

AMENDATORY SECTION (Amending WSR 01-11-038, filed 5/9/01, effective 9/1/01)

WAC 296-62-054 Manufacturers, importers and distributors--Hazard communication.

Note: The requirements in this section apply only to agriculture. The general industry requirements relating to manufacturers, importers and distributors hazard communication have been moved to chapter 296-839 WAC, Content and distribution of material safety data sheets (MSDSs) and label information.

Your responsibility:

To ensure that the hazards of all chemicals produced or imported are evaluated and that information concerning their hazards is given to employers and employees.

Note: ☼ If you have employees exposed to the chemicals you produce, import or distribute, you must comply with "Chemical hazard communication rule" WAC 296-800-170.
☼ If you are an employer who relies on a material safety data sheet from the manufacturer, importer or distributor and you distribute or produce hazardous chemicals, you do not have to comply with this rule.

You must:

- ☼ Determine whether the chemicals you produce in your workplace or import are hazardous. WAC 296-62-05402
- ☼ Use this criteria in making hazard determinations. WAC 296-62-05404
- ☼ Determine whether the chemicals you produce or import are health hazards. WAC 296-62-05406
- ☼ Obtain or develop a material safety data sheet for each hazardous chemical you produce or import. WAC 296-62-05408
- ☼ Label clearly each container of hazardous chemicals that leaves your workplace. WAC 296-62-05410
- ☼ Provide material safety data sheets. WAC 296-62-05412

Application of this standard:

The Manufacturers, Importers, and Distributors Hazardous Communication Rule
DOES NOT APPLY to:

- ☼ Any hazardous waste as such term is defined by the Hazardous Waste Management Act chapter 70.105 RCW, when subject to regulations issued under that act by the department of ecology that describes specific safety, labeling, personnel training and other standards for the accumulation, handling and management of hazardous waste;
- ☼ Any hazardous waste as such term is defined by the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901 et seq.), when subject to regulations issued under that act by the Environmental Protection Agency;
- ☼ Any hazardous substance as such term is defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. 9601 et seq.), when the hazardous substance is the focus of remedial or removal action being conducted under CERCLA in accordance with Environmental Protection Agency regulations;
- ☼ Tobacco or tobacco products;
- ☼ Wood or wood products, including lumber that will not be processed, where the chemical manufacturer or importer can establish that the only hazard they pose to the employees is the potential for flammability or combustibility (wood or wood products that have been treated with hazardous chemicals covered by this standard, and wood that may be subsequently sawed or cut, generating dust, are not exempted);
- ☼ Articles are manufactured items other than a fluid or particle:
- ☼ That are formed to a specific shape or design during manufacture;
- ☼ That have end use function(s) dependent in whole or in part upon their shape or design during end use; and

☞ That under normal conditions of use do not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under the hazard determination section of this rule), and do not pose a physical hazard or health risk to employees.

☞ Food or alcoholic beverages that are sold, used, or prepared in a retail establishment (such as grocery store, restaurant, or drinking place), and foods intended for personal consumption by employees while in the workplace;

☞ Any drug, as that term is defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 et seq.), when it is in solid, final form for direct administration to the patient (e.g., tablets or pills); drugs that are packaged by the chemical manufacturer for sale to consumers in a retail establishment (e.g., over-the-counter drugs); and drugs intended for personal consumption by employees while in the workplace (e.g., first aid supplies);

☞ Cosmetics that are packaged for sale to consumers in a retail establishment, and cosmetics intended for personal consumption by employees while in the workplace;

☞ Any consumer product or hazardous substance, as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 et seq.) and Federal Hazardous Substance Act (15 U.S.C. 1261 et seq.) respectively, where the employer can show that it is used in the workplace for the purpose intended by the chemical manufacturer or importer of the product, and the use results in a duration and frequency of exposure that is not greater than the range of exposures that could reasonably be experienced by consumers when used for the purpose intended;

☞ Ionizing and nonionizing radiation; and

☞ Biological hazards.

Article means a manufactured item other than a fluid or particle:

☞ Which is formed to a specific shape or design during manufacture;

☞ Which has end use function(s) dependent in whole or in part upon its shape or design during end use; and

☞ Which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under WAC 296-62-05407), and does not pose a physical hazard or health risk to employees.

Director means the director of the department of labor and industries or his/her designee.

Chemical means any element, chemical compound or mixture of elements and/or compounds.

Chemical manufacturer means an employer with a workplace where chemical(s) are produced for use or distribution.

Chemical name means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name which will clearly identify the chemical for the purpose of conducting a hazard evaluation.

Common name means any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name.

Designated representative means any individual or organization to whom an employee gives written authorization to exercise such employee's rights under this section. A recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

Employee means an employee of an employer who is employed in the business of his or her employer whether by way of manual labor or otherwise and every person in this state who is engaged in the employment of or who is working under an independent contract the essence of which is personal labor for an employer under this standard whether by way of manual labor or

otherwise. However, for the purposes of this part, employee shall not mean immediate family members of the officers of any corporation, partnership, sole proprietorship, or other business entity or officers of any closely held corporation engaged in agricultural production of crops or livestock. This part applies to employees who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies.

Employer means any person, firm, corporation, partnership, business trust, legal representative, or other business entity that engages in any business, industry, profession, or activity in this state and employs one or more employees or who contract with one or more persons, the essence of which is the personal labor of such person or persons and includes the state, counties, cities, and all municipal corporations, public corporations, political subdivisions of the state, and charitable organizations. This part applies to employers engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a contractor or subcontractor.

Exposure or exposed means that an employee is/was subjected to a hazardous chemical in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.), and includes potential (e.g., accidental or possible) exposure.

Foreseeable emergency means any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.

Hazardous chemical means any chemical which is a physical hazard or a health hazard.

Identity means any chemical or common name which is indicated on the material safety data sheet (MSDS) for the chemical. The identity used shall permit cross-references to be made among the required list of hazardous chemicals, the label and the MSDS.

Importer means the first business within the Customs Territory of the United States which receives hazardous chemicals produced in other countries, for the purpose of supplying them to distributors or employers within the United States. This definition is the same as Webster's, therefore we did not include it in the definitions.

Material safety data sheet (MSDS) means written or printed material concerning a hazardous chemical which is prepared in accordance with WAC 296-62-05408.

Mixture means any combination of two or more chemicals if the combination is not, in whole or in part, the result of a chemical reaction.

Novelty and prior art. A trade secret may be a device or process which is patentable; but it need not be that. It may be a device or process which is clearly anticipated in the prior art or one which is merely a mechanical improvement that a good mechanic can make. Novelty and invention are not requisite for a trade secret as they are for patentability. These requirements are essential to patentability because a patent protects against unlicensed use of the patented device or process even by one who discovers it properly through independent research. The patent monopoly is a reward to the inventor. But such is not the case with a trade secret. Its protection is not based on a policy of rewarding or otherwise encouraging the development of secret processes or devices. The protection is merely against breach of faith and reprehensible means of learning another's secret. For this limited protection it is not appropriate to require also the kind of novelty and invention which is a requisite of patentability. The nature of the secret is, however, an important factor in determining the kind of relief that is appropriate against one who is subject to liability under the rule stated in this section. Thus, if the secret consists of a device or process which is a novel invention, one who acquires the secret wrongfully is ordinarily enjoined from further use of it and is required to account for the

profits derived from his past use. If, on the other hand, the secret consists of mechanical improvements that a good mechanic can make without resort to the secret, the wrongdoer's liability may be limited to damages, and an injunction against future use of the improvements made with the aid of the secret may be inappropriate.

Secrecy. The subject matter of a trade secret must be secret. Matters of public knowledge or of general knowledge in an industry cannot be appropriated by one as his secret. Matters which are completely disclosed by the goods which one markets cannot be his secret. Substantially, a trade secret is known only in the particular business in which it is used. It is not requisite that only the proprietor of the business know it. He may, without losing his protection, communicate it to employees involved in its use. He may likewise communicate it to others pledged to secrecy. Others may also know of it independently, as, for example, when they have discovered the process or formula by independent invention and are keeping it secret. Nevertheless, a substantial element of secrecy must exist, so that, except by the use of improper means, there would be difficulty in acquiring the information. An exact definition of a trade secret is not possible. Some factors to be considered in determining whether given information is one's trade secret are:

The extent to which the information is known outside of his business;

The extent to which it is known by employees and others involved in his business;

The extent of measures taken by him to guard the secrecy of the information;

The value of the information to him and his competitors;

The amount of effort or money expended by him in developing the information;

The ease or difficulty with which the information could be properly acquired or duplicated by others.

Specific chemical identity means the chemical name, Chemical Abstracts Service (CAS) registry number, or any other information that reveals the precise chemical designation of the substance.

Trade secret means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. WAC 296-62-05225 provides a legal definition of trade secret and this rule sets out the criteria to be used in evaluating trade secrets.

Use means to package, handle, react, emit, extract, generate as a by-product, or transfer.

Workplace means an establishment, job site, or project, at one geographical location containing one or more work areas.

PART C-1
RETAIN DEPARTMENT OF TRANSPORTATION LABELING

NEW SECTION

WAC 296-62-055 Retain labeling required by the department of transportation.

Your responsibility:

To make sure DOT-required labeling on packages and containers in your workplace is retained to alert employees of potentially hazardous contents.

Note: Terms used in this rule are defined by the USDOT in Title 49 of the Code of Federal Regulations (CFR) Part 171. To access the CFR visit: <http://www.dot.gov>

NEW SECTION

WAC 296-62-05510 Scope. This chapter applies to packages, freight containers, rail freight cars, motor vehicles, and transport vehicles required to be marked, placarded, or labeled by the U.S. Department of Transportation in Title 49 of the CFR, Parts 171-180.

NEW SECTION

WAC 296-62-05520 Retain readily visible DOT labeling.

You must:

- ☞ Retain readily visible DOT labeling as specified in Table 1.

Table 1 Specifications for Retaining DOT Labeling	
If you receive	Retain DOT markings, placards and labels UNTIL:
☞ Packages of hazardous materials	☞ Hazardous materials are sufficiently removed – Packaging must be ☞ cleaned of residue ☞ purged of vapors
☞ Freight containers ☞ Rail freight cars ☞ Motor vehicles ☞ Transport vehicles	☞ Hazardous materials are sufficiently removed
☞ Nonbulk packages that will not be reshipped	☞ You replace the DOT labeling with labeling that complies with WAC 296-800-170, Employer chemical hazard communication--Introduction (see the <i>Safety and Health Core Rules Book</i>)

Chapter 296-839 WAC

CONTENT AND DISTRIBUTION OF MATERIAL SAFETY DATA SHEETS (MSDSs) AND LABEL INFORMATION

NEW SECTION

WAC 296-839-100 Scope. This chapter sets minimum requirements for content and distribution of material safety data sheets (MSDSs) and labels for hazardous chemicals.

☞ This chapter applies when you do **one or more** of the following:

- Import, produce, or repackage chemicals, including manufactured items (such as bricks, welding rods, and sheet metal) that are not exempt as articles
- Sell or distribute hazardous chemicals to manufacturers, distributors or employers
- Choose to develop material safety data sheets (MSDSs) for a product you do not import or manufacture.

Reference:

See WAC 296-800-170, the Employer chemical hazard communication rule, for MSDSs, label, and other requirements that apply when hazardous chemicals are used in your workplace.

Note: ☞ Use Table 2 to determine which sections in this chapter apply to your workplace.

Exemptions:

☞ All of the following are **always** exempt from this chapter:

- Ionizing and nonionizing radiation
- Biological hazards
- Tobacco and tobacco products

☞ The chemicals and items listed in Table 1 are exempt from this chapter **under the conditions specified.**

Table 1 Conditional Exemptions from this Chapter	
This chapter does NOT apply to	When
☞ Alcoholic beverages OR ☞ Foods	☞ Sold, used, or prepared in a retail establishment (such as a grocery store, restaurant, bar, or tavern)
☞ An article (manufactured item)	☞ It is not a fluid or particle AND ☞ It is formed to a specific shape or design during manufacture for a particular end use function ¹ AND ☞ It releases only trace amounts of a hazardous chemical during normal use AND does not pose a physical or health risk to employees

<ul style="list-style-type: none"> ☛ Consumer products <ul style="list-style-type: none"> – Produced or distributed for sale meeting the definition of "consumer products" in the Consumer Product Safety Act (see U.S. Code, Title 15, Chapter 47, section 2052²) <p>OR</p> <ul style="list-style-type: none"> ☛ Hazardous household products <ul style="list-style-type: none"> – Meeting the definition of "hazardous substances" in the Federal Hazardous Substance Act (see U.S. Code, Title 15, Chapter 30, section 1261²) 	<ul style="list-style-type: none"> ☛ Both criteria apply: <ul style="list-style-type: none"> – They are used in the workplace for the same purpose as intended by the manufacturer or importer – The duration and frequency of an employee's exposure is no more than the range of exposures that consumers might reasonably experience
<ul style="list-style-type: none"> ☛ Cosmetics 	<ul style="list-style-type: none"> ☛ Packaged and sold in retail establishments
<ul style="list-style-type: none"> ☛ Drugs <ul style="list-style-type: none"> – Meeting the definition for "drugs" in the Federal Food, Drug, and Cosmetic Act (see U.S. Code, Title 21, Chapter 9, Subchapter II, section 321²) 	<ul style="list-style-type: none"> ☛ In solid, final form (for example, tablets, or pills) for direct administration to the patient <p>OR</p> <ul style="list-style-type: none"> ☛ Packaged and sold in retail establishments (for example, over-the-counter drugs) <p>OR</p> <ul style="list-style-type: none"> ☛ Intended for employee consumption while in the workplace (for example, first-aid supplies)
<ul style="list-style-type: none"> ☛ Hazardous solid wastes <ul style="list-style-type: none"> – Meeting the definition of "hazardous wastes" in the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (see U.S. Code, Title 42, Chapter 82, Subchapter I, section 6903²) 	<ul style="list-style-type: none"> ☛ Subject to the United States Environmental Protection Agency (EPA) regulations³
<ul style="list-style-type: none"> ☛ Hazardous substances <ul style="list-style-type: none"> – Released into the environment, meeting the definition of "hazardous substances" in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (see U.S. Code, Title 42, Chapter 103, Subchapter I, section 9601²) 	<ul style="list-style-type: none"> ☛ They are the focus of remedial or removal action being conducted under CERCLA in accordance with EPA regulations (Title 40 of the Code of Federal Regulations (CFR)³)
<ul style="list-style-type: none"> ☛ Hazardous wastes <ul style="list-style-type: none"> – Meeting the definition of "dangerous wastes" in the Hazardous Waste Management Act (see chapter 70.105 RCW⁴) 	<ul style="list-style-type: none"> ☛ Subject to department of ecology regulations, chapter 173-303 WAC⁵, that address the accumulation, handling and management of hazardous waste, and describe all of the following: <ul style="list-style-type: none"> – Safety – Labeling – Personnel training – And other related requirements
<ul style="list-style-type: none"> ☛ Solid wood <p>OR</p> <ul style="list-style-type: none"> ☛ Wood products (for example, lumber, and paper) 	<ul style="list-style-type: none"> ☛ All of the following apply <ul style="list-style-type: none"> – The material is not treated with hazardous chemicals – The only hazard is potential flammability or combustibility – The product is not expected to be processed (for example, by sanding or sawing)

¹End use is dependent in whole, or in part, upon maintaining the item's original shape or design. If the item will be significantly altered from its original form, it can no longer be considered a manufactured item

²This federal act is included in the United States Code. See <http://www.access.gpo.gov/uscode/uscmmain.html>

³EPA regulations are included in the Code of Federal Regulations (CFR). See <http://www.epa.gov>

⁴This state act is included in the Revised Code of Washington (RCW). The RCW compiles all permanent laws of the state. See <http://www.leg.wa.gov/wsladm/default.htm>

⁵See <http://www.ecy.wa.gov>

Use Table 2 to find out which sections of this chapter apply to you. For example, if you import **AND** sell hazardous chemicals **ALL** sections apply.

WAC 296-839-500 applies to all employers covered by the scope of this chapter.

TABLE 2				
Section Application				
If you	Then the sections marked with an "X" apply			
	20005 - 20010	30005	30010 - 30015	40005
☞ Import or produce chemicals	X	X		
☞ Sell or distribute hazardous chemicals to – Manufacturers OR – Distributors OR – Employers (includes retail or wholesale transactions)			X	X
☞ Choose to develop MSDSs for a product you do not import or manufacture	X	X		

NEW SECTION

WAC 296-839-200 Hazard evaluation.

Your responsibility:

To make sure the hazardous chemicals are identified.

You must:

Conduct complete hazard evaluations

WAC 296-839-20005

Provide access to hazard evaluation procedures

WAC 296-839-20010.

NEW SECTION

WAC 296-839-20005 Conduct complete hazard evaluations. Important:

☞ Hazard evaluation is a process where hazards of chemicals are identified by reviewing available research or testing information. You are not required to perform your own laboratory research or testing to meet the requirements of this section

– Information from hazard evaluations is used to complete material safety data sheets (MSDSs) and labels

– MSDSs from your suppliers may be used to complete the hazard evaluation for chemicals you produce

– MSDSs and labels are **NOT** required for chemicals that are determined to be nonhazardous

☞ Importers and manufacturers are required to develop MSDSs. If you choose to develop MSDSs for a product you do not import or manufacture, then this chapter also applies to you.

You must:

(1) Describe in writing your procedures for conducting hazard

evaluations.

(2) Conduct a complete hazard evaluation for **ALL** chemicals you produce or import to determine if they are hazardous chemicals.

☞ Identify and consider available scientific evidence of health and physical hazards

☞ Evidence that meets the criteria in Table 3 must be used to establish a hazard

☞ Chemicals identified in a Table 4 source must be regarded as hazardous

☞ The scope of health hazards considered must include the categories in Tables 5 and 6

☞ If the chemical is a mixture, follow the additional criteria in Table 7.

If you find evidence that meets the criteria in Table 3, use it in your hazard evaluation.

Table 3 Criteria for Hazard Evidence	
Hazard	Criteria
☞ Health hazard	☞ Where available, use human case reports of health effects AND ☞ One or more studies that <ul style="list-style-type: none"> – Are based on human populations, if available, and animal populations^{1,2} AND <ul style="list-style-type: none"> – Report statistically significant conclusions of a hazardous effect or health hazard (as defined in this rule) AND <ul style="list-style-type: none"> – Have been conducted following established scientific principles
☞ Physical hazard	☞ Valid evidence that shows a chemical is any one of the following ³ : <ul style="list-style-type: none"> – A combustible liquid – A compressed gas – Explosive – Flammable – An organic peroxide – An oxidizer – Pyrophoric – Unstable (reactive) – Water-reactive

¹ If human data is not available, use results of tests done on animals and other available studies to predict health effects on employees (for example, effects resulting from short and long-term exposures to chemicals).

² In vitro studies alone do not generally form the basis of a finding of hazard.

³ These terms are defined in WAC 296-839-500.

Chemicals identified in the sources listed in Table 4 must be assumed to be hazardous (including carcinogens and potential carcinogens).

Table 4 Information Sources Identifying Hazardous Chemicals

- ☛ Sources that address a broad range of hazard categories:
 - Chapter 296-62 WAC, General Occupational Health Standards, WISHA
 - 29 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA)
 - *Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment*, American Conference of Governmental Industrial Hygienists (ACGIH) (latest edition).
 - ☛ Sources that identify carcinogens or potential carcinogens:
 - Chapter 296-62 WAC, General Occupational Health Standards, WISHA
 - 29 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA)
 - National Toxicology Program (NTP), Annual Report on Carcinogens (latest edition)
 - International Agency for Research on Cancer (IARC) Monographs (latest editions).
- Note:** The *Registry of Toxic Effects of Chemical Substances* is published by the National Institute for Occupational Safety and Health (NIOSH) and identifies chemicals found to be potential carcinogens by the NTP and IARC.

Chemicals meeting Table 5 definitions, along with the criteria for established evidence in Table 3, must be regarded as hazardous.

Table 5 is NOT intended to present all hazard categories or test methods. Available scientific data involving other test methods and animal species must also be evaluated to determine a chemical's hazards.

Table 5 Standard Health Hazard Categories	
A chemical is considered to be	If
☛ A carcinogen	☛ The International Agency for Research on Cancer (IARC) considers it to be a carcinogen or potential carcinogen OR ☛ The National Toxicity Program (NTP) (latest edition) lists it as a carcinogen or potential carcinogen OR ☛ It is regulated by WISHA or OSHA as a carcinogen
☛ Corrosive	☛ It causes visible destruction of, or irreversible alterations in, living tissue (not inanimate surfaces) by chemical action at the site of contact Example: – A chemical is corrosive if tested on the intact skin of albino rabbits by a method described by the U.S. Department of Transportation (in Appendix A to 49 CFR Part 173) and it destroys or changes (irreversibly) the structure of the tissue at the contact site after a four-hour exposure period

<p>☛ Toxic</p>	<p>☛ It has a median lethal dose (LD50) greater than 50 milligrams per kilogram, but no more than 500 milligrams per kilogram of body weight, when administered orally to albino rats weighing between 200 - 300 grams each.</p> <p>OR</p> <p>☛ It has a median lethal dose (LD50) greater than 200 milligrams per kilogram, but not more than 1,000 milligrams per kilogram, of body weight when administered by continuous contact for twenty-four hours (or less if death occurs within twenty-four hours) with the bare skin of albino rabbits weighing between 2 - 3 kilograms each</p> <p>OR</p> <p>☛ It has a median lethal concentration (LC50), in air:</p> <ul style="list-style-type: none"> – Greater than 200 parts per million, but not more than 2,000 parts per million (by volume of gas or vapor) <p>OR</p> <ul style="list-style-type: none"> – Greater than 2 milligrams per liter, but not more than 20 milligrams per liter, 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 - 300 grams each
<p>☛ Highly toxic</p>	<p>☛ It 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 - 300 grams each</p> <p>OR</p> <p>☛ It has a median lethal dose (LD50) of 200 milligrams, or less, per kilogram of body weight when administered by continuous contact for twenty-four hours (or less if death occurs within twenty-four hours) with the bare skin of albino rabbits weighing between 2 - 3 kilograms each</p> <p>OR</p> <p>☛ It has a median lethal concentration of (LC50), in air, of:</p> <ul style="list-style-type: none"> – 200 parts per million (by volume), or less, of gas or vapor <p>OR</p> <ul style="list-style-type: none"> – 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 - 300 grams each

<p>☞ An irritant</p>	<p>☞ It is NOT corrosive, but causes a reversible inflammatory effect on living tissue by chemical action at the contact site</p> <p>Examples:</p> <ul style="list-style-type: none"> – The chemical is a skin irritant 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) and the exposure results in an empirical score of five or more – A chemical is an eye irritant if so determined under the procedure listed in 16 CFR 1500.42 or other appropriate techniques
<p>☞ A sensitizer</p>	<p>☞ It causes a substantial proportion of exposed people or animals to develop an allergic reaction in normal tissue after repeated exposure</p>

Categories provided in Table 6 illustrate the broad range of target organ effects that must be considered when conducting hazard evaluations. Chemicals meeting Table 6 definitions, along with the criteria for established evidence in Table 3, must be regarded as hazardous.

Examples provided in Table 6 are **NOT** intended to be a complete list.

Category	Definition	Examples of Signs and Symptoms	Examples of Chemicals
Hepatotoxins	Cause liver damage	☞ Jaundice ☞ Liver enlargement	☞ Carbon tetrachloride ☞ Nitrosamines
Nephrotoxins	Cause kidney damage	☞ Edema ☞ Proteinuria	☞ Halogenated hydrocarbons ☞ Cadmium
Neurotoxins	Cause primary toxic effects on the nervous system	☞ Narcosis ☞ Behavioral changes ☞ Decrease in motor functions	☞ Mercury ☞ Carbon disulfide ☞ Lead
☞ Chemicals that act on the Blood OR ☞ Hematopoietic (blood forming) system	☞ Decrease hemoglobin function OR ☞ Deprive the body tissues of oxygen	☞ Cyanosis ☞ Loss of consciousness	☞ Carbon monoxide ☞ Cyanides ☞ Benzene
☞ Chemicals that damage the lungs	☞ Irritate lungs OR ☞ Damage pulmonary tissue	☞ Cough ☞ Tightness in chest ☞ Shortness of breath	☞ Silica ☞ Asbestos
☞ Reproductive toxins	Affect reproductive capabilities, including: ☞ Chromosomal damage (mutation) ☞ Effects on fetuses (teratogenesis)	☞ Birth defects ☞ Sterility	☞ Lead ☞ 1,2-Dibromo -3-chloropropane (DBCP) ☞ Nitrous Oxide

Cutaneous (skin) hazards	Affect the dermal layer of the body	☹ Defatting of the skin ☹ Rashes ☹ Irritation	☹ Ketones ☹ Chlorinated compounds
Eye hazards	Affect the eye or ability to see	☹ Conjunctivitis ☹ Corneal damage	☹ Organic solvents ☹ Acids

Table 7 Criteria for Evaluating Chemical Mixtures	
If a mixture	Then
☹ Has been thoroughly tested as a whole for a physical or health hazard	☹ You must use those results
☹ Has NOT been tested as a whole for a health hazard	☹ You must: – Evaluate EACH ingredient in the mixture to determine the hazards – Consider the mixture to have the same hazard as each ingredient determined to be hazardous
☹ Has NOT been tested as a whole for physical hazards	☹ You must: ☹ Use any scientifically valid data available to evaluate the potential physical hazards of the mixture

NEW SECTION

WAC 296-839-20010 Provide access to hazard evaluation procedures.

You must:

- ☹ Provide access to your written hazard evaluation procedures when requested by any of the following:
 - Employees
 - Designated representatives of employees
 - Representatives of the department of labor and industries
 - Representatives of the National Institute for Occupational Safety and Health (NIOSH).

NEW SECTION

WAC 296-839-300 Material safety data sheets.

Your responsibility:

To provide complete and accurate material safety data sheets (MSDSs).

You must:

- Develop or obtain MSDSs
- WAC 296-839-30005
- Provide MSDSs
- WAC 296-839-30010
- Follow-up if an MSDS is not provided
- WAC 296-839-30015.

NEW SECTION

WAC 296-839-30005 Develop or obtain material safety data sheets (MSDSs).

You must:

☞ Develop or obtain a complete and accurate material safety data sheet (MSDS) for each hazardous chemical or mixture according to **ALL** of the following:

- **ALL** information in Table 8 must be completed. If there is no relevant information for a required item, this must be noted. Blank spaces are not permitted.

Note: ☞ No specific format is required for MSDSs; however, an example format (OSHA form 174) can be found online at <http://www.osha.gov>

☞ One MSDS can be developed for a group of complex mixtures (for example, jet fuels or crude oil) **IF** the health and physical hazards of the mixtures are similar (the amounts of chemicals in the mixture may vary).

- Content of MSDSs must accurately represent the available scientific evidence.

Note: You may report results of scientifically valid studies that tend to refute findings of hazards.

- MSDSs must be in English.

Note: You may develop copies of MSDSs in other languages.

You must:

☞ Revise an MSDS when you become aware of new and significant information regarding the hazards of a chemical, or how to protect against the hazards

- Within three months after you first become aware of the information
OR

- Before the chemical is reintroduced into the workplace if the chemical is no longer being used, produced or imported.

Table 8 Information Required on MSDSs	
☞	The chemical's identity as it appears on the label
☞	The date the MSDS was prepared or updated
☞	A contact for additional information about the hazardous chemical and appropriate emergency procedures Include all of the following: <ul style="list-style-type: none"> - Name - Address - Telephone number of the responsible party preparing or distributing the MSDS
☞	The chemical's hazardous ingredients ¹ as determined by your hazard evaluation <ul style="list-style-type: none"> - For a single substance chemical, include the chemical and common name(s) of the substance - For mixtures tested as a whole <ul style="list-style-type: none"> Ⓢ Include the common name(s) of the mixture AND Ⓢ List the chemical and common name(s) of ingredients that contribute to the known hazards - For mixtures NOT tested as a whole, list the chemical and common name(s) of hazardous ingredients <ul style="list-style-type: none"> Ⓢ That make up 1% or more of the mixture, by weight or volume, including carcinogens (if <p>0.1% concentration or more, by weight or volume)</p> <ul style="list-style-type: none"> - If ingredients are less than the above concentrations but may present a health risk to employees (for example, allergic reaction or exposure could exceed the permissible exposure limits, or PEL) they must be listed here

<ul style="list-style-type: none"> ☛ Exposure limits for airborne concentrations. Include ALL of the following, when they exist: <ul style="list-style-type: none"> – WISHA or OSHA PELs² <ul style="list-style-type: none"> ☑ The 8-hour time weighted average (TWA) ☑ The short-term exposure limit (STEL), if available ☑ Ceiling values, if available – Threshold limit values (TLVs) including 8-hour TWAs, STELs, and ceiling values – Other exposure limits used or recommended by the employer preparing the MSDS
<ul style="list-style-type: none"> ☛ Physical and chemical characteristics <ul style="list-style-type: none"> – For example, boiling point, vapor pressure, and odor
<ul style="list-style-type: none"> ☛ Fire, explosion data, and related information <ul style="list-style-type: none"> – For example, flashpoint, flammable and explosion limits, extinguishing media, and unusual fire or explosion hazards
<ul style="list-style-type: none"> ☛ Physical hazards of the chemical including reactivity information <ul style="list-style-type: none"> – For example, incompatibilities, decomposition products, by-products, and conditions to avoid
<ul style="list-style-type: none"> ☛ Health hazard information including ALL of the following: <ul style="list-style-type: none"> – Primary routes of exposure <ul style="list-style-type: none"> ☑ For example, inhalation, ingestion, and skin absorption or other contact³ – Health effects (or hazards) associated with: <ul style="list-style-type: none"> ☑ Short-term exposure⁴ AND ☑ Long-term exposure⁴ – Whether the chemical is listed or described as a carcinogen or potential carcinogen in the latest editions of each of the following: <ul style="list-style-type: none"> ☑ The National Toxicology Program (NTP) Annual Report on Carcinogens OR ☑ The International Agency for Research on Cancer (IARC) Monographs as a potential carcinogen OR ☑ WISHA or OSHA rules – Signs and symptoms of exposure⁵ – Medical conditions generally recognized as being aggravated by exposure
<ul style="list-style-type: none"> ☛ Emergency and first-aid procedures
<ul style="list-style-type: none"> ☛ Generally applicable precautions for safe handling and use known to the employer preparing the MSDS <ul style="list-style-type: none"> – For example, appropriate procedures for clean-up of spills and leaks, waste disposal method, precautions during handling and storing
<ul style="list-style-type: none"> ☛ Generally applicable and appropriate control measures known to the employer preparing the MSDS, including ALL of the following: <ul style="list-style-type: none"> – Engineering controls (for example, general or local exhaust ventilation) – Work practices – Personal protective equipment (PPE) – Personal hygiene practices – Protective measures during repair and maintenance of contaminated equipment

¹The identities of some chemicals may be protected as trade secret information (see chapter 296-62 WAC, Part B-1, Trade secrets).

² WISHA PEL categories are defined, and values are provided, in chapter 296-62 WAC, Part H.

³ A "skin notation" listed with either an ACGIH TLV or WISHA/OSHA PEL indicates that skin absorption is a primary route of exposure.

⁴Examples of:

☛ Short-term health effects (or hazards) include eye irritation, skin damage caused by contact with corrosives, narcosis, sensitization, and lethal dose.

☛ Long-term health effects (or hazards) include cancer, liver degeneration, and silicosis.

⁵Signs and symptoms of exposure to hazardous substances include those that:

☛ Can be measured such as decreased pulmonary function

AND

☛ Are subjective such as feeling short of breath.

NEW SECTION

WAC 296-839-30010 Provide MSDSs for products shipped, transferred or sold over-the-counter.

You must:

☛ Provide the correct MSDS to manufacturers, distributors and employers:

- With the initial shipment or transfer of the product

AND

- With the first shipment or transfer after an MSDS is updated

AND

- Whenever one is requested.

Note: ☛ MSDSs may be provided separately from containers as long as they are provided before or at the same time as the containers. For example, you may fax, or e-mail the MSDS.

☛ You are **NOT** required to provide MSDSs to retailers who inform you they

- Do not sell the product to commercial accounts

AND

- Do not open the sealed product containers for use in their workplace.

You must:

☛ Follow the requirements in Table 9 for chemicals sold over-the-counter.

Table 9 Requirements for Chemicals Sold Over-the-Counter (NOT Shipped)	
If you are a	Then
☛ Retail distributor WITH commercial accounts	☛ Provide an MSDS to employers with commercial accounts when requested AND ☛ Post a sign, or otherwise inform employers, that MSDSs are available
☛ Retail distributor WITHOUT commercial accounts	☛ Provide the employer, when requested, with ALL of the following: - Name - Address - Telephone number of the chemical manufacturer, importer, or distributor who can provide an MSDS
☛ Wholesale distributor selling products over-the-counter to employers	☛ Provide an MSDS to employers with commercial accounts when requested AND ☛ Post a sign, or otherwise inform employers, that MSDSs are available

NEW SECTION

WAC 296-839-30015 Follow-up if an MSDS is not provided.

You must:

☛ Obtain an MSDS from the chemical manufacturer, distributor or importer as soon as possible, if an MSDS is not provided for a shipment labeled as a hazardous chemical.

NEW SECTION

WAC 296-839-400 Labeling.

Your responsibility:

To provide employers with containers of hazardous chemicals that are properly labeled.

NEW SECTION

WAC 296-839-40005 Label containers of hazardous chemicals.

Exemption:

Containers are exempt from this section if **ALL** hazardous contents are listed in Table 11.

You must:

- ☛ Make sure every container of hazardous chemicals leaving the workplace is properly labeled. This includes **ALL** of the following:
 - The identity of the hazardous chemical (the chemical or common name) that matches the identity used on the MSDS
 - An appropriate hazard warning
 - The name and address of the chemical manufacturer, importer, or other responsible party
 - Make sure labeling does not conflict with the requirements of:
 - ☉ The Hazardous Materials Transportation Act (49 U.S.C. 1801 et seq.)

AND

- ☉ Regulations issued under the act by the U.S. Department of Transportation (Title 49 of the Code of Federal Regulations, Parts 171 through 180). See <http://www.dot.gov>
 - Revise labels within three months of becoming aware of new and significant information about chemical hazards
 - Provide revised labels on containers beginning with the first shipment after a revision, to manufacturers, distributors or employers
 - Revise the label when a chemical is not currently used, produced or imported, before:

- ☉ You resume shipping (or transferring) the chemical

OR

- ☉ The chemical is reintroduced in the workplace
 - Label information
 - ☉ Clearly written in English

AND

- ☉ Prominently displayed on the container

Reference:

Additional labeling requirements for specific hazardous chemicals (for example, asbestos, cadmium, and formaldehyde) are found in chapter 296-62 WAC, General occupational health standards (see parts F, G, I and I-1 of that chapter).

Note: When the conditions specified in Table 10 are met for the solid material products listed you are not required to provide labels for every shipment.

Table 10 Labeling for Solid Materials

You need only send labels with the first shipment, IF the product is	And
Whole grain	<ul style="list-style-type: none"> ☞ It is shipped to the same customer AND ☞ No hazardous chemicals are part of or known to be present with the product which could expose employees during handling <ul style="list-style-type: none"> – For example, cutting fluids on solid metal, and pesticides with grain
Solid untreated wood	
Solid metal For example: Steel beams, metal castings	
Plastic items	

Exemptions:

The chemicals (and items) listed in Table 11 are **EXEMPT** from **THIS SECTION** under the conditions specified. Requirements in other sections still apply.

Table 11 Conditional Label Exemptions	
This section does not apply to	When the product is
<ul style="list-style-type: none"> ☞ Pesticides <ul style="list-style-type: none"> – Meeting the definition of "pesticides" in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (see Title 7, U.S.C. Chapter 6, Subchapter II, section 136¹) 	<ul style="list-style-type: none"> ☞ Subject to <ul style="list-style-type: none"> – Labeling requirements of FIFRA¹ AND – Labeling regulations issued under FIFRA by the United States Environmental Protection Agency (EPA) (see Title 40 of the Code of Federal Regulations²)
<ul style="list-style-type: none"> ☞ A chemical substance or mixture <ul style="list-style-type: none"> – Meeting the definition of "chemical substance" or "mixture" in the Toxic Substance Control Act (TSCA) (see Title 15 U.S.C. Chapter 53, Subchapter II, Section 2602¹) 	<ul style="list-style-type: none"> ☞ Subject to <ul style="list-style-type: none"> – Labeling requirements of TSCA¹ AND – Labeling requirements issued under TSCA by the EPA (see Title 40 of the Code of Federal Regulations²)

<p>☞ Each of the following:</p> <ul style="list-style-type: none"> – Food – Food additives – Color additives – Drugs – Cosmetics – Medical devices or products – Veterinary devices or products – Materials intended for use in these products <p>(for example: Flavors, and fragrances)</p> <p>☞ As defined in</p> <ul style="list-style-type: none"> – The Federal Food, Drug, and Cosmetic Act (see Title 21 U.S.C. Chapter 9, Subchapter II, Section 321¹) <p>OR</p> <ul style="list-style-type: none"> – Or the Virus-Serum Toxin Act of 1913 (see Title 21 U.S.C. Chapter 5, Section 151 et seq.¹) <p>OR</p> <ul style="list-style-type: none"> – Regulations issued under these acts (see Title 21 Part 101 in the Code of Federal Regulations, and Title 9, in the Code of Federal Regulations³) 	<p>☞ Subject to:</p> <ul style="list-style-type: none"> – Labeling requirements in Federal Food, Drug, and Cosmetic Act, Virus-Serum Toxin Act of 1913, and issued regulations enforced by the United States <p>☞ Food and Drug Administration (see Title 21 Federal Parts 101-180 in the Code of Federal Regulations³)</p> <p>OR</p> <p>☞ Department of Agriculture (see Title 9, in the Code of Federal Regulations³)</p>
<p>☞ Each of the following:</p> <ul style="list-style-type: none"> – Distilled spirits (beverage alcohols) <p>AND</p> <ul style="list-style-type: none"> – Wine <p>AND</p> <ul style="list-style-type: none"> – Malt beverage <p>☞ As defined in</p> <ul style="list-style-type: none"> – The Federal Alcohol Administration Act (see Title 27 U.S.C. Section 201¹) <p>AND</p> <ul style="list-style-type: none"> – Regulations issued under this act (see Title 27 in the Code of Federal Regulations)³ 	<p>☞ Subject to:</p> <ul style="list-style-type: none"> – Labeling requirements of Federal Alcohol Administration Act¹ <p>AND</p> <ul style="list-style-type: none"> – Labeling regulations issued under Federal Alcohol Administration Act by the Bureau of Alcohol, Tobacco, and Firearms (see Title 27 in the Code of Federal Regulations³)
<p>☞ Consumer products</p> <p>AND</p> <p>☞ Hazardous substances</p> <ul style="list-style-type: none"> – As defined in <ul style="list-style-type: none"> ☞ The Consumer Product Safety Act (see 15 U.S.C. 2051 et seq.¹) <p>AND</p> <ul style="list-style-type: none"> ☞ The Federal Hazardous Substances Act (see 15 U.S.C. 1261 et seq.¹) 	<p>☞ Subject to:</p> <ul style="list-style-type: none"> – A consumer product safety or labeling requirement of the Consumer Product Safety Act or Federal Hazardous Substances Act¹ <p>OR</p> <ul style="list-style-type: none"> – Regulations issued under these acts by the Consumer Product Safety Commission (see Title 16 in the Code of Federal Regulations³)
<p>☞ Agricultural seed</p> <p>AND</p> <p>☞ Vegetable seed treated with pesticides</p>	<p>☞ Labeled as required by</p> <ul style="list-style-type: none"> – The Federal Seed Act (see Title 7 U.S.C. Chapter 37 Section 1551 et seq.¹) <p>AND</p> <ul style="list-style-type: none"> – Labeling requirements issued under Federal Seed Act by the United States Department of Agriculture¹

¹This federal act is included in the United States Code. See <http://www.access.gpo.gov/uscode/uscmmain.html>

²See <http://www.epa.gov>

³See <http://www.access.gpo.gov/nara/cfr/index.html>

NEW SECTION

WAC 296-839-500 Definitions. The following definitions apply to this chapter:

Article (manufactured item)

A manufactured item that

☛ Is not a fluid or particle

AND

☛ Is formed to a specific shape or design during manufacture for a particular end use function

AND

☛ Releases only trace amounts of a hazardous chemical during normal use and does not pose a physical or health risk to employees.

Chemical

☛ An element or mixture of elements

OR

☛ A compound or mixture of compounds

OR

☛ A mixture of elements and compounds

Included are manufactured items (such as bricks, welding rods and sheet metal) that are not exempt as an article.

Chemical name

☛ The scientific designation of a chemical developed by the

- International union of pure and applied chemistry (IUPAC)

OR

- Chemical abstracts service (CAS) rules of nomenclature

OR

☛ A name that clearly identifies the chemical for the purpose of conducting a hazard evaluation.

Combustible liquid

Liquids with a flashpoint of at least 100°F (37.8°C) and below 200°F (93.3°C). A mixture with at least 99% of its components having flashpoints of 200°F (93.3°C), or higher, is not considered a combustible liquid.

Commercial account

An arrangement where a retailer is selling hazardous chemicals to an employer

☛ Generally in large quantities over time

OR

☛ At costs below regular retail price.

Common name

Any designation or identification used to identify a chemical other than the chemical name, such as a

☛ Code name or number

OR

☛ Trade or brand name

OR

☛ Generic name.

Compressed gas

☛ A contained gas or mixture of gases with an absolute pressure greater than:

- 40 psi at 70°F (21.1°C)

OR

- 104 psi at 130°F (54.4°C) regardless of the pressure at 70°F

(21.1°C)

OR

A liquid with a vapor pressure greater than 40 psi at 100°F (37.8°C), as determined by ASTM D323-72.

Container

A vessel, other than a pipe or piping system, that holds a hazardous chemical. Examples include:

- Bags
- Barrels
- Bottles
- Boxes
- Cans
- Cylinders
- Drums
- Reaction vessels
- Storage tanks
- Rail cars.

Designated representative

An individual or organization with written authorization from an employee

OR

A recognized or certified collective bargaining agent (not necessarily authorized by an employee)

OR

A legal representative of a deceased or legally incapacitated employee.

Distributor

A business that supplies hazardous chemicals to other employers. Included are employers who conduct retail and wholesale transactions.

Explosive

A chemical that causes a sudden, almost instant release of pressure, gas, and heat when exposed to a sudden shock, pressure, or high temperature.

Flammable

A chemical in one of the following categories:

• Aerosols that, when tested using a method described in 16 CFR 1500.45, yield either a:

- Flame projection of more than eighteen inches at full valve opening

OR

- A flashback (a flame extending back to the valve) at any degree of valve opening

• Gases that, at the temperature and pressure of the surrounding area, form a:

- Flammable mixture with air at a concentration of thirteen percent, by volume, or less

OR

- Range of flammable mixtures with air wider than twelve percent, by volume, regardless of the lower limit

• Liquids with a flashpoint below 100°F (37.8°C). A mixture with at least ninety-nine percent of its components having flashpoints of 100°F (37.8°C), or higher, is not considered a flammable liquid

• Solids, other than blasting agents or explosives, as defined in WAC 296-52-417 or 29 CFR 1910.109(a), that:

- Is likely to cause fire through friction, moisture, absorption, spontaneous chemical change or retained heat from manufacturing or processing

OR

- That can be readily ignited (and when ignited burns so vigorously and persistently that it creates a serious hazard)

OR

- When tested by the method described in 16 CFR 1500.44, ignite and

burn with a self-sustained flame at a rate greater than 1/10th of an inch per second along its major axis.

Flashpoint

The minimum temperature at which a liquid gives off an ignitable concentration of vapor, when tested by any of the following measurement methods:

☞ Tagliabue closed tester. Use this for liquids with a viscosity less than, 45 Saybolt Universal Seconds (SUS) at 100°F (37.8°C), that do not contain suspended solids and do not tend to form a surface film under test. See American National Standard Method of Test for Flashpoint by Tag Closed Tester, Z11.24-1979 (ASTM D 56-79)

☞ Pensky-Martens closed tester. Use this for liquids with a viscosity equal to, or greater than, 45 SUS at 100°F (37.8°C) or for liquids that contain suspended solids or have a tendency to form a surface film under test. See American National Standard Method of Test for Flashpoint by Pensky-Martens Closed Tester, Z11.7-1979 (ASTM D 93-79)

☞ Setaflash closed tester. See American National Standard Method of Test for Flashpoint by Setaflash Closed Tester (ASTM D 3278-78)

Organic peroxides, which undergo auto accelerating thermal decomposition, are excluded from any of the flashpoint measurement methods specified above.

Hazardous chemical

A chemical, which is a physical or health hazard.

Hazard warning

Words, pictures or symbols (alone or in combination) that appear on labels (or other forms of warning such as placards or tags) that communicate specific physical and health hazards (including target organ effects) associated with chemicals in a container.

Health hazard

A chemical that may cause health effects in short or long-term exposed employees based on statistically significant evidence from a single study conducted by using established scientific principles.

Health hazards include, but are not limited to, any of the following:

- ☞ Carcinogens
- ☞ Toxic or highly toxic substances
- ☞ Reproductive toxins
- ☞ Irritants
- ☞ Corrosives
- ☞ Sensitizers
- ☞ Hepatotoxins (liver toxins)
- ☞ Nephrotoxins (kidney toxins)
- ☞ Neurotoxins (nervous system toxins)
- ☞ Substances that act on the hematopoietic system (blood or blood forming system)

☞ Substances that can damage the lungs, skin, eyes, or mucous membranes.

Identity

A chemical or common name listed on the material safety data sheet (MSDS) and label.

Importer

The first business, within the Customs Territory of the United States, that receives hazardous chemicals produced in other countries and supplies them to manufacturers, distributors or employers within the United States.

Label

Written, printed, or graphic material displayed on, or attached to, a container of hazardous chemicals.

Manufacturer

An employer with a workplace where one or more chemicals (including items not exempt as "articles," see Table 1 in this chapter) are produced for

use or distribution.

Material safety data sheet (MSDS)

Written, printed or electronic information (on paper, microfiche, or on-screen) that informs manufacturers, distributors or employers about the chemical, its hazards and protective measures as required by this rule.

Mixture

A combination of two or more chemicals that retain their chemical identify after being combined.

Organic peroxide

An organic compound containing the bivalent-O-O- structure. It may be considered a structural derivative of hydrogen peroxide if one or both of the hydrogen atoms has been replaced by an organic radical.

Oxidizer

A chemical, other than a blasting agent or explosive as defined in WAC 296-52-417 or 29 CFR 1910.109(a), that starts or promotes combustion in other materials, causing fire either of itself or through the release of oxygen or other gases.

Permissible exposure limits

See chapter 296-62 WAC part H, for definition of this term.

Physical hazards

A chemical that has scientifically valid evidence to show it is one of the following:

- ☛ A combustible liquid
- ☛ A compressed gas
- ☛ Explosive
- ☛ Flammable
- ☛ An organic peroxide
- ☛ An oxidizer
- ☛ Pyrophoric
- ☛ Unstable (reactive)
- ☛ Water-reactive.

Produce

To do one or more of the following:

- ☛ Manufacture
- ☛ Process
- ☛ Formulate
- ☛ Blend
- ☛ Extract
- ☛ Generate
- ☛ Emit
- ☛ Repackage.

Pyrophoric

Chemicals that ignite spontaneously in the air at a temperature of 130°F (54.4°C) or below.

Responsible party

Someone who can provide more information about the hazardous chemical and appropriate emergency procedures.

Retailer

See "distributor."

Threshold limit values (TLVs)

Airborne concentrations of substances established by the American Conference of Governmental Industrial Hygienists (ACGIH), and represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse health effects.

TLVs are specified in the most recent edition of the *Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices* and include the following categories:

- ☛ Threshold limit value-time-weighted average (TLV-TWA)
- ☛ Threshold limit value-short-term exposure limit (TLV-STEL)

☞ Threshold limit value-ceiling (TLV-C).

Unstable (reactive)

A chemical in its pure state, or as produced or transported, that will vigorously polymerize, decompose, condense, or become self-reactive under conditions of shocks, pressure or temperature. Use

To do one or more of the following:

☞ Package

☞ Handle

☞ React

☞ Emit

☞ Extract

☞ Generate as a by-product

☞ Transfer.

Water-reactive

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

Wholesaler

See "distributor."