UCI Environmental Health & Safety

Hazard Communication Program

Responsible Administrator: Industrial Hygiene
Reviewed: April 2024

Summary: This section outlines the policy and procedures related to Hazard Communication that are administered through the Environmental Health and Safety (EHS) Department.

1. Program Description

The Cal/OSHA Hazard Communication Regulation, often called HazCom, is designed to ensure that the hazards of workplace chemicals are evaluated and that information on the hazards is provided to employers and employees. Details of this regulation are provided in CCR, Title 8, Section 5194. The substances that are subject to the regulation are in Appendix A: Hazardous Substances List. The Standard requires all employers to provide information to their employees about the hazardous chemicals to which they may be exposed, by means of a hazard communication program, labels and other forms of warning, safety data sheets, and information and training.

1.1. The HazCom program must include five main components:

- A written Hazard Communication Program
- An up-to-date inventory of hazardous chemicals in the workplace
- Accessibility of copies of Safety Data Sheets (SDS) for all hazardous chemicals in the workplace
- Proper labeling and other forms of warning for hazardous chemicals; and,
- Training for affected employees on the requirements of the Standard/Regulation.

1.2. This Hazard Communication Program applies to all University of California – Irvine (UC Irvine) Departments, Offices, and Centers and their employees, faculty, and staff. It is intended to ensure that employees, faculty, and staff are made aware of and properly trained in the safe use of hazardous chemicals with which they may come

in contact. This is accomplished by providing appropriate employee training, compiling chemical inventories, maintaining, and using Safety Data Sheets (SDS) and ensuring that chemical containers are properly labeled. The Program complies with the Cal/OSHA Hazard Communication Regulation (Title 8, Chapter 4, Subchapter 7, Group 16, Article 109, Section 5194)Additional requirements for laboratories as specified in Cal Hazardous Chemicals in Laboratories Standard (Title 8, Chapter 4, Subchapter 7, Group 16, Article 109, Section 5191) are covered in the UCI Chemical Hygiene Program.

UC Irvine Departments, Offices, and Centers must also comply with any additional chemical- specific requirements of standards or regulations promulgated by Cal/OSHA (i.e., substance specific regulations).

2. Scope

2.1 The scope of this Program covers hazardous chemical use in all UC Irvine workplaces. The list of hazardous chemicals subject to the regulations is in Appendix B: Definitions of this program.

Non-Routine Tasks. Occasionally employees may be asked to perform tasks that are not part of their normal routine. Non-routine tasks may include annual cleaning or a one-time application of a chemical.

Supervisors will provide staff asked to perform non-routine tasks involving the use of hazardous chemicals with information regarding associated hazards prior to starting the non-routine task. This information will also include measures to ensure protection from the hazards, and information regarding engineering and administrative controls or PPE that should be used. Non-routine tasks should not be undertaken until the employees and/or students involved understand the associated hazards and methods for protection.

3. Definitions

See Appendix B: Definitions for a complete list of definitions. These definitions include those that may be needed when reviewing Safety Data Sheets (SDS).

4. Responsibilities

4.1 **Supervisors and Faculty are** responsible for:

- Overall compliance with HazCom requirements.
- Training employees regarding the site-specific use of hazardous chemicals and methods required to protect from related hazards,
- Informing employees of any new products and hazardous materials being considered for use in the department,
- Maintaining an adequate supply of approved personal protective equipment (PPE) for employee
- Ensuring that employees are trained on the appropriate use of PPE,
- Ensuring all employees have completed their safety training self-assessments (STSA) and have completed all required safety training (including the Hazard Communication course, if applicable) and any refresher training. Available training classes are found in the University of California Learning Center (UCLC)

4.2 **Employees, and Staff** are responsible for:

- Reading, understanding, and following the safety information included on container labels and SDSs,
- Attending and participating in Safety Fundamentals and other required safety training,
- Labeling secondary containers appropriately,
- Developing an understanding of the Program,
- Reporting any incidents involving hazardous chemicals to their supervisor, and
- Wearing appropriate PPE.

4.3 **Contractors** working on UC Irvine property are responsible for:

- Compliance with the Standard under their own written Hazard Communication Program.
- In addition, contractors must notify the appropriate UCI project manager of any hazardous chemicals they will use on property owned or occupied by UCI,
- Provide a copy of their written Hazcom Program upon request,
- Have onsite copies of SDSs for any hazardous chemicals they use on UC Irvine property, and
- Immediately provide SDSs for these products upon request. In addition, all hazardous chemicals used on UCI property shall be properly labeled per Section 5.4 of this Program.

4.4 **Environmental Health and Safety (EHS)** is responsible for:

- Preparing and maintaining this written Program,
- Conducting, facilitating, and/or reviewing and updating Safety Fundamentals and other related safety training as required,
- Assisting Department staff with the requirements of the Standard,
- Assisting in product selection or substitution, and
- Assisting in the selection of appropriate PPE as requested.

5. Program Components

5.1 Written HazCom Program

EHS is responsible for the maintenance of this Hazard Communication Program. Copies of the HazCom Program may be obtained by contacting EHS or by visiting the EHS Written Programs website (Hazard Communication Program).

5.2 Hazardous Substance/Chemical Inventories

Chemical users are required to maintain a current chemical inventory that lists the chemicals and compressed gases used and stored in their areas and the quantity of these chemicals. Specific storage locations must be kept as part of the inventory list to ensure that they can be easily located. Chemical inventories are used to ensure compliance with storage limits and fire regulations and can be used in an emergency to identify potential hazards for emergency response operations. The chemical inventory list should be reviewed prior to ordering new chemicals and only the minimum quantities of chemicals necessary for the research should be purchased. As new chemicals are added to the inventory, each laboratory group must confirm that they have access to the Safety Data Sheet (SDS) for that chemical. Where practical, each chemical should be dated so that

expired chemicals can be easily identified for disposal. It is advisable to inventory the materials frequently (at least annually) to avoid overcrowding with materials that are no longer useful and note the items that should be replaced, have deteriorated, or show container deterioration. Unneeded items should be considered for disposal, as well as compromised items should be discarded as chemical waste. Indications for disposal include:

- Cloudiness in liquids
- Color change
- Evidence of liquids in solids, or solids in liquids
- "Puddling" of material around outside of containers
- Pressure build-up within containers
- Obvious deterioration of containers

Access to hazardous chemicals, including toxic and corrosive substances, should be always controllable.

5.3 Chemical inventories for the University are found in UC Chemicals. Each department is responsible for maintaining an up-to-date inventory of hazardous chemicals present in their work areas. Supervisors are responsible for updating and maintaining the inventory as hazardous chemicals are added or removed, and reconciling (i.e., ensuring the physical inventory and the electronic inventory are the same) their inventory annually. Chemical inventories shall be made available upon request. EHS can be consulted as needed for assistance with hazard reviews.

5.4 Safety Data Sheets

The purpose of the Safety Data Sheet (SDS) is to describe the physical and chemical properties, physical and health hazards, routes of exposure, precautions for safe handling and use, emergency and first aid procedures, and control measures related to hazardous chemicals.

With the adoption of the Globally Harmonized System (GHS), SDS's will typically follow a 16-section format that contains information on:

- Product Identity
- Hazard(s) Identification
- Composition/Ingredients
- First-Aid Measures
- Fire-Fighting Measures
- Accidental Release
- Handling and Storage
- Exposure Controls/Personal Protection
- Physical and Chemical Properties
- Stability and Reactivity
- Toxicological Information
- Ecological Information

- Disposal Considerations
- Transport Information
- Regulatory Information
- Other Information

At UCI, SDS's may be accessed:

- Through the EHS website (https://ehs.uci.edu/sds/index.php);
- By emailing a request through the EHS office (safety@uci.edu);
- By contacting the EHS office at extension 4.6200.

5.4.1 The department supervisor is responsible for ensuring SDS's for each hazardous chemical in the department inventory is available for staff and students in the immediate work area. The supervisor will provide all SDSs for in-use or stored chemicals at each location. Staff and students may contact EHS with any questions related to information provided on the SDS.

5.5 Container Labeling

Every chemical subject to this program must be properly labeled. Most chemicals come with a manufacturer's label that contains the necessary information, so care should be taken to not damage or remove these labels. Each chemical bottle, including diluted chemical solutions, must be labeled with its contents and the hazards associated with this chemical. The supervisor is responsible for ensuring incoming chemical containers and chemical containers within the current inventory are properly labeled. Labels must include the identity of the contents, appropriate hazard warnings (i.e., signal word, hazard statement[s], pictograms, precautionary statement[s]), and the manufacturer, importer, or responsible party information (i.e., name, address, and telephone number). Affixed labels must not be removed from any container until the container has been completely emptied.

It is recommended that each bottle also be dated when received and when opened to assist in determining which chemicals are expired and require disposal. Once the chemical has been received, it may be transferred to smaller secondary containers for use in the workplace. Supervisors are responsible for ensuring all secondary containers are labeled with the identity of the hazardous chemical, appropriate hazard warnings (as defined in the regulation), and the manufacturer, importer, or responsible party information (as defined by the regulation). UC Irvine employees, faculty, and staff should report any unlabeled secondary containers to the responsible supervisor who will either label the container or, if the container contents are unknown, contact EHS for assistance and/or disposal.

Chemical labeling should follow the Globally Harmonized System (GHS) of classification and labeling of chemicals. Appendix C: Globally Harmonized System (GHS) Pictograms contains the GHS pictograms used in labeling and hazard communication.

5.6 **Training.** Hazard communication training is provided to UC Irvine employees working with hazardous chemicals subject to the HazCom regulation.

5.6.1 Hazard Communication modules are currently included in various training presentations available in University of California Learning Center (uclc.uci.edu).

5.6.2 Department Supervisors are responsible for training employees regarding the site-specific use of hazardous chemicals and methods required to protect from related hazards, and informing employees of any new products and hazardous materials being considered for use in the department, The work unit-specific training for employees is delivered prior to the employee's initial assignment or whenever employees will be using a new hazardous chemical including:

6. Reporting Requirements

N/A

7. References & Appendices

- OSHA Hazard Communication Standard (29 CFR 1910.1200)
- Cal/OSHA Hazard Communication Regulation (CCR Title 8, Section 5194)
- OSHA "Laboratory Standard" (29 CFR 1910.1450)
- UCI Chemical Hygiene Plan
- UCI Asbestos Management Program
- UCI Respiratory Protection Program
- UCI Hazardous Waste Management Program
- Guide to the California Hazard Communication Regulation
- NIOSH Pocket Guide to Chemical Hazards

Appendix A: Hazardous Substances List*
Appendix B: Definitions
Appendix C: Globally Harmonized System (GHS) Pictograms

Appendix A: Hazardous Substances List*

https://www.dir.ca.gov/title8/339.html

* An SDS is not required for tapes, films, or extruded, molded or coated products containing listed hazardous substances in bound form except when these substances can be released in the workplace under normal conditions of work or in reasonably foreseeable emergencies resulting from workplace operations.

CAS No.	Source	Substance	Footnotes
26148685	1	A-alpha-C (2-Amino-9H-pyrido[2,3-b]indole)	
3688537	1	AF-2 ([2-(2-Furyl)-3-(5-nitro-2-furyl)] acrylamide)	
86884	3	ANTU; see 1-(1-Naphthyl)-2-thiourea	
83329	2	Acenaphthene	
75070	1,2,3	Acetaldehyde	
60355	1	Acetamide	
64197	2,3	Acetic acid	1
108247	2,3	Acetic anhydride	
67641	3	Acetone	
75865	2	Acetone cyanohydrin	
75058	3	Acetonitrile	
81812	3	3-(alpha-Acetonylbenzyl)-4-hydroxycoumarin; see Warfarin	
53963	3	2-Acetylaminofluorene	
506967	2	Acetyl bromide	
79367	2	Acetyl chloride	
74862	3	Acetylene	
540590	2,3	Acetylene dichloride	
79276	3	Acetylene tetrabromide	
79345	1,3	Acetylene tetrachloride	
50782	3	Acetylsalicylic acid	37
107028	2,3,4	Acrolein	
79061	1,3	Acrylamide	
79107	3	Acrylic acid	
107131	1,2,3,4	Acrylonitrile	
50760	1	Actinomycin D	
124049	2	Adlpic acid	
23214928	1	Adriamycin	
	1	Aflatoxins	
116063	4	Aldicarb	
51285	2	Aldifen; see Dinitrophenols	
309002	1,2,3,4	Aldrin	
107186	2,3,4	Allyl alcohol	
107051	2,3	Allyl chloride	
106923	3	Allyl glycidyl ether	12
57067	1	Allyl isothiocyanate	
2835394	1	Allyl isovalerate	

2179591 3 Allyl propyl disulfide
3 Aluminum 3
3 Aluminum, alkyls
7429905 3 Aluminum metal and oxide
20859738 4 Aluminum phosphide
3 Aluminum pyro powders
3 Aluminum, soluble salts 2
10043013 2 Aluminum sulfate;
see Aluminum, soluble salts
117793 1 2-Aminoanthraquinone
60093 1 para-Aminoazobenzene
97563 1 o-Aminoazotoluene
1300738 3 Aminodimethylbenzene; see Xylidine
92671 1,3 4-Aminodiphenyl 31
75047 2 Aminoethane; see Ethylamine
141435 3 2-Aminoethanol; see Ethanolamine
82280 1 1-Amino-2-methylanthraquinone
91598 3 2-Aminonaphthalene;
see beta-Naphthylamine
712685 1 2-Amino-5-(5-nitro-2-
furyl)-1,3,4-thiadiazole
121664 1 2-Amino-5-nitrothiazole
504290 3 2-Aminopyridine
504245 4 4-Aminopyridine
1918021 4 4-Amino-3,5,6-trichloropicolinic
acid; see Picloram
2432997 1 11-Aminoundecanoic acid
61825 1,3 Amitrole
7773060 2 Ammate; see Ammonium
sulfamate
7664417 2,3 Ammonia
631618 2 Ammonium acetate
1863634 2 Ammonium benzoate
1066337 2 Ammonium bicarbonate
7789095 2 Ammonium bichromate;
see Chromium compounds
1341497 2 Ammonium bifluoride; see
Flouride and inorganic fluoride
compounds
10192300 2 Ammonium bisulfite
1111780 2 Ammonium carbamate
506876 2 Ammonium carbonate
3012655 2 Ammonium citrate dibasic
12125029 2,3 Ammonium chloride fume
7788989 2 Ammonium chromate;
see Chromium compounds
13826830 2 Ammonium fluoborate
12125018 2 Ammonium fluoride; see Fluoride,
and inorganic fluoride compounds
1336216 2 Ammonium hydroxide 29
6009707 2 Ammonium oxalate
16919190 2 Ammonium silicofluoride
7773060 2,3 Ammonium sulfamate
12135761 2 Ammonium sulfide
10196040 2 Ammonium sulfite
3164292 2 Ammonium tartrate
1762954 2 Ammonium thiocyanate

628637, 123922, 626380, 625161 2,3 Amyl acetate, all isomers
1 Anabolic steroids (Androgenic steroids)
62533 1,2,3 Aniline
90040 1,3 o-Anisidine
104949 3 p-Anisidine
191264 1 Anthanthrene
120127 2 Anthracene
7440360 2,3 Antimony 3
2,3 Antimony compounds 4
7647189 2 Antimony pentachloride; see Antimony compounds
28300745 2 Antimony potassium tartrate; see Antimony compounds
7789619 2 Antimony tribromide; see Antimony compounds
10025919 2 Antimony trichloride; see Antimony compounds
77883564 2 Antimony trifluoride; see Antimony compounds
1309644 2 Antimony trioxide
140578 1 AramiteRegistered; see 2-(p-tert-Butyphenoxy)isopropyl-2-chloroethyl sulfite)
7440382 1,2,3,4 Arsenic and arsenic compounds 32
1303328 2 Arsenic disulfide; see Arsenic and arsenic compounds
1303282 1,2 Arsenic pentoxide; see Arsenic and arsenic compounds
1327533 1,2 Arsenic trioxide; see Arsenic and arsenic compounds
1303339 1,2 Arsenic trisulfide; see Arsenic and arsenic compounds
784421 3 Arsine
1332214 1,2,3 Asbestos 5
8052424 3 Asphalt (petroleum) fumes 6
50782 3 Aspirin; see Acetylsalicylic acid
1912249 1,3,4 Atrazine
12174117 1 Attapulgite
492808 1 Auramine
12192573 1 Aurothioglucose
320672 1 5-Azacytidine
115026 1 Azaserine
446866 1 Azathioprine
86500 2,3,4 Azinphos methyl; see O,O-Dimethyl S-(4-oxo-benzotri-azino-3-methyl) phosphorodithioate
151564 1 Aziridine; see Ethyleneimine
1072522 1 2-(1-Aziridinyl)ethanol
800248 1 Aziridyl benzoquinone
103333 1 Azobenzene
3333526 3 2,2'-Azobisisobutyronitrile decomposition product; see Tetramethyl succinonitrile

6923224 4 Azodrin; see 3-(Dimethoxyphosphinyloxy)-N-methyl-cis-crotonamide
154938 1 BCNU; see 1,3-bis (2-Chloroethyl)-1-nitrosourea
2426086 3 BGE; see n-Butyl glycidyl ether
58899 2 BHC; see Hexachlorocyclohexanes
319846 2 alpha-BHC
319857 2 beta-BHC
319869 2 delta-BHC
58899 2 gamma-BHC; see Lindane
86884 3 Bantu; see 1-(1-Naphthyl)-2-thiourea
101279 2 Barban
2,3 Barium, soluble compounds 2
542621 2 Barium cyanide; see Cyanides, inorganic salts
17804352 3 Benomyl
25057890 4 Bentazon
225514 1 Benz[c]acridine
56553 1,2 Benz [a]anthracene
56553 2 1,2-Benzanthracene; see Benz[a]anthracene
71432 1,2,3 Benzene
108907 2,3 Benzene chloride; see Chlorinated benzenes
123319 3 1,4-Benzenediol; see Hydroquinone
108463 2 1,3-Benzenediol; see Resorcinol
118741 1,4 Benzene hexachloride; see Chlorinated benzenes
531851, 531862, 92875 1,2,3 Benzidine (and its salts) 31
1 Benzidine-based dyes
205992 1,2 Benzo [b]fluoranthene
205823 1 Benzo[i[fluoranthene
207089 1,2 Benzo[k]fluoranthene
207089 2 11,12 Benzofluoranthene; see Benzo[k]fluoranthene
205992 2 3,4 Benzofluoranthene; see Benzo[b]fluoranthene
65850 2 Benzoic Acid 7
71432 3 Benzol; see Benzene
100470 2 Benzonitrile
191242 2 1,12-Benzoperylene
191242 2 Benzo(ghi)perylene; see 1,12-Benzoperylene
50328 1,2 Benzo [a]pyrene
91225 2 Benzo(b)pyridine; see Quinoline
105113 1 para-Benzoquinone dioxime
106514 3 p-Benzoquinone; see Quinone
98077 1 Benzotrichloride
98884 2 Benzoyl chloride
94360 3 Benzoyl peroxide
140114 1 Benzyl acetate
100447 1,2,3 Benzyl chloride
1694093 1 Benzyl violet 4B
7440417 1,2,3 Beryllium 34
7787475 1,2 Berrylium chloride; see

		Beryllium compounds	
	1,2,3	Beryllium compounds	
7787497	1,2	Beryllium fluoride; see Beryllium compounds	
7787555	2	Beryllium nitrate; see Beryllium compounds	
141662	4	Bidrin; see 3-Hydroxy-N,N-dimethyl-cis-crotonamide dimethyl phosphate	
92524	3	Biphenyl	
2168685	1	Bis(1-aziridinyl)morpholinophosphine sulphide	
111911	2	Bis(2-chloroethoxy) methane	
111444	2,3	Bis(2-chloroethyl)ether; see Chloroalkyl ethers	
494031	1	N,N-Bis(2-chloroethyl)-2 -naphthylamine	
154938	1	1,3-Bis(2-chloroethyl)-1 -nitrosourea	
154938	1	Bischloroethyl nitrosourea; see 1,3-Bis(2-chloroethyl)-1-nitrosourea	
13483186	1	1,2-Bis(chloromethoxy)ethane	
56894981	1	1,4-Bis(chloromethoxymethyl)benzene	
542881	1,3	Bis(chloromethyl) ether	
108601	1	Bis(2-chloro-1-methylethyl) ether	
108601	2	Bis(2-chloroisopropyl) ether	
115322	1,2	1,1-Bis-(p-chlorophenyl)-2,2,2-trichloroethanol(dicofol)	
137268	3	Bis-(dimethylthiocarbamoyl) disulfide	
2238075	3	Bis(2,3-epoxypropyl)ether; see Diglycidyl ether	
117817	2	Bis(2-ethylhexyl) phthalate; see Phthalate esters	
1304821	3	Bismuth telluride; see Tellurium compounds	
11056067	1	Bleomycins	
129179	1	Blue VRS	
	3	Borates, tetra, sodium salts	8
1303862	3	Boron oxide	8
10294334	3	Boron tribromide	
7637072	3	Boron trifluoride	
3844459	1	Brilliant Blue FCF	
314409	3	Bromacil	
7726956	3	Bromine	
7789302	3	Bromine pentafluoride	
74975	3	Bromochloromethane	
75274	2	Bromodichloromethane	
74964	3	Bromoethane; see Ethyl bromide	
593602	3	Bromoethylene; see Vinyl bromide	
75252	2,3	Bromoform	
74839	3	Bromomethane; see Methyl bromide	
101553	2	4-Bromophenyl phenyl ether	
75638	3	Bromotrifluoromethane	
1689845	4	Bromoxynil	
106990	1,2,3	1,3-Butadiene	
106978	3	Butane	
55981	1	1,4-Butanediol dimethanesulfonate	

		(Busulfan)
109795	3	Butanethiol; see n-Butyl mercaptan
71363	3	Butanol; see Butyl alcohol
78933	3	2-Butanone
123739	2	2-Butenal propylene aldehyde; see Crotonaldehyde
2426086	3	1-Butoxy-2,3-epoxypropane; see n-Butyl glycidyl ether
111762	3	2-Butoxyethanol; see Ethylene glycol monobutyl ether
123864, 105464, 540885, 110190	2,3	Butyl acetate, all isomers
141322	3	Butyl acrylate
71363, 78922, 75650	3	Butyl alcohol
109739, 78819, 513495, 13952846, 75649	2,3	Butylamine, all isomers
25013165	1	Butylated hydroxyanisole
128370	1	Butylated hydroxytoluene; see 2,6-Di-tert-butyl-p-cresol
85687	2	Butyl benzyl phthalate
299865	3	4-tert-Butyl-2-chlorophenylmethyl methylphosphoramidate
1189851	3	tert-Butyl chromate; see Chromium compounds
2426086	3	n-Butyl glycidyl ether 12
138227	3	n-Butyl lactate
109795	3	n-Butyl mercaptan
89725	3	o-sec-Butylphenol
140578	1	2-(p-tert-Butylphenoxy)isopropyl-2-chloroethyl sulfite
84742	2	n-Butyl phthalate; see Phthalate esters
98511	3	p-tert-Butyltoluene
107926	2	Butyric acid
3068880	1	beta-Butyrolactone
13010474	1	CCNU; see 1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea
543908	1,2	Cadmium acetate; see Cadmium compounds
7440439, 1306190	1,2,3,4	Cadmium and cadmium oxide 3
7789426	2	Cadmium bromide; see Cadmium compounds
10108642	1,2	Cadmium chloride; see Cadmium compunds
	1,2,3,4	Cadmium compounds
7440702	2	Calcium
7778441	1,2,3	Calcium arsenate; see Arsenic and arsenic compounds
52740166	2	Calcium arsenite; see Arsenic and arsenic compounds
75207	2	Calcium carbide
13765190	1,2	Calcium chromate; see Chromium compounds
156627	3	Calcium cyanamide
592018	2,4	Calcium cyanide; see Cyanides, inorganic

		salts
26264062	2	Calcium dodecylbenzene-sulfonate 9
1305620	3	Calcium hydroxide
7778543	2	Calcium hypochlorite
1305788	3	Calcium oxide
76222	3	Camphor
56257	1	Cantharidin
105602	3	Caprolactam
2425061	1,3	Captafol
133062	1,2,3	Captan
63252	2,3,4	Carbaryl
86748	1	Carbazole
7786347	2,3,4	alpha-2-Carbomethoxy-1- methylvinyl dimethyl phosphate(mevinphos)
7786347	3	2-Carbomethoxy-l-propen-2-yl dimethyl phosphate; see alpha-2-Carbomethoxy-l-methylvinyl dimethyl phosphate
75150	2,4	Carbon bisulfide; see Carbon disulfide
1333864	1,3	Carbon black-Extracts 10
124389	3	Carbon dioxide
75150	2,3,4	Carbon disulfide
630080	3	Carbon monoxide
558134	3	Carbon tetrabromide
56235	1,2,3,4	Carbon tetrachloride
75445	2,3	Carbonyl chloride; see Phosgene
353504	3	Carbonyl Fluoride
786196	4	Carbophenothion
154938	1	Carmoisine; see 1,3-Bis(2-chloro-ethyl)-1-nitrosourea
120809	3	Catechol
1310732	3	Caustic soda; see Sodium hydroxide
110805	5	Cellosolve; see Ethylene glycol mono-ethyl ether
21351791	3	Cesium hydroxide
305033	1	Chlorambucil
56757	1	Chloramphenicol
57749	1,2,3,4	Chlordane
143500	1,2	Chlordecone
6164983	4	Chlordimeform
115286	1	Chlorendic acid
470906	4	Chlorfenvinphos
	1,2,3	Chlorinated benzenes
8001352	3	Chlorinated camphene; see Toxaphene
	2	Chlorinated cresols
55720995	3	Chlorinated diphenyl oxide
	2	Chlorinated ethanes
	2	Chlorinated naphthalenes, (other than those listed elsewhere)
108171262	1	Chlorinated paraffins
	2	Chlorinated phenols; see Chlorinated cresols
	1	a-Chlorinated toluenes
7782505	2,3	Chlorine
10049044	3	Chlorine dioxide
7790912	3	Chlorine trifluoride
494031	1	Chlornaphazine; see N,N-bis(2-

		Chloroethyl)-2-naphthylamine
107200	3	Chloroacetaldehyde
532274	3	alpha-Chloroacetophenone
79049	3	Chloroacetyl chloride
	1,2,3	Chloroalkyl ethers
108907	2,3	Chlorobenzene; see Chlorinated benzenes
510156	1	Chlorobenzilate
2698411	3	o-Chlorobenzylidene-malononitrile
74975	3	Chlorobromomethane; see Bromochloromethane
126998	3	2-Chloro-1,3-butadiene; see Chloroprene
124481	2	Chlorodibromomethane
75456	1,3	Chlorodifluoromethane (FC-22)
53449219	3	Chlorodiphenyl; see Polychlorobiphenyls
106898	3	1-Chloro-2,3,-epoxypropane; see Epichlorohydrin
75003	2,3	Chloroethane; see Ethyl chloride
107073	3	2-Chloroethanol; see Ethylene chlorohydrin
13010474	1	1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea
75014	3	Chloroethylene; see Vinyl chloride
13909096	1	1-(2-Chloroethyl)-3-(4-methycyclo-hexyl)-1-nitrosourea (Methyl -CCNU)
110758	2	2-Chloroethyl vinyl ether
593704	1	Chlorofluoromethane
67663	1,2,3	Chloroform
75445	2	Chloroformyl chloride; see Phosgene
59507	2	para-Chloro-meta-cresol
74873	3	Chloromethane; see Methyl chloride
107302	3	Chloromethyl methyl ether; see Methyl chloromethyl ether
91587	2	2-Chloronaphthalene
100005	3	1-Chloro-4-nitrobenzene; see p-Nitrochlorobenzene
600259	3	1-Chloro-1-nitropropane
76153	3	Chloropentafluoroethane
95578	2	2-Chlorophenol; see Chlorophenols
	1	Chlorophenols
	1	Chlorophenoxy herbicides
95830	1	4-Chloro-o-phenylenediamine
7005723	2	4-Chlorophenyl phenyl ether
76062	3,4	Chloropicrin
126998	2,3	Chloroprene
1331288	3	o-Chlorostyrene
7790945	2	Chlorosulfonic acid
1897456	1	Chlorothalonil
95498	3	o-Chlorotoluene
100447	3	alpha-Chlorotoluene; see Benzyl chloride
95692	1	p-Chloro-o-toluidine
7745893	4	3-Chloro-p-toluidine hydrochloride
1929824	3	2-Chloro-6-(trichloromethyl) pyridine
75887	1	2-Chloro-1,1,1-trifluoroethane
2921882	2,3	Chlorpyrifos

1066304 2 Chromic acetate; see Chromium compounds
11115745 2 Chromic acid; see Chromium compounds
10101538 2 Chromic sulfate; see Chromium compounds
7440473 2,3 Chromium 3
1,2,3 Chromium compounds
7440473 3 Chromium metal; see Chromium
11115745 2 Chromium troixide; see Chromium compounds
10049055 2 Chromous chloride; see Chromium compounds
14977618 3 Chromyl chloride;
218019 1,2 Chrysenes; see Polynuclear aromatic hydrocarbons
532821 1 Chrysoidine
87296 1 Cinnamyl anthranilate
108316 2,3 Cis-butenedioic anhydride; see Maleic anhydride
15663271 1 Cisplatin
51875 1 Citrinin
6358538 1 Citrus Red no. 2
637070 1 Clofibrate
1420048 4 Clonitralid
2971906 3 Clopidol
3 Coal (Bituminous) dust
65996932 1 Coal-tar pitches
8007452 1,3 Coal tar pitch volatiles 11
7440484 2,3 Cobalt 3,34
10210681 3 Cobalt carbonyl
16842038 3 Cobalt hydrocarbonyl
7789437 2 Cobaltous bromide
544183 2 Cobaltous formate
14017415 2 Cobaltous sulfamate
62748 4 Compound 1080; see Sodium fluoroacetate
7440508 2,3 Copper 3
2,3 Copper compounds 39
3 Cotton dust 27
56724 2 Coumaphos
91645 1 Coumarin
8001589 1 Creosotes
120718 1 p-Cresidine
95487, 106445, 108394,1319773 2,3 Cresol (all isomers)
123739 2,3 Crotonaldehyde
299865 3 Crufomate; see 4-tert-Butyl (-2-chlor-ophenylmethyl) methylphos-phoramidate
98828 3 Cumene
142712 2 Cupric acetate; see Copper compounds
12002038 2 Cupric acetoarsenite; see Copper compounds
7447394 2 Cupric chloride; see Copper compounds
3251238 2 Cupric nitrate; see Copper compounds
5893663 2 Cupric oxalate; see Copper compounds
10380297 2 Cupric sulfate, ammoniated; see Copper

		compounds
7758987	2	Cupric sulfate; see Copper compounds
815827	2	Cupric tartrate; see Copper compounds
420042	3	Cyanamide
	2,3,4	Cyanides, inorganic salts
100470	2	Cyanobenzene; see Benzonitrile
460195	3	Cyanogen
506774	2,3	Cyanogen chloride
14901087	1	Cycasin
	1	Cyclamates
110827	2,3	Cyclohexane
108930	3	Cyclohexanol
108941	3	Cyclohexanone
110838	3	Cyclohexene
66819	4,5	Cycloheximide
108918	3	Cyclohexylamine
121824	3	Cyclonite; see Cyclotrimethylenetrinitramine
542927	3	Cyclopentadiene
12079651	3	Cyclopentadienyltriocarbonyl manganese; see Manganese compounds
287923	3	Cyclopentane
27208373	1	Cyclopenta[c,d]pyrene
50180	1	Cyclophosphamide
6055192		
121824	3	Cyclotrimethylene-trinitramine
13121705	3	Cyhexatin; see Tin compounds
94757	2,3,4	2,4-D
94111, 94791, 94804, 1320189, 1928387, 1928616, 1929733, 2971382, 25168267, 53467111	2	2,4-D esters (2,4-dichloro-phenoxyacetic acid esters)
94826	4	2,4-DB (2,4-dichloro- phenoxybutyric acid)
72548	2,4	DDD; see TDE
72548	2	4,4-DDD; see TDE
72559	2	DDE; see 1,1-Dichloro-2,2-bis(p-chlorophenyl)-ethylene
72559	2	4,4-DDE; see 1,1-Dichloro-2,2-bis(p-chlorophenyl)-ethylene
120365	4	2,4-DP (2,4-dichlorophenoxy-propionic acid)
50293	1,2,3,4	DDT-(1,1,1-trichloro-2,2-bis (p-chlorophenyl)ethane)
50293	2	4,4-DDT; see DDT
62737	3	DDVP; see Dichlorvos
78488	4	DEF; see S,S,S Tributyl phosphorotrithioate
2238075	3	DGE; see Diglycidyl ether
68122	3	DMF; see N,N-Dimethylformamide
57147	3	DMH; see Dimethylhydrazine (all isomers)
81889	1	D&C Red No. 19; see Rhodamine B
432034	1	Dacarbazine
80080	1	Dapsone

115902	4	Dasanit; see O,O-Diethyl O-[4-(methylsulfinyl) phenyl] phosphorothioate
20830813	1	Daunomycin
17702419	3	Decaborane
8065483	3,4	Demeton
298033	2	Demeton-O
126750	2	Demeton-S
123422	3	Diacetone alcohol; see 4-Hydroxy-4-methyl-2-pentanone
613354	1	N,N'-Diacetylbenzidine
10311849	4	Dialifor
2303164	1	Diallate
615054	1	2,4-Diaminoanisole
39156417	1	2,4-Diaminoanisole sulfate
92875	3	4,4'-Diaminobiphenyl; see Benzidine (and its salts)
91941	3	4,4'Diamino-3,3'-dichlorobiphenyl; see Dichlorobenzidine and its salts
101814	1	4,4'-Diaminodiphenyl ether
107153	2,3	1,2-Diaminoethane; see Ethylenediamine
95807	1	2,4-Diaminotoluene
119904	1	ortho-Dianisidine; see 3,3-Dimethoxy-benzidine
333415	2,3	Diazinon
334883	1,3	Diazomethane
226368	1	Dibenz [a,h]acridine
224420	1	Dibenz [a,j]acridine
53703	1,2	Dibenz [a,h]anthracene
215587	1	Dibenz[a,c]anthracene
224419	1	Dibenz[a,j]anthracene
53703	2	1,2,5,6-Dibenzanthracene; see Dibenz[a,h] anthracene
	1,2	Dibenzanthracenes; see Polynuclear aromatic hydrocarbons
194592	1	7H-Dibenzo [c,g]carbazole
5385751	1	Dibenzo[a,e]fluoranthene
192472	1	Dibenzo[h,rst]pentaphene
192654	1	Dibenzo [a,e]pyrene
189640	1	Dibenzo [a,h]pyrene
189559	1	Dibenzo [a,i]pyrene
191300	1	Dibenzo[a,l]pyrene
92842	3	Dibenzothiazine; see Phenothiazine
94360	3	Dibenzoyl Perozide; see Benzoyl peroxide
19287457	3	Diborane
300765	2	Dibrom; see O,O-Dimethyl O-(1,2-dibromo-2,2-dichloroethyl) phosphate
96128	1,3	1,2-Dibromo-3-chloropropane
75616	3	Dibromodifluoromethane
106934	2,3	1,2-Dibromoethane; see Ethylene dibromide
102818	3	2-(Dibutylamino) ethanol
128370	1,3	2,6-Di-tert-butyl-p-cresol 7
107664	3	Dibutyl phosphate
84742	3	Dibutyl phthalate; see Phthalate esters

84742 2 Di-n-butyl phthalate; see Phthaltate esters
1918009 2,4 Dicamba
1194656 2 Dichlobenil
117806 2 Dichlone
7572294 1,3 Dichloroacetylene
541731 2 m-Dichlorobenzene
106467 1,2,3 p-Dichlorobenzene
95501 2,3 o-Dichlorobenzene
95501 2 1,2-Dichlorobenzene; see o-Dichlorobenzene
541731 2 1,3-Dichlorobenzene; see m-Dichlorobenzene
106467 2 1,4-Dichlorobenzene; see p-Dichlorobenzene
225321226 1,2,3 Dichlorobenzenes; see Chlorinated benzenes
1,2,3 Dichlorobenzidine (and its salts)
91941 1,2,3 3,3'-Dichlorobenzidine; see Dichlorobenzidene (and its salts)
72548 2 1,1-Dichloro-2,2-bis(p-chlorophenyl) ethane; see TDE
72559 2,4 1,1-Dichloro-2,2-bis (p-chlorophenyl) ethylene
75274 2 Dichlorobromomethane; see Bromodichloromethane
28434868 1 3,3'-Dichloro-4,4'-diaminodiphenyl ether
75718 3 Dichlorodifluoromethane (FC-12)
118525 3 1,3-Dichloro-5,5-dimethyl-hydantoin
107062 1,2 1,2-Dichloroethane; see Ethylene dichloride
75343 2,3 1,1-Dichloroethane; see Ethylidene chloride
156605 2 1,2-trans-Dichloroethylene
540590 2,3 1,2-Dichloroethylene; see Acetylene dichloride
75354 2,3 1,1 Dichloroethylene; see Vinylidene chloride
111444 ,1,3 Dichloroethyl ether; see Chloroaikyl ethers
75092 3 Dichloromethane; see Methylene chloride
75434 3 Dichloromonofluoromethane (FC-21)
117806 2 Dichloronaphthoquinone; see Dichlone
594729 3 1,1-Dichloro-1-nitroethane
120832 2 2,4-Dichlorophenol
94757 2,3,4 2,4-Dichlorophenoxyacetic acid; see 2,4-D
609201 1 2,6-Dichloro-para-phenylenediamine
1836755 1,4 2,4-Dichlorophenyl p-nitrophenyl ether
26638197, 78875, 142289, 78999 1,2,3 Dichloropropanes
78875 1,2 1,2-Dichloropropane; see Dichloropropanes
8003198 2 Dichloropropene-dichloropropane (mixture)
26952238, 542756, 1,2,3,4 Dichloropropenes

78886
709988 4 3,4-Dichloropropionanilide; see Propanil
75990 2,3 2,2-Dichloropropionic acid
8003198 2 1,2-Dichloropropylene
76142 3 1,2-Dichloro-1,1,2,2-tetrafluoro-ethane (FC-114)
62737 2 2,2-Dichlorovinyl dimethyl phosphate; see Dichlorvos
62737 1,2,3 Dichlorvos
102307, 99309 2 Dicloran
115322 1,2 Dicofol; see 1,1-Bis(p-chlorophenyl)-2, 2,2-trichloroethanol
5124301 3 Dicyclohexylmethane-4,4'- diisocyanate
77736 3 Dicyclopentadiene
102545 3 Dicyclopentadienyl iron
60571 1,2,3,4 Dieldrin
84173 1 Dienestrol
1464535 1 Diepoxybutane 12
111422 3 Diethanolamine
109897 2,3 Diethylamine
100378 3 2-(Diethylamino)ethanol
12391 3 1,4-Diethylene dioxide; see p-Dioxane
111400 3 Diethylenetriamine
60297 3 Diethyl ether; see Ethyl ether
298044 3 O,O-Diethyl S-2-(ethylthio)ethyl phosphorodithioate; see Disulfoton
298022 3 O,O-Diethyl S-(ethylthio)methyl phosphorodithioate; see Phorate
103231 1 Di(2-ethylehexyl)adipate
117817 1 Di-(2-ethylhexyl) phthalate; see Phthalate esters
1615801 1 1,2-Diethylhydrazine
333415 3 O,O-Diethyl O-(2-isopropyl-6-methy-4-pyrimidinyl phosphorothioate; see Diazinon
96220 3 Diethyl ketone
115902, 115913 3,4 O,O-diethyl O-[4-(methylsufiny) phenyl] phosphorothioate (fensulfothion)
56382 3 O,O-Diethyl O-(p-nitrophenyl) phosphorothioate; see Parathion
84662 2,3 Diethyl phthalate; see Phthalate esters
56531 1 Diethylstilbestrol
64675 1 Diethyl sulfate
75616 3 Difluorodibromomethane; see Dibromodifluoromethane
2238075 3 Diglycidyl ether
101906 1 Diglycidyl resorcinol ether
1563662 2,3,4 2,3-Dihydro-2,2-dimethyl-7-benzo-furanyl methylcarbamate (carbofuran)
94586 1 Dihydrosafrole
123319 3 p-Dihydroxybenzene; see Hydroquinone
108463 2 meta-Dihydroxybenzene; see Resorcinol
794934 1 Dihydroxymethylfuratrizine
108838 3 Diisobutyl ketone
108189 3 Diisopropylamine
108203 3 Diisopropyl ether; see Isopropyl ether

828002	1	Dimethoxane
119904	1	3,3'-Dimethoxybenzidine
91930	1	3,3'-Dimethoxybenzidine-4,4'-diisocyanate
109875	3	Dimethoxymethane; see Methylal
6923224	3,4	3-(Dimethoxyphosphinyloxy)-N-methyl-cis-crotonamide (Monocrotophos)
127195	3	N,N-Dimethylacetamide
124403	2,3	Dimethylamine
60117	1,3	4-Dimethylaminoazobenzene
1300738	3	Dimethylaminobenzene; see Xylidine
55738540	1	trans-2-[(Dimethylamino) methylimino]-5-[2-(5-nitro-2-furyl)vinyl]-1,3,4-oxadiazole
121697	3	N,N-Dimethylaniline
108383	2,3	Dimethylbenzene; see Xylene, all isomers
119937	1	3,3'-Dimethylbenzidine
108849	3	1,3-Dimethylbutyl acetate; see sec-Hexyl acetate
79447	1	Dimethylcarbamoyl chloride
300765	2,3	0,0-Dimethyl 0-(1,2-dibromo-2,2-dichloroethyl) phosphate (Naled)
121755	3	O,O-Dimethyl S-(1,2-dicarboethoxyethyl) phosphorodithioate; see Malathion
8022002	3	O,O-Dimethyl O-(2-(ethylthio)-ethyl) phosphorothioate and O,O-Dimethyl S-(2-(ethylthio)-ethyl) phosphoro-thioate mixture; see Methyl demeton
68122	3	N,N-Dimethylformamide
108838	3	2,6-Dimethyl-4-heptanone; see Diisobutyl ketone
540738	1	1,2-Dimethylhydrazine
57147, 540738	1,3	Dimethylhydrazine (all isomers)
67641	3	Dimethyl ketone; see Acetone
115902, 115913	3,4	0,0-Dimethyl 0-[p-(methylsulfinyl)-phenyl]phosphorothioate (fensulfothion)
55389	3	O,O-dimethyl O-[3-methyl-4 (methylthio) phenyl] phosphorothioate; see Fenthion
298000	3	O,O-Dimethyl O-(p-nitrophenyl) phosphorothioate; see Methyl parathion
62759	1,3	N,N-Dimethylnitrosamine; see N-Nitrosodimethylamine
86500	2,3,4	0,0-Dimethyl S-(4-oxo-benzotri-azino-3-methyl) phosphorodithioate (Azinphos methyl)
105679	2	2,4-Dimethylphenol
1300716	2	Dimethylphenol; see Xylenol
121697	3	Dimethylphenylamine; see N,N-Dimethylaniline
10265926	4	0,S-Dimethyl phosphoramidothioate
950378	4	0,0-Dimethyl phosphorodithioate, S-

			ester with 4-(mercaptomethyl)-2-methoxy-02-1,3,4-thiadiazolin-5-one
77781		2,3	Dimethyl phthaltate; see Phthalate esters
77781		1,3	Dimethyl sulfate
299843		2,3	O,O-Dimethyl O-(2,4,5-trichlorophenyl) phosphorothioate; see Ronnel
148016		3	Dinitrolmide; see 3,5-Dinitro-o-toluamide
25154545, 99650, 100254, 528290		2,3	Dinitrobenzenes, all isomers
25154545		2	Dinitrobenzol; see Dinitrobenzenes, all isomers
534521		2,3,4	4,6-Dinitro-o-cresol
534521		2	Dinitrocresol; see Nitrophenols, all isomers
51285		2,4	2,4-Dinitrophenol; see Dinitrophenols
51285, 329715, 573568		2,4	Dinitrophenols
42397648		1	1,6-Dinitropyrene
43977659		1	1,8-Dinitropyrene
148016		3	3,5-Dinitro-o-toluamide
606202		2	2,6-Dinitrotoluene
121142		2	2,4-Dinitrotoluene
25321146, 121142, 121142, 606202, 610399, 602017, 619518		2,3	Dinitrotoluenes, all isomers
88857		4	Dinoseb
117840		2	Di-n-octyl phthalate
117817		3	Di-sec-octyl phthalate; see Phthalate esters
123911		3	1,4-Dioxacyclohexane; see p-Dioxane
123911		1,3	p-Dioxane
123911		1	1,4-Dioxane; see p-Dioxane
78342		3,4	2,3-p-Dioxanedithiol S,S-bis (0,0-diethyl phosphorodithioate) (dioxathion)
78342		3,4	Dioxathion; see 2,3-p-Dioxanedithiol S,S-bis (O,O-diethyl phosphorodithioate)
92524		3	Diphenyl; see Biphenyl
122394		3	Diphenylamine
57410		1	Diphenylhydantoin (Phenytoin)
630933		1	Diphenylhydantoin (Phenytoin), sodium salt
38622183		2	Diphenylhydrazine
122667		2	1,2-Diphenylhydrazine; see Hydrazobenzene
101688		3	Diphenylmethane diisocyanate; see Methylene bis(4-phenylisocyanate)
34590948		3	Dipropylene glycol monomethyl ether
123193		3	Dipropyl ketone
85007, 2764729		2,3	Diquat
1937377		1	Direct Black 38 (technical grade)
2602462		1	Direct Blue 6 (technical grade)

16071866	1	Direct Brown 95	
2475458	1	Disperse Blue 1	
97778	3	Disulfiram	
298044	2,3,4	Disulfoton	
298044	2,4	Disyston; see Disulfoton	
1189851	3	Di-tert-butyl chromate; see Chromium compounds	
330541	2,3	Diuron	
108576	3	Divinyl benzene	
27176870	2	Dodecylbenzenesulfonic acid	9
23214928	1	Doxorubicin hydrochloride; see Adriamycin	
60004	2	EDTA	
115297	2,3,4	Endosulfan	
959988	2	alpha-Endosulfan	
33213659	2	beta-Endosulfan	
1031078	2	Endosulfan-sulfate	
72208	2,3,4	Endrin	
7421934	2	Endrin aldehyde	
106898	1,2,3	Epichlorohydrin	12
2104645	3,4	EPN	
106876	1	1-Epoxyethyl-3,4-epixycyclohexane; see Vinyl cyclohexene dioxide	
4016142	3	1,2-Epoxy-3-isopropoxypropane; see Isopropyl glycidyl ether	
141377	1	3,4-Epoxy-6-methylcyclohexyimethyl-3,4-epoxy-6-methylcyclohexane carboxylate	
122601	3	1,2-Epoxy-3-phenoxypropane; see Phenyl glycidyl ether	
75569	3	1,2-Epoxypropane; see Propylene oxide	
556525	3	2,3-Epoxypropanol; see Glycidol	
12510428	1	Erionite	
75058	3	Ethanenitrile; see Acetonitrile	
75081	3	Ethanethiol; see Ethyl mercaptan	
64175	1,3	Ethanol; see Ethyl alcohol	
141435	3	Ethanolamine	
463514	3	Ethenone; see Ketene	
57636	1	Ethinyloestradiol	
563122	2,3,4	Ethion	
536334	1	Ethionamide	
110805	3	2-Ethoxyethanol; see Ethylene glycol monoethyl ether	
111159	3	2-Ethoxyethanol acetate; see Ethylene glycol monoethyl ether acetate	
141786	3	Ethyl acetate	
140885	1,3	Ethyl acrylate	
64175	1,3	Ethyl alcohol	13
75047	2,3	Ethylamine	
541855	3	Ethyl sec-amyl ketone	
100414	2,3	Ethylbenzene	
74964	3	Ethyl bromide	
106354	3	Ethyl butyl ketone	
75003	3	Ethyl chloride	
510156	1	Ethyl-4,4'-dichlorobenzilate; see Chlorobenzilate	
13194484	4	0-Ethyl S,S-dipropyl phosphorodithioate	

		(ethoprop)	
85007	3	1,1'-Ethylene-2,2'-bipyridinium dibromide; see Diquat	
107073	3	Ethylene chlorohydrin	
107153	2,3	Ethylenediamine	
106934	1,2,3,4,5	Ethylene dibromide	33
107062	1,2,3,4	Ethylene dichloride	
107211	3	Ethylene glycol	14
628966	3	Ethylene glycol dinitrate	
111762	2,3	Ethylene glycol monobutyl ether	
110805	3,5	Ethylene glycol monoethyl ether	
111159	3,5	Ethylene glycol monoethyl ether acetate	
109864	3,5	Ethylene glycol monomethyl ether	
110496	3,5	Ethylene glycol monomethyl ether acetate	
151564	1,3	Ethyleneimine	
75218	1,2,3,5	Ethylene oxide	12
420122	1	Ethylene sulphide	
96457	1	Ethylenethiourea	
79016	2	Ethylene trichloride; see Trichlorethylene	
60297	3	Ethyl ether	
109944	3	Ethyl formate	
75343	3	Ethylidene chloride	
16219753	3	Ethylidene norbornene	
75081	3	Ethyl mercaptan	
62500	1	Ethyl methanesulphonate	
563122	2	Ethyl methylene; see Ethion	
78933	3	Ethyl methyl ketone; see 2-Butanone	
22224926	3,4	Ethyl 3-methyl-4-(methylthio)-phenyl (1-methylethyl) phosphoramidate	
100743	3	N-Ethylmorpholine	
2104645	3	O-Ethyl O-(p-nitrophenyl) phenylphosphonothioate; see EPN	
759739	1	N-Ethyl-N-Nitrosourea; see N-Nitroso-N-ethylurea	
56382	2,4	Ethyl parathion; see Parathion	
78104	3	Ethyl silicate	
100743	3	4-Ethyl-1,4-tetrahydrooxazine; see N-Ethylmorpholine	
110805	3	2-Ethyoxyethanol; see Ethylene glycol monoethyl ether	
97530	1	Eugenol	
314136	1	Evans blue	
2353459	1	Fast Green FCF	
22224926	3,4	Fenamiphos; see Ethyl-3-methyl-4 (methylthio)phenyl (1-methylethyl) phosphoramidate	
115902	3	Fensulfothion; see O,O-Diethyl O-[4-(methylsulfinyl)phenyl] phosphorothioate	
55389	3	Fenthion	
101428	2	Fenuron	
4482557	2	Fenuron-TCA	
14484641	3,4	Ferbam	
1185575	2	Ferric ammonium citrate; see Iron salts, soluble	
2944674	2	Ferric ammonium oxalate; see Iron salts, soluble	

7705080 2 Ferric chloride; see Iron salts, soluble
14484641 3 Ferric N,N-dimethylthiocarbamate; see Ferbam
7783508 2 Ferric fluoride; see Iron salts, soluble
10421484 2 Ferric nitrate; see Iron salts, soluble
10028225 2 Ferric sulfate; see Iron salts, soluble
10045893 2 Ferrous ammonium sulfate; see Iron salts, soluble
7758943 2 Ferrous chloride; see Iron salts, soluble
7720787 2 Ferrous sulfate; see Iron salts, soluble
12604589 3 Ferrovanadium dust 3
206440 2 Fluoranthene
53963 3 n-Fluoren-2-yl-acetamide; see 2-Acetylamino-fluorene
2,3 Fluoride, and inorganic fluoride compounds
7782414 2,3 Fluorine
640197 4 Fluoroacetamide/1081
75694 3 Fluorocarbon 11; see Fluorotrichlormethane
75718 3 Fluorocarbon 12; see Dichlorodifluoromethane
75434 3 Fluorocarbon 21; see Dichloromonofluoromethane
75456 3 Fluorocarbon 22; see Chlorodifluoromethane
76120 3 Fluorocarbon 112; see 1,1,2,2-Tetrachloro-1,2-difluoroethane
76131 3 Fluorocarbon 113; see 1,1,2-Trichloro-1,2,2-trifluoroethane
76142 3 Fluorocarbon 114; see 1,2-Dichloro-1,1,2,2-tetrafluoroethane
75694 3 Fluorotrichloromethane
150505 4 Folex; see s,s,s-Tributyl phosphorotritthioite
133073 4 Folpet
944229 3,4 Fonofos
50000 1,2,3 Formaldehyde
75127 3 Formamide
64186 2,3 Formic acid
3570750 1 2-(2-Formylhydrazino)-4-(5-nitro-2-furyl) thiazole
110178 2 Fumaric acid 15
6164983 4 Fundal; see Chlordimeform
98011 2 2-Furaldehyde; see Furfural
98011 2,3 Furfural
98000 3 Furfuryl alcohol
6164983 4 Galecron; see Chlordimeform
8006619 3 Gasoline 16
7782652 3 Germanium tetrahydride
3 Glass, fibrous or dust 38
67730114 1 Glu-P-1 (2-Amino-6-methyldipyrido[1,2-a:3',2'-d]imidazole
67730103 1 Glu-P-2 (2-Aminodipyrido[1,2-a:3',2'-d]imidazole)

111308	3	Glutaraldehyde	
765344	1	Glycidaldehyde	
556525	3	Glycidol	12
7782425	3	Graphite	17
126078	1	Griseofulvin	
4680788	1	Guinea Green B	
86500	2	Guthion; see O,O-Dimethyl S-(4-oxobenzotriazino-3-methyl) phosphorodithioate	
16568028	1	Gyromitrin (Acetaldehyde methylformylhydrazone)	
822060	3	HDI; see Hexamethylene diisocyanate	
7440586	3	Hafnium	
	2	Haloethers (other than those listed elsewhere, includes chloro-phenylphenyl ethers, bromophenylphenyl ether, bis(dichloroisopropyl) ether, bis (chloroethoxy) methane and polychlorinated diphenyl ethers)	
	2	Halomethanes	
2784943		HC Blue 1	
76448	1,2,3,4	Heptachlor	
1024573	2	Heptachlor epoxide	
76448	3	1,4,5,6,7,8,8,-Heptachloro-3a, 4,7,7a-tetrahydro-4,7-methanoindene; see Heptachlor	
142845	3	n-Heptane	
106354	3	3-Heptanone; see Ethyl butyl ketone	
110430	3	2-Heptanone; see Methyl n-amyl ketone	
118741	1,2	Hexachlorobenzene; see Benzene hexachloride	
87683	1,2,3	Hexachlorobutadiene	
608731	2	Hexachlorocyclohexane	
	1	Hexachlorocyclohexanes	
77474	2,3	Hexachlorocyclopentadiene	
72208	3	1,2,3,4,10,10-Hexachloro-6,7-epoxy-, 1,4,4a,5,6,7,8,8a-octahydro-1,4,-endo-endo-5,8-dimethano naphthalene and methabolites; see Endrin	
60571	3	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4,-endo-exo-5,8-dimethanonaphthalene; see Dieldrin	
67721	1,2,3	Hexachloroethane	
115297	3	6,7,8,9,10,10-Hexachloro-1,5,5a,6,9,9a-hexahydro-6,9-methano-2,4,3-benzodioxathiepin-3-oxide; see Endosulfan	
309002	3	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-endo-1,2-exo-5,8-dimethanonaphthalene; see Aldrin	
1335871	2,3	Hexachloronaphthalene	
70304	2	Hexachlorophene (HCP)	
684162	3	Hexafluoroacetone	
684162	3	1,1,1,3,3,3,-Hexafluoro-2-propanone; see Hexafluoroacetone	

822060	3	Hexamethylene diisocyanate
680319	1	Hexamethylphosphoramide
	3	Hexane (all isomers)
591786	3	2-Hexanone; see Methyl n-butyl ketone
108101	3	Hexone; see Methyl isobutyl ketone
108849	3	sec-Hexyl acetate
107415	3	Hexylene glycol
86544	1	Hydralazine
302012	1,3	Hydrazine
10035106	3	Hydrobromic acid; see Hydrogen bromide
7647010	2,3	Hydrochloric acid; see Hydrogen chloride
74908	2,3,4	Hydrocyanic acid; see Hydrogen cyanide
7664393	2,3	Hydrofluoric acid; see Hydrogen fluoride
1333740	3	Hydrogen
5124301	3	Hydrogenated MDI; see Dicyclohexylmethane-4,4'-diisocyanate
	3	Hydrogenated terphenyls
10035106	3	Hydrogen bromide
7647010	2,3	Hydrogen chloride
74908	2,3,4	Hydrogen cyanide
7664393	2,3	Hydrogen fluoride
7722841	1,3	Hydrogen peroxide
7783075	2	Hydrogen selenide; see Selenium and selenium compounds
7783064	2,3	Hydrogen sulfide
123319	3	Hydroquinone
141662	3,4	3-Hydroxy-N,N-dimethyl-cis-croto-namide dimethyl phosphate (dicrotophos)
6923224	3	3-Hydroxy-N-methyl-cis-crotonamide dimethyl phosphate; see 3-(Dimethoxyphosphinyloxy)-N-methyl-ciscrotonamide
123422	3	4-Hydroxy-4-methyl-2-pentanone
999611	3	Hydroxypropyl acrylate
4016142	3	IGE; see Isopropyl glycidyl ether
4098719	3	IPDI; see Isophorone diisocyanate
76180966	1	IQ; (2-Amino-3-methylimidazo[4,5-f]quinoline)
95316	3	Indene
193395	1,2	Indeno(1,2,3-cd)pyrene
	2,3	Indium and indium compounds
7553562	3	Iodine
75478	3	Iodoform
7439896	2	Iron
9004664	1	Iron dextran
8050939	1	Iron-dextrin complex
1309371	3	Iron oxide fume
13463406	3	Iron pentacarbonyl
	2,3	Iron salts, soluble 18
15503863	1	Isatidine
12392	3	Isoamyl acetate; see Amyl acetate
123513	3	Isoamyl alcohol
110190	3	Isobutyl acetate (2-methylpropyl acetate)
78831	3	Isobutyl alcohol

78819 2 Isobutylamine; see Butylamine, all isomers
54853 1 Isonicotinic acid hydrazide (Isoniazid)
26952216 3 Isooctyl alcohol
78591 2,3 Isophorone
4098719 3 Isophorone diisocyanate
3778732 1 Isophosphamide
78795 2 Isoprene
42504461 2 Isopropanolamine dodecyl-benzenesulfonate 9
109591 3 Isopropoxyethanol
114261 3 2-Isopropoxyphenyl N-methylcarbamate (propoxur)
108214 3 Isopropyl acetate
67630 1,3 Isopropyl alcohol
75310 3 Isopropylamine
643287 3 N-Isopropylaniline
98828 3 Isopropylbenzene; see Cumene
108203 3 Isopropyl ether
4016142 3 Isopropyl glycidyl ether 12
120581 1 Isosafrole
115322 2 Kelthane; see 1,1-Bis(p-chlorophenyl)-2,2,2-trichloroethanol
143500 1,2 Kepone; see Chlordecone
463514 3 Ketene
16752775 4 Lannate; see S-Methyl N-((methyl carbamoyl)oxy)-thioacetimidate
303344 1 Lasiocarpine
7439921 1,2,3 Lead 3
301042 2 Lead acetate; see Lead compounds
7784409, 7645252, 10102480 2,3 Lead arsenate; see Lead compounds
7758954 2 Lead chloride; see Lead compounds
7758976 3 Lead chromate; see Chromium compounds
1,2,3 Lead compounds
13814965 2 Lead fluoborate; see Lead compounds
7783462 2 Lead fluoride; see Lead compounds
10101630 2 Lead iodide; see Lead compounds
10099748 2 Lead nitrate; see Lead compounds
7446277 1 Lead phosphate; see Lead compounds
7428480, 1072351, 52652592 2 Lead stearate; see Lead compounds
1335326 1 Lead subacetate; see Lead compounds
7446142 2 Lead sulfate; see Lead compounds
1314870 2 Lead sulfide; see Lead compounds
78002 2,3 Lead tetraethyl; see Lead compounds
75741 3 Lead tetramethyl; see Lead compounds
592870 2 Lead thiocyanate; see Lead compounds
5141208 1 Light Green SF
58899 2,3,4 Lindane and other Hexachlorocyclohexane isomers
330552 2 Linuron
14307358 2 Lithium chromate; see Chromate compounds
7580678 3 Lithium hydride
21884446 1 Luteoskyrin

101144	3	MBOCA; see 4,4'-Methylene bis(2-chloroaniline)
94746	4	MCPA (2-methyl-4-chloro-phenoxyacetic acid)
101779	3	MDA; see 4,4'-Methylene dianiline
101688	3	MDI; see Methylene bis(4-phenylisocyanate)
68006837	1	MeA-a-C (2-Amino-3-methyl-9H-pyrido [2,3-b]indole)
78933	3	MEK; see 2-Butanone
101144	1	MOCA; see 4,4'-Methylene bis(2-chloroaniline)
	1	MOPP
7439954	2	Magnesium
1309484	3	Magnesium oxide 3
121755	2,3	Malathion
110167	2	Maleic acid
108316	2,3	Maleic anhydride
7439965	2,3	Manganese 3
	3	Manganese compounds
12079651	3	Manganese, cyclopentadienyl-tricarbonyl
1317537	3	Manganese tetroxide; see Manganese compounds
551746	1	Mannomustine
71589	1	Medroxyprogesterone acetate
148823	1	Melphalan
2032657	2	Mercaptodimethur
592041	2	Mercuric cyanide; see Mercury and mercury compounds
10045940	2	Mercuric nitrate; see Mercury and mercury compounds
7783359	2	Mercuric sulfate; see Mercury and mercury compounds
592858	2	Mercuric thiocyanate; see Mercury and mercury compounds
7782867	2	Mercurous nitrate; see Mercury and mercury compounds
	2,3,4	Mercury and mercury compounds
531760	1	Merphalan
108678	3	Mesitylene; see Trimethylbenzene (all isomers)
141797	3	Mesityl oxide
72333	1	Mestranol
2032657	2	Mesurol; see Mercaptodimethur
79414	3	Methacrylic acid
74931	2,3	Methanethiol; see Methyl mercaptan
67561	3	Methanol; see Methyl alcohol
2032657	2	Methiocarb; see Mercaptodimethur
16752775	3,4	Methomyl; see 5-Methyl N-[(methylcarbamoyl)oxy]-thioacetanide
298817	1	Methoxsalen (with ultraviolet therapy)
72435	2,3	Methoxychlor
109864	3	2-Methoxyethanol; see Ethylene glycol monomethyl ether
110496	3	2-Methoxyethyl acetate; see Ethylene

		glycol monomethyl ether acetate	
150765	3	4-Methoxyphenol	
484208		5-Methoxypsoralen	
298817	1	8-Methoxypsoralen; see Methoxsalen	
79209	3	Methyl acetate	
74997	3	Methyl acetylene	
	3	Methyl acetylene-propadiene mixture	
123739	3	beta-Methylacrolein; see Crotonaldehyde	
96333	3	Methyl acrylate	
126987	3	alpha-Methylacrylonitrile	
109875	3	Methylal	
67561	3	Methyl alcohol	30
74895	2,3	Methylamine	
108112	3	Methyl amyl alcohol; see Methyl isobutyl carbinol	
110430	3	Methyl n-amyl ketone	
	1	5-Methylangelicin	
100618	3	N-Methylaniline	
95534	1,3	o-Methylaniline	
75558	1,3	2-Methylaziridine	
590965	1	Methylazoxymethanol	
592621	1	Methylazoxymethyl acetate	
74839	1,2,3,4	Methyl bromide	
78795	2	2-Methyl-1,3-butadiene; see Isoprene	
123513	3	3-Methylbutanol; see Isoamyl alcohol	
123922	3	3-Methylbutyl acetate; see Amyl acetate, all isomers	
591786	3	Methyl n-butyl ketone	
13909096	1	Methyl-CCNU; see 1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea	
109864	5	Methyl CellosolveRegistered; see Ethylene glycol monomethyl ether	
74873	2,3	Methyl chloride	
71556	2,3	Methyl chloroform	
107302	1,3	Methyl chloromethyl ether	31
3351324	1	2-Methylchrysene	
3351313	1	3-Methylchrysene	
3351302	1	4-Methylchrysene	
3697243	1	5-Methylchrysene	
1705857	1	6-Methylchrysene	
75058	3	Methyl cyanide; see Acetonitrile	
137053	3	Methyl 2-cyanoacrylate	
108872	3	Methylcyclohexane	
1331233, 591231, 583595, 25639423	3	Methylcyclohexanol, all isomers	
583608	3	o-Methylcyclohexanone	
12108133	3	2-Methylcyclopentadienyl manganese tricarbonyl	
8022002	3	Methyl demeton	
534521	2,3	2-Methyl-4,6-dinitrophenol; see 4,6-Dinitro-O-cresol	
99809	1	N-Methyl-N,4-Dinitrosoaniline	
75092	1,2,3,5	Methylene chloride	
101144	1,3	4,4'-Methylene bis(2-chloroaniline)	
5124301	3	Methylene bis(4-cyclohexylisocyanate);	

		see Dicyclohexylmethane-4,4'-diisocyanate
101611	1	4,4'-Methylene bis(N,N-dimethyl)benzenamine
838880	1	4,4'-Methylene bis(2-methylaniline)
101688	3	Methylenebis(4-phenyl isocyanate)
101779	1,3	4,4'-Methylenedianiline
13552448		4,4'-Methylenedianiline dihydrochloride
78933	3	Methyl ethyl ketone; see 2-Butanone
1338234	3	Methyl ethyl ketone peroxide
33543316	1	2-Methylfluoranthene
107313	3	Methyl formate
541855	3	5-Methyl-3-heptanone; see Ethyl sec-amyl ketone
60344	3	Methyl hydrazine
74884	1,3	Methyl iodide
110123	3	Methyl isoamyl ketone
108112	3	Methyl isobutyl carbinol
108101	3	Methyl isobutyl ketone
624839	3	Methyl isocyanate
563804	3	Methyl isopropyl ketone
74931	2,3	Methyl mercaptan
80626	2,3	Methyl methacrylate
66273	1	Methyl methanesulfonate
16752775	3,4	S-Methyl N-[(methylcarbamoyl)oxy]-thioacetamidate (Methomyl)
80626	2,3	Methyl 2-methyl-2-propenoate; see Methyl methacrylate
129157	1	2-Methyl-1-nitroanthraquinone
70257	1	N-Methyl-N'-nitro-N-nitroso-guanidine
684935	1	N-Methyl-N-Nitrosourea; see N-Nitroso-N-methylurea
615532	1	N-Methyl-N-Nitrosourethane; see N-Nitroso-N-methylurethane
298000	2,3,4	Methyl parathion
108112	3	4-Methyl-2-pentanol; see Methyl isobutyl carbinol
141797	3	4-Methyl-3-pentene-2-one; see Mesityl oxide
108849	3	4-Methyl-2-pentyl acetate; see sec-Hexyl acetate
98839	3	1-Methyl-l-phenylethene; see alpha Methylstyrene
78831	3	2-Methylpropanol; see Isobutyl alcohol
110190	3	2-Methylpropyl acetate; see Isobutyl acetate
107879	3	Methyl propyl ketone; see 2-Pentanone
54115	3	1-Methyl-2-(3-pyridyl) pyrrolidine; see Nicotine
681845	3	Methyl silicate
98839	3	alpha-Methylstyrene
77781	3	Methyl sulfate; see Dimethyl sulfate
58184	1	Methyl testosterone
56042	1	Methylthiouracil

484208 1 5-Methyoxypsoralen
443481 1 Metronidazole
7786347 2,3,4 Mevinphos; see alpha-2-Carbomethoxy-1-methylvinyl dimethyl phosphate
315184 2 Mexacarbate
12001262 3 Mica 19
3 Mineral wool fiber
2385855 1,2 Mirex
50077 1 Mitomycin C
13194484 4 Mocap; see O-Ethyl S,S dipropyl phosphorodithioate
2212671 4 Molinate
7439987 2,3 Molybdenum 3
3 Molybdenum compounds 20
10265926 4 Monitor; see O,S-Dimethyl phosphoramidothioate
108907 2,3 Monochlorobenzene; see Chlorinated benzenes
315220 1 Monocrotaline
6923224 3,4 Monocrotophos; see 3-(Dimethoxyphosphinyloxy)-N-methyl-cis-crotonamide
75047 2 Monoethylamine; see Ethylamine
74895 2 Monomethylamine; see Methylamine
100618 3 Monomethylaniline; see N-Methylaniline
60344 3 Monomethyl hydrazine; see Methyl hydrazine
150685 1,2 Monuron
140410 2 Monuron-TCA
110918 3 Morpholine
139913 1 5-(Morpholinomethyl)-3-[(5-nitrofurfurylidene)-amino] -2-oxazolidinone
7647010 2 Muriatic acid; see Hydrogen chloride
505602 1 Mustard Gas
25551284 3 NDI; see Naphthalene diisocyanate
139139 2 NTA; see Nitrilotriacetic acid
3771195 1 Nafenopin
300765 3 Naled; see O,O-Dimethyl O-(1,2-dibromo-2,2 dichloroethyl) phosphate
8030317 3 Naphtha, coal tar
91203 2,3 Naphthalene
2243621 1 1,5-Naphthalenediamine
25551284 3 Napthalene diisocyanate
1338245 2 Naphthenic acid
134327 3 1-Naphthylamine; see alpha-Naphthylamine
91598 1 2-Naphthylamine; see beta-Naphthylamine
134327 3 alpha-Naphthylamine
91598 1,3 beta-Naphthylamine 31
63252 3 1-Naphthyl N-methylcarbamate; see Carbaryl

86884	3	1-(1-Naphthyl)-2-thiourea
22224926	4	Nemacur; see Ethyl 3-methyl-4-(methylthio) phenyl (1-methyl ethyl) phosphoramidate
563122	2	Nialate; see Ethion
7440020	1,2,3	Nickel 3
15699180	2	Nickel ammonium sulfate; see Nickel compounds
13463393	3	Nickel carbonyl; see Nickel compounds
37211055	2	Nickel chloride; see Nickel compounds
7718549	1,2,3	Nickel compounds
12054487	2	Nickel hydroxide; see Nickel compounds
14216752	2	Nickel nitrate; see Nickel compounds
12035722	1	Nickel subsulphide; see Nickel compounds
778614	2	Nickel sulfate; see Nickel compounds
54115	3,4	Nicotine
56382	2	Niran; see Parathion
61574	1	Niridazole
139946	1	Nithiazide
1929824	3	Nitrapyrin; see 2-Chloro-6-(trichloromethyl) pyridine
7697372	2,3	Nitric acid
10102439	3	Nitric oxide
139139	2	Nitrilotriacetic acid
602879	1	5-Nitroacenaphthene
100016	3	p-Nitroaniline
99592	1	5-Nitro-o-anisidine
98953	2,3	Nitrobenzene
100005	3	p-Nitrochlorobenzene
7496028	1	6-Nitrochrysene
92933	3	4-Nitrodiphenyl 31
79243	3	Nitroethane
1836755	1	Nitrofen (technical grade); see 2,4-Dichlorphenyl p-nitrophenyl ether
607578	1	2-Nitrofluorene
59870	1	Nitrofurazone
555840	1	1-[(5-Nitrofurfurylidene)-amino]-2-imidazolidinone
531828	1	N-4-[(5-Nitro-2-furyl)- 2-thiazolyl] acetamide
10102440	2,3	Nitrogen dioxide
51752, 55867	1	Nitrogen mustard and its hydrochloride
302705, 126852	1	Nitrogen mustard N-oxide and its hydrochloride
10102440	2,3	Nitrogen tetroxide; see Nitrogen dioxide
7783542	3	Nitrogen trifluoride
55630	3	Ntroglycerin
75525	3	Nitromethane
25154556, 554847, 88755, 100027	2	Nitrophenols, all isomers
79469	1,3	2-Nitropropane; see Nitropropanes
108032, 794691	3	Nitropropanes
57835924	1	4-Nitropyrene
5522430	1	1-Nitropyrene
	2	Nitrosamines
1133648	1	N'-Nitrosoanabasine

924163 1 N-Nitroso-di-n-butylamine
1116547 1 N-Nitrosodiethanolamine
55185 1 N-Nitrosodiethylamine
62759 1,2,3 N-Nitrosodimethylamine
86306 1,2 N-Nitrosodiphenylamine
621647 1,2 N-Nitroso-di-n-propylamine
759739 1 N-Nitroso-N-ethylurea
60153493 1 3-(N-Nitrosomethylamino)propionitrile
64091914 1 4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)
10595956 1 N-Nitrosomethylethylamine
684935 1 N-Nitroso-N-methylurea
615532 1 N-Nitroso-N-methylurethane
4549400 1 N-Nitrosomethylvinylamine
59892 1 N-Nitrosomorpholine
16543558 1 N-Nitrosonornicotine
100754 1 N-Nitrosopiperidine
930552 1 N-Nitrosopyrrolidine
13256229 1 N-Nitrososarcosine
1321126, 88722, 99081, 99990 2,3 Nitrotoluenes
76062 3 Nitrotrichloromethane; see Chloropicrin
10024972 3 Nitrous oxide
111842 3 Nonane
68224 1 Norethisterone
51989 1 Norethisterone acetate
2698411 3 OCBM; see O-Chlorobenzylidine malonitrile
152169 4 OMPA; see Schradan
303479 1 Ochratoxin A
2234131 2,3 Octachloronaphthalene
57749 3 1,2,4,5,6,7,8,8-Octachloro 3a,4,7,7a,-tetrahydro-4,7-methanoindane; see Chlordane
111659 3 Octane
50282 1 Oestradiol-17B
22966796 1 Oestradiol mustard
1 Oestrogens, steroidal
1 Oestrogens, nonsteroidal
53167 1 Oestrone
1,2,3 Oil mist, particulate 21
2646175 1 Oil orange SS
1 Oral contraceptives, certain Oestrogen-progestin combinations
20816120 3 Osmium tetroxide
144627 3 Oxalic acid
604751 1 Oxazepam
301122 4 Oxydemetonmethyl
7783417 3 Oxygen difluoride
10028156 3 Ozone 22
1,2,3 PCB; see Polychlorobiphenyls
12674112 2 PCB-1016; see Polychlorobiphenyls
11104282 2 PCB-1221; see Polychlorobiphenyls
11141165 2 PCB-1232; see Polychlorobiphenyls
53469219 2 PCB-1242; see Polychlorobiphenyls
12672296 2 PCB-1248; see Polychlorobiphenyls

11097691	2	PCB-1254; see Polychlorobiphenyls
11096825	2	PCB-1260; see Polychlorobiphenyls
82688	2	PCNB; see Quintozene (Pentachloronitrobenzene)
87865	2,3	PCP; see Pentachlorophenol
6423434	3	PGDN; see Propylene glycol dinitrate
122601	3	PGE; see Phenyl glycidyl ether
7440053	2	Palladium
794394	1	Panfuran S; see Dihydroxymethylfuratrizine
8002742	3	Paraffin wax fume
30525894	2	Paraformaldehyde
2074502, 1910425	3,4	Paraquat
10048325	1	Parasorbic acid
56382	2,3,4	Parathion
90653	1	Penicillic acid
19624227	3	Pentaborane
76017	1	Pentachloroethane
1321648	2,3	Pentachloronaphthalene
87865	2,3	Pentachlorophenol
109660	3	Pentane
107879	3	2-Pentanone
77474	2	Perchlorocyclopentadiene; see Hexachlorocyclo-pentadiene
67721	3	Perchloroethane; see Hexachloroethane
127184	1,2,3,5	Perchloroethylene
594423	3	Perchloromethyl mercaptan
7616946	3	Perchloryl fluoride
72560	2	Perthane
60102376	1	Petasitenine
62442	1	Phenacetin
532274	3	Phenacyl chloride; see alpha-Chloroacetophenone
85018	2	Phenanthrene
136403, 94780	1	Phenazopyridine and its hydrochloride
156514	1	Phenelzine sulphate
103037	1	Phenicarbazide
50066	1	Phenobarbital
108952	2,3	Phenol
	2	Phenolic compounds (4AAP)
	2	Phenols
92842	3	Phenothiazine
59861, 63923	1	Phenoxybenzamine and its hydrochloride
122394	3	n-Phenylaniline; see Diphenylamine
92524	3	Phenylbenzene; see Biphenyl
100470	2	Phenyl cyanide; see Benzonitrile
106503	3	p-Phenylenediamine
100414	2	Phenylethane; see Ethylbenzene
101848	3	Phenyl ether, vapor 14
100425	2,3	Phenylethylene; see Styrene, monomer
122601	1,3	Phenyl glycidyl ether 12
100630	3	Phenylhydrazine
108985	3	Phenyl mercaptan
135886	1	N-Phenyl-2-naphthylamine
132274	1	o-Phenylphenate, sodium; see

		Sodium ortho-phenylphenate
638211	3	Phenylphosphine
57410	1	Phenytoin; see Diphenylhydantoin
298022	3,4	Phorate
4104144	4	Phosacetim
7786347	2,4	Phosdrin; see alpha-2-Carbomethoxy-1-methylvinyl dimethyl phosphate
75445	2,3	Phosgene
13171216	4	Phosphamidon
7803512	3	Phosphine
7664382	2,3	Phosphoric acid
563122	2	Phosphorodithioate; see Ethion
7723140	2,3	Phosphorus
10025873	2,3	Phosphorus oxychloride
10026138	3	Phosphorus pentachloride
1314803	2,3	Phosphorus pentasulfide
7719122	2,3	Phosphorus trichloride
121755	2	Phosphothion; see Malathion
	1,2,3	Phthalate esters 36
85449	3	Phthalic anhydride
626175	3	m-Phthalodinitrile
1918021	1,3,4	Picloram
88891	3	Picric acid
83261	3	Pindone; see 2-Pivalyl-1,3-indandione
142643	3	Piperazine dihydrochloride
83261	3	2-Pivalyl-1,3-indandione (pindone)
744064	2,3	Platinum, metal
	3	Platinum, soluble salts
	1	Polybrominated biphenyls
1336363, 53449219,	1,2,3	Polyhlorobiphenyls
11097691	2	Polychlorinated biphenyls; see Polychlorobiphenyls
	2	Polycyclic Organic Matter; see Polynuclear aromatic hydrocarbons
	1,2	Polynuclear aromatic hydrocarbons 23
	3	Polytetrafluoroethylene, decomposition products
9003398	1	Polyvinyl pyrrolidone
3761533	1	Ponceau MX
3564098	1	Ponceau 3R
7440097	2	Potassium
7784410	2	Potassium arsenate; see Arsenic and arsenic compounds
10124502	2	Potassium arsenite; see Arsenic and arsenic compounds
7778509	2	Potassium bichromate; see Chromuim compounds
23746341	1	Potassium bis(2-hydroxyethyl) dithiocarbamate
7758012	1	Potassium bromate
7789006	2	Potassium chromate; see Chromium compounds
151508	2	Potassium cyanide; see Cyanides, inorganic salts
1310583	2,3	Potassium hydroxide
7722647	2	Potassium permanganate

366701 1 Procarbazine hydrochloride
57830 1 Progesterone
1 Progestins
51025 1 Pronetalol hydrochloride
120714 1 1,3-Propane sultone
709988 4 Propanil
2312358 2,4 Propargite
107197 3 Propargyl alcohol
122429 2 Propham
57578 1,3 beta-Propiolactone
79094 2,3 Propionic acid
123626 2 Propionic anhydride
114261 2,3 Propoxur; see 2-Isopropoxyphenyl N-methylcarbamate
109604 3 n-Propyl acetate
71238 3 n-Propyl alcohol
627123 1 n-Propyl carbamate
115071 3 Propylene
78875 2,3 Propylene dichloride; see Dichloropropanes
6423434 3 Propylene glycol dinitrate
107982 3 Propylene glycol monomethyl ether
75558 3 Propyleneimine; see 2-Methylaziridine
75569 1,2,3 Propylene oxide 12
627134 3 n-Propyl nitrate
51525 1 Propylthiouracil
74997 3 Propyne; see Methylacetylene
107197 3 2-Propyn-l-ol; see Propargyl alcohol
87625625 1 Ptaquiloside
129000 2 Pyrene
121299, 121211 2 Pyrethrins
8003347 3 Pyrethrum
110861 3 Pyridine
58140 1 Pyrimethamine
120809 3 Pyrocatechol; see Catechol
98011 2 Pyromucic aldehyde; see Furfural
117359 1 Quercetin
91225 2 Quinoline
106514 3 Quinone
82688 1 Quintozene (Pentachloronitrobenzene)
121824 3 RDX; see Cyclotrimethylenetrinitramine
2 Radionuclides
13982633 2 Radium 226
10043922 1 Radon
86884 3 Ratrack; see l-(1-Naphthyl)-2-thiourea
50555 1 Reserpine
108463 2,3 Resorcinol
480546 1 Retrorsine
989388 1 Rhodamine 6G
81889 1 Rhodamine B
7440166 3 Rhodium 3
3 Rhodium compounds
36791045 5 Ribavirin
13292461 1 Rifampicin
299843 2,3 Ronnel
3 Rosin core solder, pyrolysis products24

83794	3	Rotenone, commercial	
	3	Rubber solvent (naphtha)	
8047674	1	Saccharated iron oxide	
94597	1	Safrole	
152169	4	Schradan	
	2,3	Selenium and selenium compounds	
7783791	3	Selenium hexafluoride; see Selenium and selenium compounds	
7446084	2	Selenium oxide; see Selenium and selenium compounds	
563417	1	Semicarbazide hydrochloride	
2318185	1	Senkirkine	
136787	3	Sesone; see Sodium 2-(2,4-dichlorophenoxy) ethyl sulfate	
63252	2,4	Sevin; see Carbaryl	
68308349	1	Shale-oils	
1982496	2	Siduron	
7803625	3	Silane	
7631869	1,3	Silica	25, 35
7803625	3	Silicon tetrahydride; see Silane	
7440224	2,3	Silver	3
	2,3	Silver compounds	26
7761888	2	Silver nitrate; see Silver compounds	
93721	2,4	Silvex; see 2,4,5 TP acid	
	3	Soapstone	19
7440235	2	Sodium	
7631892	2	Sodium arsenate; see Arsenic and arsenic compounds	
7784465	2	Sodium arsenite; see Arsenic and arsenic compounds	
26628228	3	Sodium azide	
10588019	2	Sodium bichromate; see Chromium compounds	
1333831	2	Sodium bifluoride; see Fluoride and fluoride compounds	
7631905	2,3	Sodium bisulfite	
7775113	2	Sodium chromate; see Chromium compounds	
143339	2,4	Sodium cyanide; see Cyanides, inorganic salts	
136787	3	Sodium 2-(2,4-dichlorophenoxy)-ethyl sulfate	
25155300	2	Sodium dodecylbenzene-sulfonate	9
7681494	2	Sodium fluoride; see Fluoride and fluoride compounds	
62748	3,4	Sodium fluoroacetate	
16721805	2	Sodium hydrosulfide	
1310732	2,3	Sodium hydroxide	
7681529	2	Sodium hypochlorite	
7681574	3	Sodium metabisulfite	
124414	2	Sodium methylate	
7632000	2	Sodium nitrite	
132274	1	Sodium ortho-phenylphenate	
7558794, 10039324, 10140655	2	Sodium phosphate, dibasic	
778544, 7601549, 10101890, 10361894,	2	Sodium phosphate, tribasic	

7758294, 10124568
10102188 2 Sodium selenite; see Selenium and selenium compounds
1 Soots, tars, and certain mineral oils
52017 1 Spironolactone
7745893 4 Starlicide; see 3-Chloro-p-toluidine hydrochloride
10048132 1 Sterigmatocystin
7803523 3 Stibine; see Antimony compounds
8052413 3 Stoddard solvent
18883664 1 Streptozotocin
7440246 2 Strontium
7789062 2 Strontium chromate; see Chromium compounds
57249 2,3,4 Strychnine
100425 1,2,3 Styrene, monomer
96093 1 Styrene oxide
1395217, 9014011 3 Subtilisins (proteolytic enzymes)
108305 1 Succinic anhydride
842079 1 Sudan I
3118976 1 Sudan II
95067 1 Sulfallate
723466 1 Sulfamethoxazole
3689245 3,4 Sulfotepp; see Tetraethyl dithiopyrophosphate
7704349 2 Sulfur
10025679 2 Sulfur chloride; see Sulfur monochloride
7446095 3 Sulfur dioxide
2551624 3 Sulfur hexafluoride
7664939 2,3 Sulfuric acid
7790945 2 Sulfuric chlorohydrin; see Chlorosulfonic acid
10025679 2,3 Sulfur monochloride
5714227 3 Sulfur pentafluoride
7783600 3 Sulfur tetrafluoride
2699798 3 Sulfuryl fluoride
35400432 3 Sulprofos
950378 4 Surpracide; see O,O-Dimethyl phosphorodithioate, S-ether with 4-(mercaptomethyl)-2-methoxy-O2-1,3,4-thiadiazolin-5-one
1918189 2 Swep
8065483 4 Systox; see Demeton
93765 2,3,4 2,4,5-T; 2,4,5-Trichloro-phenoxyacetic acid
6369966, 6369977, 1319728, 3813147 2 2,4,5-T amines
2545597, 93798, 61792072, 1928478, 25168154 2 2,4,5-T esters; 2,4,5-trichlorophenoxyacetic acid esters
13560991 2 2,4,5-T salt; acetic acid, 2,4,5-trichlorophenoxy- sodium salt
93721 2,4 2,4,5-TP acid; propanoic acid, 2-(2,4,5-trichlorophenoxy)-
32534955 2 2,4,5-TP ester; propanoic acid,

2-(2,4,5-trichlorophenoxy)-, isooctyl ester)
1746016 1,2 TCDD; see 2,3,7,8-Tetrachlorodibenzo-p-dioxin
78308 3 TCP; see Tri-o-creysl phosphate
72548 2,4 TDE
584849 3 TDI; see Tolulene-2,4-diisocyanate
3689245 3 TEDP; see Tetraethyl dithionopyrophosphate
107493 2,3,4 TEPP; see Tetraethyl pyrophosphate
109999 3 THF; see Tetrahydrofuran
118967 3 TNT; see 2,4,6-Trinitrotoluene
115866 3 TPP; see Triphenyl phosphate
14807966 1,3 Talc 19
1 Tannic acid and tannins
7440257 2,3 Tantalum 3
1314610 3 Tantalum oxide
10028167 3 Tellurium 3
3 Tellurium compounds
7783804 3 Tellurium hexafluoride; see Tellurium compounds
3383968 3 Temephos; see Tetramethyl O, O'-thio-di-p-phenylene phosphorothiate
8001501 1 Terpene polychlorinates (Strobane6Registered)
3 Terphenyls
58220 1 Testosterone (and its esters)
315377 1 Testosterone enanthate
79276 3 1,1,2,2-Tetrabromoethane; see Acetylene tetrabromide
1746016 1,2 2,3,7,8-Tetrachlorodibenzo-p-dioxin
76119 3 1,1,1,2-Tetrachloro-2, 2-difluoroethane
72548 2 Tetrachlorodiphenylethane; see TDE
603206 1 1,1,1,2-Tetrachloroethane
76120 3 1,1,2,2-Tetrachloro-1,2- difluoroethane (FC-112)
79345 1,2,3 1,1,2,2-Tetrachloroethane; see Acetylene tetrachloride
127184 2,3,5 Tetrachloroethylene; see Perchloroethylene
56235 2,3 Tetrachloromethane; see Carbon tetrachloride
1335882 2,3 Tetrachloronaphthalene
961115 1 Tetrachlorvinphos
3689245 3,4 Tetraethyl dithiopyrophosphate (Sulfotepp)
78002 2 Tetraethyl lead; see Lead compounds
107493 2,3,4 Tetraethyl pyrophosphate
78104 3 Tetraethyl silicate; see Ethyl silicate
109999 3 Tetrahydrofuran
110918 3 Tetrahydro-4H-1-4-oxazine; see Morpholine
75741 3 Tetramethyl lead; see Lead compounds
681845 3 Tetramethyl silicate; see Methyl silicate
3383968 3 Tetramethyl 0,0'-thio-di-p-phenylene

		phosphorothioate (temephos)
3333526	3	Tetramethyl succinonitrile (decomposition product of 2,2'-azobisisobutyronitrile)
137268	3	Tetramethyl thiuran disulfide; see Bis(dimethylthiocarbamoyl) disulfide
509148	3	Tetranitromethane
7722885	3	Tetra sodium pyrophosphate
479458	3	Tetryl
7440280	2	Thallium 3
	2,3	Thallium compounds
10031591, 7446186	2	Thallium sulfate; see Thallium compounds
298022	4	Thimet; see Phorate
62555	1	Thioacetamide
28249776	4	Thiobencarb
96695	3	4,4'-Thiobis(6-tert-butyl-m-cresol)
115297	2	Thiodan; see Endosulfan
139651	1	4,4'-Thiodianiline
68111	3	Thioglycolic acid
7719097	3	Thionyl chloride
52244	1	Thiotepa; see Tris(1-aziridinyl) phosphine sulphide
141902	1	Thiouracil
62566	1	Thiourea
137268	3	Thiram; see Bis(dimethylthiocarbamyl) disulfide
7440315	2,3	Tin 3
	3	Tin compounds
7440326	2	Titanium
1836755	4	Tok; see 2,4-Dichlorophenyl-p-nitrophenyl ether
119937	1	o-Tolidine; see 3,3'-Dimethylbenzidine
108883	2,3	Toluene
584849	1,3	Toluene-2, 4-diisocyanate
26471625, 91087, 26471625, 584849	1	Toluene diisocyanates
108441	3	m-Toluidine
106490	3	p-Toluidine
95534	3	o-Toluidine; see o-Methylaniline
636215	1	ortho-Toluidine; hydrochloride
108883	2,3	Toluol; see Toluene
10311849	4	Torak; see Dialifor
8001352	1,2,3,4	Toxaphene
14567738	3	Tremolite
299752	1	Treosulfan
299752	1	Treosulphan; see Treosulfan
75252	3	Tribomomethane; see Bromoform
126738	3	Tributyl phosphate
78488	4	S,S,S-Tributyl phosphoro-trithioate
150505	4	S,S,S-Tributyl phosphorotrithioite
	4	Tributyltin, coatings containing
52686	2	Trichlorfon
76039	3	Trichloroacetic acid
120821	2,3	1,2,4-Trichlorobenzene; see

		Chlorinated benzenes
50293	3	1,1,1-Trichloro-2-2,bis (p-chlorophenyl) ethane; see DDT
72435	3	1,1,1-Trichloro-2,2-bis (p-methoxphenyl)-ethane; see Methoxychlor
79005	1,2,3	1,1,2-Trichloroethane
71556	2,3	1,1,1-Trichloroethane; see Methyl chloroform
79016	3	Trichloroethene; see Trichloroethylene
79016	1,2,3	Trichloroethylene
75694	3	Trichlorofluoromethane; see Fluorotrichloromethane
67663	2,3	Trichloromethane; see Chloroform
594423	3	Trichloromethanethiol; see Perchloromethyl mercaptan
1321659	2,3	Trichloronaphthalene
76062	3	Trichloronitromethane; see Chloropicrin
88062	2	2,4,6-Trichlorophenol; see Trichlorophenols
25167822, 15950660, 933788, 933755, 95954, 609198, 88062	1,2	Trichlorophenols
136254	2	2-(2,4,5-Trichlorophenoxy) ethyl 2,2-dichloropropionate (Erbon)
96184	3	1,2,3-Trichloropropane
76131	2,3	1,1,2-Trichloro-1,2, 2-trifluoroethane (FC-113)
78308	3	Tri-o-cresyl phosphate
13121705	3	Tricyclohexyltin hydroxide; see Tin compounds
27323417	2	Triethanolamine dodecylbenzenesulfonate 9
121448	2,3	Triethylamine
1954285	1	Triethylene glycol diglycidyl ether
75638	3	Triflorobromomethane; see Bromotrifluoromethane
1582098	1,2	Trifuralin
552307	3	Trimellitic anhydride
75503	2,3	Trimethylamine
137177	1	2,4,5-Trimethylaniline
	3	Trimethylbenzene (all isomers)
78591	3	3,5,5-Trimethyl-2-cyclohexene-1-one; see Isophorone
121459	3	Trimethyl phosphite
88891	3	2,4,6-Trinitrophenol; see Picric acid
479458	3	2,4,6-Trinitrophenylmethylnitramine; see Tetryl
118967	3	2,4,6-Trinitrotoluene
78308	3	Tri-ortho-cresyl phosphate; Tri-o-cresyl phosphate
603349	3	Triphenylamine
115866	3	Triphenyl phosphate
68768	1	Tris(aziridinyl)-para-benzoquinone;

(Triaziquone)
52244 1 Tris(1-aziridinyl)phosphine sulfide
51183 1 2,4,6-Tris(1-aziridinyl)-s-triazine
38571732 1 1,2,3-Tris(chloromethoxy)propane
126727 1 Tris(2,3-dibromopropyl) phosphate
786196 4 Trithion; see Carbophenothion
62450060 1 Trp-P-1 (Tryptophan-P-1)
62450071 1 Trp-P2 (Tryptophan-P-2)
72571 1 Trypan blue (commercial grade)
7440337 2,3 Tungsten, Tungsten compounds 3,34
8006642 3 Turpentine
66751 1 Uracil mustard
7440611 2,3 Uranium 3,34
2,3 Uranium compounds
541093 2 Uranyl acetate; see Uranium compounds
10102064 2 Uranyl nitrate; see Uranium compounds
51796 1 Urethane
8030306 3 VM & P (Varnish Makers & Painters)
naphtha
110623 3 Valeraldehyde
7440622 2 Vanadium
1314621 2,3 Vanadium pentoxide 3
27774136 2 Vanadyl sulfate
62737 2 Vapona; see Dichlorvos
108054 2,3 Vinyl acetate
100425 2 Vinylbenzene; see Styrene, monomer
593602 1,3 Vinyl bromide
75014 1,2,3 Vinyl chloride
107131 2,3 Vinyl cyanide; see Acrylonitrile
100403 1 4-Vinylcyclohexene
106876 1,3 Vinyl cyclohexene dioxide
106876 1 4-Vinyl-1-cyclohexene diepoxide;
see Vinyl cyclohexene dioxide
75354 1,2,3 Vinylidene chloride
25013154 3 Vinyltoluene
79005 1 Vinyl trichloride; see 1,1,2-
Trichloroethane
81812 3 Warfarin
13983170 1 Wollastonite
1330207, 95476, 2,3 Xylene, all isomers
106423, 108383
1477550 3 m-Xylene-a',a'-diamine
1300716 2 Xylenol
1300738 3 Xylidine
95476 2,3 Xylol; see Xylene, all isomers
131793 1 Yellow OB
3 Yttrium compounds
17924924 1 Zearalenone
7440666 2 Zinc 3
557346 2 Zinc acetate; see Zinc compounds
14639975, 14639986,2 Zinc ammonium chloride; see Zinc
52628258 compounds
1332076 2 Zinc borate; see Zinc compounds
7699458 2 Zinc bromide; see Zinc compounds
3486359 2 Zinc carbonate; see Zinc compounds
7646857 2,3 Zinc chloride; see Zinc compounds
1350659 3 Zinc chromate; see Chromium

		compounds
	2,3,4	Zinc compounds 28
557211	2	Zinc cyanide; see Cyanides, inorganic salts
7783495	2	Zinc fluoride; see Zinc compounds
557415	2	Zinc formate; see Zinc compounds
7779864	2	Zinc hydrosulfite; see Zinc compounds
7779886	2	Zinc Nitrate; see Zinc compounds
1314132	3	Zinc oxide fume; see Zinc compounds
127822	2	Zinc phenolsulfonate; see Zinc compounds
1314847	2,4	Zinc phosphide; see Zinc compounds
16871719	2	Zinc silicofluoride; see Zinc compounds
7733020	2	Zinc sulfate; see Zinc compounds
12122677		Zineb
7440677	2	Zirconium
7440677	2,3	Zirconium compounds, as Zr
13746899	2	Zirconium nitrate; see Zirconium compounds
16923958	2	Zirconium potassium fluoride; see Zirconium compounds
14644612	2	Zirconium sulfate; see Zirconium compounds
10026116	2	Zirconium tetrachloride

FOOTNOTES FOR HAZARDOUS SUBSTANCE LIST

1. Refers to solutions greater than or equal to 10%. Exempt when present in food or beverages, such as vinegar, apple cider, and wine, regardless of concentration.

2. Refers to water-soluble salts only; all other salts are exempt.

3. An MSDS must be provided under the following circumstances:

a) The metal is supplied as a fine powder.

b) The metal is in welding or brazing rods.

c) The metal may be melted with the generation of toxic fume.

d) Under normal use, toxic dust or fume is likely to be generated by any manufacturing process.

4. Exempt when in bonded form or when antimony compounds cannot be released due to cutting, grinding, heating, etc.

5. Except:

a) Exterior and interior coatings and laminating resins containing encapsulated asbestos fibers within such products.

b) Cold process asphalt roof coatings.

c) Non-friable encapsulated products such as floor tiles.

6. Any liquids; and products that could give rise to asphalt fume under normal conditions are included. Mechanical breakup of hardened asphalt surfaces is exempt.

7. Exempt when used in foods and feeds as a preservative.

8. Exempt except when present as free crystal/powder.

9. Exempt when in solution.

10. Exempt when in form where exposure to dust cannot occur.

11. Products that could give rise to coal tar pitch volatiles during normal use are included.

12. Exempt when part of a cured epoxy or rubber.

13. Refers to solutions greater than or equal to 25%. Beverage alcohol (as defined by Sections 23004 and 23005 of the California Alcoholic Beverage Control Act) in any concentration is exempt.

14. Exempt except when vapors or particulates are or can be formed due to work practices or procedures.

15. Exempt except when present as a dust.

16. Exempt when used as fuel.

17. Exempt except when inhalable dust and/or particulates are present or are generated through use of the product.

18. Refers to the water-soluble salts only; exempt when mixed in food or animal feed.

19. Exempt except when inhalable dust is present or can be generated through use.

20. Exempt when in mixture, suspension, or where inhalable dust or particles are not present or cannot be formed.

21. Exempt except where mineral oil mists can be generated in the ordinary use of the products, e.g., cutting oils

22. Occupational sources of ozone include, but are not limited to:

a) during oxidizing process of fine organic chemicals production (primarily ozolaic acid);

b) during operations involving high-intensity UV light (plasma torch operations, glass blowing, hot metal operations, photoengraving operations, use of mercury vapor lamps, direct copying machines, projecting equipment);

c) during operations involving high voltage electrical equipment (spectrographic and fluorometric apparatus, electroplating operations, high-volt linear accelerators, and electrostatic precipitators);

d) during operations involving ozonizing process in treatment of water, industrial waste, and sewage; during air purification;

e) during drilling, cutting, and welding operations utilizing laser radiation;

f) during bleaching operations (textiles, pulp, paper, waxes, starch, sugar, Teflon, and synthetic fibers), refining of mineral oils and their derivatives, processing of perfumes, vanillin, and camphor, aging and drying operations (wood, wines, whiskeys, varnishes, and printing inks);

g) during food preserving operations for mold and bacteria control;

h) during welding operations using inert gas shielded arc welding devices, bare wire arc welding; and

i) during manufacturing production of ozone.

23. Includes benzanthracenes, benzopyrenes, benzofluoranthrene, chrysenes, dibenzanthracenes, and indenopyrenes.

24. Refers to smoke and fume products given off during soldering.

25. Exempt except when inhalable particulates are present or can be generated.

26. Silver compounds existing in stable emulsions or suspensions, as in photographic film, are exempt.

27. Applicable to cotton fiber for use in industries or operations covered by General Industry Safety Order 5219, Cotton Dust.

28. Exempt when present in motor oils at 2.5% or below. Zinc oxide is exempt except when present as dust or when generated as a fume. Zinc stearate is exempt except when present as dust.

29. Refers to solutions greater than or equal to 4%.

30. Refers to solutions greater than or equal to 3%.

31. Refers to any mixture containing 0.1% or greater of this substance.

32. Refers to any mixture containing 0.02% or greater inorganic arsenic.

33. Refers to any mixture containing 0.1% or greater EDB.

34. Exempt when encapsulated in a capsule which meets the definition of "Special Form Materials" prescribed in 49 CFR 173.403(z).

35. Applies to silica sand and silica flour, but naturally occurring dirt and sand which has not been increased in silica concentration by beneficiation are exempt.

36. Except butyl benzyl phthalate.

37. Exempt except when crystalline powder is being manufactured or being used.

38. Fibrous glass is a mechanical irritant. There is no present scientific evidence as to the existence of any other adverse health effect.

39. Except Copper phthalocyanine crudes and pigments.

APPENDIX B: Definitions

Acid - Any chemical with a pH between 0 and 6. Acids are corrosive and cause severe burns.

Acute Effect - An effect on the human body that takes place soon after exposure. Example: Ethyl Alcohol ingestion may result in acute intoxication.

ACGIH - American Conference of Governmental Industrial Hygienists – A consensus organization comprised of professional industrial hygienists. ACGIH studies chemical exposures and publishes recommended occupational exposure limits for hundreds of chemicals and physical agents.

Aerosol - A fine aerial suspension of particles sufficiently small in size to confer some degree of stability from sedimentation. *Example: smoke or fog*.

Alkali - (or bases) Alkalis turn litmus paper blue and have pH values from 8 to 14. Any chemical substance which forms soluble soaps with fatty acids. They may cause severe burns to the skin.

ANSI - American National Standards Institute; a privately funded, voluntary membership organization that identifies industrial and public needs for national consensus standards and coordinates development of such standards. Many ANSI standards relate to safe design/performance of equipment, such as safety shoes, eyeglasses, smoke detectors, fire pumps and household appliances; and safe practices or procedures, such as noise measurement, testing of fire extinguishers, and flame arresters, industrial lighting practices, and the use of abrasive wheels.

Antidote - A remedy to relieve, prevent, or counteract the effects of a poison.

Asphyxiate - A vapor or gas, which can cause unconsciousness or death by suffocation (lack of oxygen). Most simple asphyxiates are harmful to the body only when they become so concentrated that they reduce oxygen in the air (normally about 21%) to dangerous levels (16% or lower). Some chemicals like carbon monoxide function as chemical asphyxiates by reducing the blood's ability to carry oxygen.

Auto-Ignition Temperature - The temperature at which a closed or nearly closed container must be heated in order for the flammable liquid, when introduced into the container, will ignite spontaneously or burn.

Boiling Point - The temperature at which a liquid changes to a vapor state, at a given pressure, usually expressed in degrees Fahrenheit at sea level pressure. Flammable materials with low boiling points generally present special fire hazards.

Cal/OSHA – The California Department of Industrial Relations, Division of Occupational Safety and Health. A State office that promulgates regulations that are designed to protect employees from workplace hazards.

Carcinogen - A substance or agent that can cause a growth of abnormal tissue or tumors in humans or animals. A material identified as an animal carcinogen does not necessarily cause cancer in humans. *Examples: Coal tar, which can cause skin cancer, and vinyl chloride, which can cause liver cancer*.

CHEMTREC – The Chemical Transportation Emergency Center is a national center established by the Chemical Manufacturers Association (CMA) in Washington DC to relay pertinent emergency information concerning specific chemicals on request. (CHEMTREC's 24-hour toll free phone number is 800-424- 9300). This number should only be used by those who respond to chemical transportation emergencies.

Chronic Effect - An adverse effect on a human body that can take months or years to develop after exposure*. Examples: Cancer*

Combustible - Capable of burning.

Combustible Liquid - Any liquid having a flashpoint at or above 100F, but below 200F.

Concentration - The relative amount of a substance when combined or mixed with other substances.
Example: 2 PPM hydrogen sulfide in air or a 50% caustic solution.

Corrosive - A liquid or solid that causes visible destruction or irreversible alterations in human skin tissue at the site of contact or, in the case of leakage from it packaging, a liquid that has a severe corrosion rate on steel. *Example: Sulfuric acid.*

CPSC - Consumer Products Safety Commission; Federal agency responsible for regulating hazardous materials when they appear in consumer goods.

Dermal Toxicity - Adverse effects resulting from skin exposure to a substance.

Dilution Ventilation - Air flow designed to dilute contaminants to acceptable levels.

Evaporation Rate - The rate at which a particular material will vaporize (evaporate) when compared to the rate of vaporization of a known material. The evaporation rate can be used in evaluating the health and fire hazards of a material and may be classified as Fast, Medium, or Slow.

Exposure - Any situation arising from work operations where an employee may ingest, inhale, absorb through the skin or eyes, or otherwise come into contact with a hazardous substance.

Flammability Limits - The range of gas or vapor concentration in the air that may ignite or explode if an ignition source is present.

Flammable Aerosol - An aerosol that when tested by the method described in 16 CFR 1500.45, yields a flame projection exceeding 18 inches at full valve opening or a flashback (a flame extending back to the valve) at any degree of valve opening.

Flammable Gas - A gas that at ambient temperature and pressure, (1) forms a flammable

mixture with air at a concentration of thirteen percent (13%) by volume or less; (2) forms a range of flammable mixtures with air, wider than twelve percent (12%) by volume, regardless of the lower limit.

Flammable Liquid - Any liquid having a flash point below 100□F, except any mixture having components with flash points of 100□F or higher, the total of which make up 99% or more of the total volume of the mixture.

Flammable Solid - A solid, other than a blasting agent or explosive, as defined in 29 CFR 1910.109(a), that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing processing or which can be ignited readily and when ignited, burns so vigorously and persistently as to create a serious hazard.

Flash Point - The temperature at which a liquid will give off enough flammable vapors to ignite if an ignition source is present.

Hazardous Chemical - Any chemical which presents either a health hazard or physical hazard.

Health Hazard - A chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. This may include chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, or agents which act on the hematopoietic system and agents which damage the lungs, skin, eyes or mucous membranes.

Insoluble - Incapable of being dissolved in a liquid.

Irritant - A substance which, by contact in sufficient concentration for a sufficient period of time, will cause an inflammatory response or reaction of the eye, skin, or respiratory system. The contact may be a single exposure or multiple exposures. *Some primary irritants: chronic acid, nitric acid, sodium hydroxide, calcium chloride, amines, metallic salts, chlorinated hydrocarbons, ketones and alcohols.*

LC - Lethal concentration; a concentration of a substance being tested which will kill a test animal.

LC50 - The concentration of a material in air which, on the basis of laboratory testing, is expected to kill 50% of a group of test animals when administered as a single exposure. Generally, more toxic materials have lower LC50s.

LD - Lethal dose; a concentration of a substance (dose) being tested which will kill a test animal.

LD50 - Lethal dose 50%; a single dose of a material which on the basis of laboratory tests, is expected to kill 50% of a group of test animals. The LD50 dose is usually expressed in milligrams or grams of material per kilogram of animal body weight. Generally, more toxic materials have lower LD50s.

LEL - Lower Explosive Limit - The lowest concentration (lowest percentage of the substance in air) that will produce a flash of fire when an ignition source (heat, arc, or flame) is present. At concentration lower than the LEL, there is not enough fuel to sustain combustion.

Mist - Suspended liquid droplets generated by condensation from the gaseous to the liquid state, or by breaking up a liquid into a dispersed state, such as splashing, foaming or atomizing. Mist is formed when a finely divided liquid is suspended in air.

NFPA - National Fire Protection Association; an international voluntary membership organization to promote/improve fire protection and prevention and establish safeguards against loss of life and property by fire. Best known for the National Fire Codes and familiar diamond-shaped label for hazards. See Section 8.0.

NIOSH - National Institute for Occupational Safety and Health (of the Public Health Service, U.S. Dept. of Health and Human Services (DHHS)); federal agency which recommends occupational exposure limits for various substances and assists OSHA with occupational safety and health investigations and research.

OSHA – The Occupational Safety and Health Administration - A subdivision of the U.S. Department of Labor that promulgates regulations designed to ensure the safety of employees in the workplace.

Oxidizer - 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.

PEL - Permissible exposure limit; the legally enforced exposure limit for a substance established by OSHA regulatory authority. The PEL indicates the permissible concentration of air contaminants to which nearly all workers may be repeatedly exposed eight (8) hours a day, forty (40) hours a week, over a working lifetime (30 years) without adverse health effects.

Physical Hazard - A chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, corrosive, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, self- reactive, self-heating, unstable (reactive) or water-reactive.

ppb - Parts per billion; a unit for measuring the concentration of a gas or vapor in air - parts (by volume) of the gas or vapor in a billion parts of air.

ppm - Parts per million; a unit for measuring the concentration of a gas or vapor in air - parts (by volume) of the gas or vapor in a million parts of air.

Pyrophoric - A chemical that will ignite spontaneously in air at a temperature of 130□F or below.

Reactivity - A description of the tendency of a substance to undergo chemical reaction with the release of energy.

Reproductive Toxin - Substances that affect the male and/or female reproductive systems and may impair the ability to have children.

Sensitizer - A substance which, on first exposure, causes little or no reaction in human or test animals but which, on repeated exposure, may cause a marked response not necessarily limited to the contact site.

Skin sensitization is the most common form of sensitization in the industrial setting, although respiratory sensitization to a few chemicals is also known to occur. *Examples: poison ivy and pollen.*

Solvent - A substance, usually a liquid, in which other substances are dissolved. The most common solvent is water.

Stability - An expression of the ability of a material to remain unchanged. For SDS purposes, a material is stable if it remains in the same form under expected and reasonable conditions of storage or use.

STEL - Short term exposure limit.

Systemic Poison - A poison, which spreads throughout the body, affecting all body systems, and organs. Its adverse effect is not localized in one spot or area.

Systemic Toxicity - Adverse effects caused by a substance, which affects the body in a general rather than local manner.

Target Organ Toxin - A toxic substance that attacks a specific organ of the body. *Example*: *overexposure to carbon tetrachloride can cause liver damage*.

Teratogen - A substance that may cause malformations in the fetus upon exposure. *Example: thalidomide*.

TLV - Threshold limit value; a term used by ACGIH to express the airborne concentration of a material to which nearly all persons can be exposed daily, without adverse effects. ACGIH expressed TLVs in three ways:

- **TLV-TWA**: The allowable time-weighted average concentration for a normal 8-hour workday or 40-hour workweek.
- **TLV-STEL**: The short-term exposure limit or maximum concentration for a continuous 15-minute exposure period (maximum of four such periods per day, with at least 60 minutes between exposure periods, and provided that the daily TLV-TWA is not exceeded).
- **TLV-C**: The ceiling limit - the concentration that should not be exceeded even instantaneously.

Toxic Substance - Any substance which can cause acute or chronic injury to the human body, or which is suspected of being able to cause diseases or injury under some conditions.

Toxicity - The sum of adverse effects resulting from exposure to a material, generally by mouth, skin, or respiratory tract.

Trade Secret - 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 their competitors.

TWA - Time weighted average exposure.

UEL - Upper explosive limit or upper flammable limit of a vapor or gas. The highest concentration of a substance in air that will combust when an ignition source is present.

Unstable - A chemical which will vigorously polymerize, decompose, condense, or become self-reactive under conditions of shock, pressure, or temperature. These chemicals are also referred to as reactive.

Vapor - The gaseous form of a solid or liquid substance as it evaporates.

Vapor Density - The weight of a vapor or gas compared to the weight of an equal volume of air; an expression of the density of the vapor or gas. Materials that are lighter-than-air have vapor densities less than 1.0 (Examples: propane, hydrogen sulfide, ethane, butane, chlorine, sulfur dioxide) have vapor densities greater than 1.0. All vapors and gases will mix with air, but lighter materials will tend to rise and dissipate (unless confined). Heavier vapors and gases are likely to concentrate closer to the ground.

Vapor Pressure - The pressure exerted by saturated vapor above its own liquid in a closed container. When quality control tests are performed on products the test temperature is usually 100□F and the vapor pressure is expressed as pounds per square inch (psig or psia). However, vapor pressures reported on SDSs are in millimeters of mercury (mmHg) at 68□F unless otherwise stated. Additional info:

- Vapor pressure of a substance at 100□F will always be higher than the vapor pressure of the substance at 68□F.
- 760 mmHg is equivalent to 14.7 pounds per square inch.
- The lower the boiling point of a substance, the higher its vapor pressure.

Water-Reactive - A chemical that reacts with water.

APPENDIX C: Globally Harmonized System (GHS) Pictograms

The Globally Harmonized System, or GHS, is a system for standardizing and harmonizing the classification and labeling of chemicals. The GHS enhances the basic goal of hazard communication, which is to ensure that employers, employees and the public are provided with adequate, practical, reliable and comprehensible information on the hazards of chemicals, so that they can take effective preventive and protective measure for their health and safety. The system will continue to communicate hazard information, as well as protective measures, on labels and Safety Data Sheets (SDS, formerly MSDS) using the following pictograms:

Hazard Type: Physical
(*Tipo de Riesgo: Fisicos*)
Explosives (*Explosivos*)
Self-reactives (*Autorreactivas*)
Organic Peroxides (*Peroxidos organicos*)

Hazard Type: Physical
(*Tipo de Riesgo: Fisicos*)
Flammables (*Inflamables*)
Pyrophorics (*Piroforicos*)
Self-heating (*Calentamiento espontaneo*)
Emit flammable gas (*Desprenden gases inflamables*)
Self-reactives (*Autorreactivas*)
Organic peroxides (*Peroxidos organicos*)

Hazard Type: Physical
(*Tipo de Riesgo: Fisicos*)
Oxidizers (*Comburentes*)

Hazard Type: Physical
(*Tipo de Riesgo: Fisicos*)
Gases under pressure (*Gases a presion*)

Hazard Type: Physical and Health
(*Tipo de Riesgo: Fisicos y de Salud*)
Skin corrosion/burns (*Corrosion o quemaduras cutaneas*)
Eye damage (*Lesion ocular*)
Corrosive to metals (*Corrosivo para los metals*)

Hazard Type: Health
(*Tipo de Riesgo: Salud*)
Acute toxicity -fatal or toxic (*Toxicidad aguda -mortal o toxica*)

Hazard Type: Health
(*Tipo de Riesgo: Salud*)
Respiratory sensitizer (*Sensibilizacion respiratoria*)
Mutagenicity (*Mutagenecidad*)
Carcinogen (*Carcinogeno*)
Reproductive toxicity (*Toxicidad para la reproduccion*)
Target organ toxicity (*Toxicidad especifica de organos diana*)
Aspiration toxicity (*Peligro por aspiracion*)

Hazard Type: Health
(*Tipo de Riesgo: Salud*)
Acute toxicity - harmful (*Toxicidad aguda –danino*)
Irritant - skin and eye (*Irritante –piel y ojos*)
Skin sensitizer (*Sensibilizador cutaneo*)
Respiratory tract irritant (*Irritante de vias respiratorias*)
Narcotic effects (*Efecto narcotico*)
Hazardous to ozone layer –non-mandatory (*Peligros pa la capa de ozono –no obligatorio*)

Hazard Type: Environmental
(*Tipo de Riesgo: Medio ambiente*)
Aquatic toxicity (*Toxicidad acuatica*)

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