <input type="checkbox"/> q. RAIL CAR <input type="checkbox"/> b. UNDERGROUND TANK <input type="checkbox"/> f. CAN <input type="checkbox"/> j. BAG <input type="checkbox"/> n. PLASTIC BOTTLE <input type="checkbox"/> r. OTHER <input type="checkbox"/> c. TANK INSIDE BUILDING <input type="checkbox"/> g. CARBOY <input type="checkbox"/> k. BOX <input type="checkbox"/> o. TOTE BIN <input type="checkbox"/> d. STEEL DRUM <input type="checkbox"/> h. SILO <input type="checkbox"/> l. CYLINDER <input type="checkbox"/> p. TANK WAGON					
STORAGE PRESSURE		<input type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT	224		
STORAGE TEMPERATURE		<input type="checkbox"/> a. AMBIENT <input type="checkbox"/> b. ABOVE AMBIENT <input type="checkbox"/> c. BELOW AMBIENT <input type="checkbox"/> d. CRYOGENIC	225		

#	% WT	HAZARDOUS COMPONENT (For mixture or waste only)	EHS	CAS #
1	226		<input type="checkbox"/> Yes <input type="checkbox"/> No	228
2	230		<input type="checkbox"/> Yes <input type="checkbox"/> No	232
3	234		<input type="checkbox"/> Yes <input type="checkbox"/> No	236
4	238		<input type="checkbox"/> Yes <input type="checkbox"/> No	240
5	242		<input type="checkbox"/> Yes <input type="checkbox"/> No	244

If more hazardous components are present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, attach additional sheets of paper capturing the required information.

If EPCRA, Please Sign Here

**UNIFIED PROGRAM CONSOLIDATED FORM**  
**City of Vernon Environmental Health Department, 4305 S. Santa Fe Ave., Vernon, CA 90058**  
**Section IIA: HAZARDOUS MATERIALS INVENTORY – CHEMICAL DESCRIPTION PAGE INSTRUCTIONS**

You must complete a separate Hazardous Materials Inventory - Chemical Description page for each hazardous material (hazardous substances and hazardous waste) that you handle at your facility in aggregate quantities equal to or greater than 50 pounds, 5 gallons, 200 cubic feet of gas (calculated at standard temperature and pressure) or the federal threshold planning quantity for Extremely Hazardous Substances, whichever is less. Also complete a page for each radioactive material handled over quantities for which an emergency plan is required to be adopted pursuant to 10 CFR Parts 30, 40, or 70. The completed inventory should reflect all reportable quantities of hazardous materials at your facility, reported **separately** for each building or outside adjacent area, with **separate** pages for unique occurrences of physical state, storage temperature and storage pressure. [Note: the numbering of the instructions follows the data element numbers that are on the Unified Program Consolidated Form (UPCF) pages. These data element numbers are used for electronic submission and are the same as the numbering used in Division 3, Electronic Submittal of Information.] Please number all pages of your submittal. This helps the City of Vernon Environmental Health Department identify whether the submittal is complete and if any pages are separated.

1. FACILITY ID NUMBER - This number is assigned by the City of Vernon. This is the unique number which identifies your facility.
3. BUSINESS NAME - Enter the full legal name of the business.
200. ADD/DELETE/ REVISE - Indicate if the material is being added to the inventory, deleted from the inventory, or if the information previously submitted is being revised.  
NOTE: You may choose to leave this blank if you resubmit your entire inventory annually.
201. CHEMICAL LOCATION - Enter the building or outside/ adjacent area where the hazardous material is handled. A chemical that is stored at the same pressure and temperature, in multiple locations within a building, can be reported on a single page. NOTE: This information is not subject to public disclosure pursuant to HSC §25506.
202. CHEMICAL LOCATION CONFIDENTIAL - EPCRA - All businesses which are subject to the Emergency Planning and Community Right to Know Act (EPCRA) must check "Yes" to keep chemical location information confidential. If the business does not wish to keep chemical location information confidential check "No".
203. MAP NUMBER - If a map is included, enter the number of the map on which the location of the hazardous material is shown.
204. GRID NUMBER - If grid coordinates are used, enter the grid coordinates of the map that correspond to the location of the hazardous material. If applicable, multiple grid coordinates can be listed.
205. CHEMICAL NAME - Enter the proper chemical name associated with the Chemical Abstract Service (CAS) number of the hazardous material. This should be the International Union of Pure and Applied Chemistry (IUPAC) name found on the Material Safety Data Sheet (MSDS). NOTE: If the chemical is a mixture, do not complete this field; complete the ACOMMON NAME" field instead.
206. TRADE SECRET - Check "Yes" if the information in this section is declared a trade secret, or "No" if it is not.  
State requirement: If yes, and business is not subject to EPCRA, disclosure of the designated trade secret information is bound by HSC §25511.  
Federal requirement: If yes, and business is subject to EPCRA, disclosure of the designated Trade Secret information is bound by 40 CFR and the business must submit a "Substantiation to Accompany Claims of Trade Secrecy" form (40 CFR 350.27) to USEPA.
207. COMMON NAME - Enter the common name or trade name of the hazardous material or mixture containing a hazardous material.
208. EHS - Check "Yes" if the hazardous material is an Extremely Hazardous Substance (EHS), as defined in 40 CFR, Part 355, Appendix A. If the material is a mixture containing an EHS, leave this section blank and complete the section on hazardous components below.
209. CAS # - Enter the Chemical Abstract Service (CAS) number for the hazardous material. For mixtures, enter the CAS number of the mixture if it has been assigned a number distinct from its components. If the mixture has no CAS number, leave this column blank and report the CAS numbers of the individual hazardous components in the appropriate section below.
210. FIRE CODE HAZARD CLASSES - Fire Code Hazard Classes describe to first responders the type and level of hazardous materials which a business handles. A list of the hazard classes and instructions on how to determine which class a material falls under are included in the appendices of Article 80 of the Uniform Fire Code. If a material has more than one applicable hazard class, include all. Contact the City of Vernon Environmental Health Department for guidance.
211. HAZARDOUS MATERIAL TYPE - Check the one box that best describes the type of hazardous material: pure, mixture or waste. If waste material, check only that box. If mixture or waste, complete hazardous components section.
212. RADIOACTIVE - Check "Yes" if the hazardous material is radioactive or "No" if it is not.
213. CURIES - If the hazardous material is radioactive, use this area to report the activity in curies. You may use up to nine digits with a floating decimal point to report activity in curies.
214. PHYSICAL STATE - Check the one box that best describes the state in which the hazardous material is handled: solid, liquid or gas.
215. LARGEST CONTAINER - Enter the total capacity of the largest container in which the material is stored.
216. FEDERAL HAZARD CATEGORIES - Check all categories that describe the physical and health hazards associated with the hazardous material.

<b>PHYSICAL HAZARDS</b>	<b>HEALTH HAZARDS</b>
<b>Fire:</b> Flammable Liquids and Solids, Combustible Liquids, Pyrophorics, Oxidizers	<b>Acute Health (Immediate):</b> Highly Toxic, Toxic, Irritants, Sensitizers, Corrosives, other hazardous chemicals with an adverse effect with short term exposure
<b>Reactive:</b> Unstable Reactive, Organic Peroxides, Water Reactive, Radioactive	<b>Chronic Health (Delayed):</b> Carcinogens, other hazardous chemicals with an adverse effect with long term exposure
<b>Pressure Release:</b> Explosives, Compressed Gases, Blasting Agents	

217. AVERAGE DAILY AMOUNT - Calculate the average daily amount of the hazardous material or mixture containing a hazardous material, in each building or adjacent/ outside area. Calculations shall be based on the previous year's inventory of material reported on this page. Total all daily amounts and divide by the number of days the chemical will be on site. If this is a material that has not previously been present at this location, the amount shall be the average daily amount you project to be on hand during the course of the year. This amount should be consistent with the units reported in box 221 and should not exceed that of maximum daily amount.
218. MAXIMUM DAILY AMOUNT - Enter the maximum amount of each hazardous material or mixture containing a hazardous material, which is handled in a building or adjacent/outside area at any one time over the course of the year. This amount must contain at a minimum last year's inventory of the material reported on this page, with the reflection of additions, deletions, or revisions projected for the current year. This amount should be consistent with the units reported in box 221.
219. ANNUAL WASTE AMOUNT - If the hazardous material being inventoried is a waste, provide an estimate of the annual amount handled.
220. STATE WASTE CODE - If the hazardous material is a waste, enter the appropriate California 3-digit hazardous waste code as listed on the back of the Uniform Hazardous Waste Manifest.
221. UNITS - Check the unit of measure that is most appropriate for the material being reported on this page: gallons, pounds, cubic feet or tons. NOTE: If the material is a federally defined Extremely Hazardous Substance (EHS), all amounts must be reported in pounds. If material is a mixture containing an EHS, report the units that the material is stored in (gallons, pounds, cubic feet, or tons).
222. DAYS ON SITE - List the total number of days during the year that the material is on site.
223. STORAGE CONTAINER - Check all boxes that describe the type of storage containers in which the hazardous material is stored. NOTE: If appropriate, you may choose more than one.
224. STORAGE PRESSURE - Check the one box that best describes the pressure at which the hazardous material is stored.
225. STORAGE TEMPERATURE - Check the one box that best describes the temperature at which the hazardous material is stored.
226. HAZARDOUS COMPONENTS 1-5 (% BY WEIGHT) - Enter the percentage weight of the hazardous component in a mixture. If a range of percentages is available, report the highest percentage in that range. (Report for components 2 through 5 in 230, 234, 238, and 242.)
227. HAZARDOUS COMPONENTS 1-5 NAME - When reporting a hazardous material that is a mixture, list up to five chemical names of hazardous components in that mixture by percent weight (refer to MSDS or, in the case of trade secrets, refer to manufacturer). All hazardous components in the mixture present at greater than 1% by weight if non-carcinogenic, or 0.1% by weight if carcinogenic, should be reported. If more than five hazardous components are present above these

percentages, you may attach an additional sheet of paper to capture the required information. When reporting waste mixtures, mineral and chemical composition should be listed. (Report for components 2 through 5 in 231, 235, 239, and 243.)

228. HAZARDOUS COMPONENTS 1-5 EHS - Check "Yes" if the component of the mixture is considered an Extremely Hazardous Substance as defined in 40 CFR, Part 355, or "No" if it is not. (Report for components 2 through 5 in 232, 236, 240, and 244.)

229. HAZARDOUS COMPONENTS 1-5 CAS - List the Chemical Abstract Service (CAS) numbers as related to the hazardous components in the mixture. (Repeat for 2-5.)

## **"Hazard Classes for Common Chemicals"**

### **Automotive Fluids**

1. Motor Oil, Brake Fluid, Hydraulic Oil  
Federal Hazard Categories—Fire and Chronic Health  
Fire Code Hazard Class—Combustible Liquid Class III-B and Irritant
2. Antifreeze  
Federal Hazard Categories —Acute Health  
Fire Code Hazard Class—Combustible Liquid Class III-B and Irritant
3. Gasoline  
Federal Hazard Class—Fire and Acute Health  
Fire Code Hazard Class—Flammable Liquid Class I-B, Carcinogen, and Irritant
4. Diesel Fuel  
Federal Hazard Categories —Fire and Chronic Health  
Fire Code Hazard Class—Combustible Liquid Class II and Irritant

### **Gases**

1. Acetylene  
Federal Hazard Categories —Fire, Reaction and Pressure Release  
Fire Code Hazard Class—Liquefied Flammable Gas and Unstable Reactive Class II
2. Propane  
Federal Hazard Categories —Fire and Pressure Release  
Fire Code Hazard Class—Liquefied Flammable Gas
3. Oxygen  
Federal Hazard Categories —Reaction and Pressure Release  
Fire Code Hazard Class—Oxidizing Gas
4. Nitrous Oxide  
Federal Hazard Categories —Pressure Release and Acute Health  
Fire Code Hazard Class—Oxidizing Gas-Liquefied

### **Commercial Related Products**

1. Solvent-Based Paint  
Federal Hazard Categories —Fire and Chronic Health  
Fire Code Hazard Class—Flammable Liquid Class I-B and Irritant
2. Lacquer Thinner, Paint Thinner, Brush Cleaner, Acetone, Methyl Ethyl Ketone (MEK)  
Federal Hazard Categories —Fire and Chronic Health  
Fire Code Hazard Class—Flammable Liquid Class I-B and Irritant
3. Dry Cleaning Solvent, Perchloroethylene, Tetrachloroethylene  
Federal Hazard Categories —Chronic Health  
Fire Code Hazard Class—Carcinogen and Irritant
4. Photographic Developer Solution  
Federal Hazard Categories —Chronic Health  
Fire Code Hazard Class—Toxic, Irritant, and Sensitizer
5. Photographic Fixer Solution  
Federal Hazard Categories —Chronic Health

## Fire Hazard Class—Irritant

**Uniform Fire Code Hazard Classes**

**Division 1.1, 1.2, 1.3 Explosive:** An explosive that has a Division 1.1, 1.2, or 1.3 classification as defined by the Department of Transportation (DOT) found in 49 Code of Federal Regulations, Section 173.50.

**Combustible Dust:** Dust with pulverized particles that, if mixed with air in the proper proportions, becomes explosive and may be ignited by a flame, a spark, or other source of ignition.

**Compressed Gas:** A material or mixture of materials which is a gas at 68°F (20°C) or less at 14.7 psia (101.3kPa) of pressure and has a boiling point of 68°F (20°C) or less at 14.7 psia (101.3 kPa) which is either liquefied, nonliquefied or in solution, except those gases which have no other health or physical hazard properties are not considered to be compressed until the pressure in the packaging exceeds 41 psia (292.5 kPa) at 68°F (20°C). The states of a compressed gas are categorized as follows: (a) Nonliquefied compressed gases are gases, other than those in solution, which are in a packaging under the charged pressure and are entirely gaseous at a temperature of 68°F (20°C). (b) Liquefied compressed gases are gases that, in a packaging under the charged pressure, are partially liquid at a temperature of 68°F (20°C). (c) Compressed gases in solution are nonliquefied gases that are dissolved in a solvent. (d) Compressed gas mixtures consist of a mixture of two or more compressed gases contained in a packaging, the hazard properties of which are represented by the properties of the mixture as a whole.

- **Corrosive Compressed Gas:** A compressed gas that also meets the criteria for a corrosive material.
- **Flammable Compressed Gas:** A material which is a gas at 68°F (20°C) or less at 14.7 psia (101.3 kPa) of pressure [a material has a boiling point of 68°F (20°C) or less at 14.7 psia (101.3 kPa)] which is (a) ignitable at 14.7 psia (101.3 kPa) when in a mixture of 13 percent or less by volume with air or (b) has a flammable range at 14.7 psia (101.3 kPa) with air of at least 12 percent, regardless of the lower limit. The limits specified shall be determined at 14.7 psia (101.3 kPa) of pressure and a temperature of 68°F (20°C) in accordance with nationally recognized standards.
- **Highly Toxic Compressed Gas:** A compressed gas that also meets the criteria for highly toxic material.
- **Inert Compressed Gas:** A compressed gas that exhibits no chemical activity, will not react with any other chemical, and is harmless to persons, animals, and the environment.
- **Oxidizing Compressed Gas:** A compressed gas that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases (including oxygen).
- **Toxic Compressed Gas:** A compressed gas that also meets the criteria for toxic material

**Corrosive:** 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 intact skin of albino rabbits by the method described in Appendix A of C.F.R. 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 does not refer to action on inanimate surfaces. General “rule of thumb”, pH  $\leq$  3 and  $\geq$  12. DOT Class 8 materials.

**Cryogen:** A fluid that has a normal boiling point of below 150°F. They can also be: flammable, oxidizer, corrosive, highly toxic, or nonflammable.

**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 blasting agent, that is commonly used or intended to be used for the purpose of producing an explosive effect.

**Flammable Liquid:** A liquid having a flash point below 100°F and having a vapor pressure not exceeding 40 psia at 100°F. DOT Class 3 materials.

Class I—Liquids having flash points below 100°F.

Class I-A Liquids having flash points below 73°F and having a boiling point below 100°F.

Class I-B Liquids having flash points below 73°F and having a boiling point at or above 100°F.

Class I-C Liquids having flash points at or above 73°F and below 100°F.

**Combustible Liquid:** A liquid having a flash point at or above 100°F. DOT Type 3 materials. Combustible liquids are subdivided as follows:

- **Class II**—Liquids having flash points at or above 100°F and below 140°F.
- **Class III-A** Liquids having flash points at or above 140°F and below 200°F.
- **Class III-B** Liquids having flash points at or above 200°F.

**Flammable Solid:** A solid substance, other than one which is defined as a blasting agent or explosive, that is liable to cause fire through friction or as a result of retained heat from manufacture, which has an ignition temperature below 212 degrees F., or which burns so vigorously or persistently when ignited that it creates a serious hazard. Flammable solids include solid materials which when dispersed in air as a cloud may be ignited and cause an explosion. DOT Class 4.1 materials

**Hazardous Production Material (HPM):** A solid, liquid, or gas associated with semiconductor manufacturing that has a degree-of-hazard rating in health, flammability or reactivity of Class 3 or 4 as ranked by U.F.C. Standard 79-3 and which is used directly in research, laboratory or production processes which have as their end product materials which are not hazardous.

**Highly Toxic Materials:** A material, DOT Class 6.1, which produces a lethal dose or lethal concentration that falls within any of the following categories:

- (a) A chemical that has a median lethal dose (LD50) of 50 mg/kg or less of body weight when administered orally to albino rats weighing between 200 and 300 grams.
- (b) A chemical that has a median lethal dose (LD50) of 200 mg/kg or less 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 kg each.
- (c) A chemical that has a median lethal concentration (LC50) in air of 200 ppm by volume or less of gas or vapor, or 2 mg/liter of mist, fume or dust, when administered by continuous inhalation for one hour, to albino rats weighing between 200 and 300 grams each. NOTE: If a material meets criterion ©, it also meets the definition of highly toxic material (by inhalation) and must additionally be given a hazard class code of 2 as found on page 19.

**Irritant:** A chemical that 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 skin of albino rabbits by the methods of 16 C.F.R. 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 C.F.R. 1500.42 or other approved techniques.

**Liquefied Petroleum Gas (LPG):** A material that is composed predominantly of the following hydrocarbons or mixtures of them: propane, propylene, butane (normal butane or isobutane) and butylenes.

**Organic Coating:** A liquid mixture of binders, such as alkyd, nitrocellulose, acrylic or oil and flammable and combustible solvents such as hydrocarbon, ester, ketone or alcohol, which when spread in a thin film converts to a durable protective and decorative finish.

**Organic Peroxide:** 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. Organic peroxides may present an explosive hazard (detonation or deflagration) or they may be shock sensitive. They may also decompose into various unstable compounds over an extended period of time. DOT Class 5.3 materials.

- **Class I:** Class I peroxides are capable of deflagration, but not detonation. These peroxides present a high explosion hazard through rapid decomposition. DOT Type B

- **Class II:** Class II peroxides burn very rapidly and present a severe reactivity hazard. DOT Type C

: **Class III** peroxides burn rapidly and present a moderate reactivity hazard. DOT Type D

- **Class III - Class IV:** Class IV peroxides burn in the same manner as ordinary combustibles and present a minimum reactivity hazard. DOT Types E & F
- **Class V:** Class V peroxides do not burn or present a decomposition hazard. DOT Type G

**Other Health Hazard Material (Target Organ Toxins):** A material which affects target organs of the body, including, but not limited to, those materials which produce liver damage, kidney damage, damage to the nervous system, act on the blood to decrease hemoglobin function, deprive the body tissue of oxygen, or affect reproductive capabilities, including mutations (chromosomal damage) or teratogens (effects on fetuses).

**Oxidizer:** A chemical other than a blasting agent or explosive that initiates or promotes combustion in other materials, thereby causing fire either of itself or through the release of oxygen or other gases. DOT Class 5.1 materials.

- **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. DOT Packing Group I
- **Class 3:** An oxidizer that can cause a severe increase in the burning rate of combustible material with which it comes in contact or that will undergo vigorous self-sustained decomposition due to contamination or exposure to heat. DOT Packing Group II
- **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. DOT Packing Group III
- **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.

**Pyrophoric:** A chemical that will spontaneously ignite in air at or below a temperature of 130°F.

**Radioactive Material:** A material or combination of materials that spontaneously emits ionizing radiation.

**Unsealed Source:** Any radioactive material that allows alpha, beta, or gamma emitters to be released into the atmosphere.

**Sealed Source:** Any radioactive material that is encased in equipment, instruments, or calibration devices, that does not allow the user to be exposed to the radioactive material.

**Sensitizer:** 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:** A material, DOT Class 6.1, which produces a lethal dose or a lethal concentration within any of the following categories:

- (a) A chemical or substance that has a median lethal dose (LD50) of more than 50 mg/kg but not more than 500 mg/kg 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 mg/kg but not more than 1,000 mg/kg of body weight when administered by continuous contact for 24 hours, or less if death occurs within 24 hrs., with bare skin of albino rabbits weighing between 2 and 3 kilograms each.
- (c) A chemical or substance that has a median lethal concentration (LC50) in air more than 200 ppm but not more than 2,000 ppm by volume of gas or vapor, or more than 2 mg/L but not more than 20 mg/L 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.

**Unstable (reactive) Materials:** A material, other than an explosive, which in the pure state or as commercially produced will vigorously polymerize, decompose, condense or become self-reactive and undergo other violent chemical changes, including explosion, when exposed to heat, friction or shock, or in the absence of an inhibitor or in the presence of contaminants or in contact with incompatible materials.

- **Class 4:** Materials that in themselves are readily capable of detonation or of explosive decomposition or explosive reaction at normal temperatures and pressures. This class should include materials that are sensitive to mechanical or localized thermal shock at normal temperatures and pressures.
  
- **Class 3:** 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. This degree should include materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures.
- **Class 2:** Materials that 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 1:** Materials that in themselves are normally stable but which can become unstable at elevated temperatures and pressures.

**Water-Reactive Material:** A material which explodes; violently reacts; produces flammable, toxic or other hazardous gases; or evolves enough heat to cause self-ignition of nearby combustibles upon exposure to water or moisture. DOT Class 4.3 materials.

- **Class 3:** Materials that react explosively with water without requiring heat or confinement. DOT Packing Group I
- **Class 2:** Materials that may form potentially explosive mixtures with water. DOT Packing Group II
- **Class 1:** Materials that may react with water with some release of energy but not violently. DOT Packing Group III