RULES
OF
TENNESSEE DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

CHAPTER 0800-01-01
OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR GENERAL INDUSTRY

TABLE OF CONTENTS

0800-01-01-.01 Purpose and Scope
0800-01-01-.02 Definitions
0800-01-01-.03 Petitions for the Issuance, Amendment, or Repeal of a Standard
0800-01-01-.04 Amendments to this Chapter
0800-01-01-.05 Applicability of Standards
0800-01-01-.06 Adoption and Citation of Federal Standards
0800-01-01-.07 Exceptions to Adoption of Federal Standards in 29 CFR Part 1910

0800-01-01-.01 PURPOSE AND SCOPE.

(1) The Commissioner of Labor and Workforce Development has the responsibility to develop and promulgate regulations which adopt occupational safety and health standards. The Commissioner may adopt the federal standards relating to the same issue.

(2) This chapter carries out the directive to the Commissioner of Labor and Workforce Development under T.C.A. §§ 50-3-201 and 50-3-202. It adopts occupational safety and health standards which are the federal standards relating to the same issue, and state standards required for effective enforcement of the Act that are of a general or a specific nature in providing occupational safety and health protection.

Authority: *T.C.A. §§ 4-3-1411, 50-3-201, and 50-3-202.* ***Administrative History:*** *Original rule certified June 10, 1974. Amendment filed June 12, 1974; effective July 12, 1974. Amendment filed January 10, 1975; effective February 10, 1975. Amendment filed June 18, 1975; effective July 18, 1975. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repeal and new rule filed March 31, 1983; effective June 15, 1983. Amendment filed November 25, 1983; effective February 13, 1984. Repeal and new rule filed January 11, 2002; effective May 31, 2002.*

0800-01-01-.02 DEFINITIONS. As used in this and subsequent chapters, unless the context clearly otherwise requires:

(1) "Act" means Chapter 561 of the Public Acts of 1972, known as the Occupational Safety and Health Act of 1972 pursuant to section 1 thereof, as amended (T.C.A. Title 50, Chapter 3, §§ 50-3-101 through 50-3-919.)

(2) "Administrator" means the chief administrative officer of the Division of Occupational Safety and Health of the Tennessee Department of Labor and Workforce Development, and includes any person appointed, designated or deputized to perform the duties or to exercise the powers assigned to the Administrator of the Division of Occupational Safety and Health under the Act.

(3) "Commissioner of Labor and Workforce Development" or "Commissioner" means the chief executive officer of the Tennessee Department of Labor and Workforce Development. For the purposes of this chapter, it includes any person appointed, designated, or deputized to perform the duties or to exercise the powers assigned to the Commissioner of Labor and Workforce Development under the Act.

(4) "Employee" means any person performing services for another under a contract of hire, including minors, whether lawfully or unlawfully employed, persons in executive positions, and shall include state, county, metropolitan and municipal government employees.

(Rule 0800-01-01-.02, continued)

(5) "Employer" means a person engaged in a business who has one or more employees and includes state, county, metropolitan and municipal governments.

(6) "Federal standard" means a standard adopted a by rule promulgated under section 6 of the Occupational Safety and Health Act of 1970, Public Law 91-596 (Title 29, United States Code § 655).

(7) "OSHA" means the Occupational Safety and Health Act of 1970, as amended Public Law 91-596 (Title 29, United States Code § 650 et seq., or the Occupational Safety and Health Administration, United States Department of Labor, depending upon the context in which the acronym is used. As used in federal standards adopted by this chapter, it shall mean the same as federal standard as defined in paragraph (6) of this rule or one of the foregoing, depending upon context. It shall also, for the purposes of this chapter, be considered synonymous with the acronym "TOSHA" as defined in paragraph (10) of this rule.

(8) "Person" means one or more individuals, partnerships, associations, corporations, business trusts, legal representatives or any organized group of persons.

(9) "Standard" means an occupational safety and health standard promulgated by the Commissioner of Labor and Workforce Development which requires conditions or the adoption or the use of one or more practices, means, methods, operations or processes reasonably necessary or appropriate to provide safe and healthful employment and places of employment.

(10) "TOSHA" means the Division of Occupational Safety and Health, Tennessee Department of Labor and Workforce Development, which is the agency responsible for the administration and enforcement of the Act and rules and regulations promulgated by the Commissioner of Labor and Workforce Development pursuant thereto.

Authority: *T.C.A. §§ 4-3-1411, 50-3-103, and 50-3-201.* ***Administrative History:*** *Original rule filed January 10, 1975; effective February 9, 1975. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repeal and new rule filed March 31, 1983; effective June 15, 1983. Amendment filed November 25, 1983; effective February 13, 1984. Amendment filed March 27, 2001; effective July 30, 2001. Repeal and new rule filed January 11, 2002; effective May 31, 2002.*

0800-01-01-.03 PETITIONS FOR THE ISSUANCE, AMENDMENT, OR REPEAL OF A STANDARD.

(1) Any interested person may petition in writing the Commissioner of Labor and Workforce Development to promulgate, modify or revoke a standard. The petition should set forth the terms or the substance of the rule desired, the effects thereof if promulgated, and the reasons therefor.

(2) Within a reasonable time after the receipt of a submission pursuant to paragraph (1) of this rule, the Commissioner shall inform the person submitting the petition in writing of his intended action. If the petition is denied, the Commissioner shall set forth the reasons therefor.

Authority: *T.C.A. §§ 4-3-1411, 50-3-105, and 50-3-201.* ***Administrative History:*** *Original rule filed June 18, 1975; effective July 18, 1975. Amendment filed January 26, 1976; effective April 15, 1976. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repealed and new rule filed March 31, 1983; effective June 15, 1983. Amendment filed November 25, 1983; effective February 13, 1984. Repeal and new rule filed January 11, 2002; effective May 31, 2002.*

0800-01-01-.04 AMENDMENTS TO THIS CHAPTER.

(1) The Commissioner of Labor and Workforce Development may promulgate, modify, or revoke any occupational safety and health standard in this chapter in the manner provided in T.C.A. § 4-5-101 et seq., the Uniform Administrative Procedures Act.

Authority: *T.C.A. §§ 4-3-1411 and 50-3-201.* ***Administrative History:*** *Original rule filed June 18, 1975; effective July 18, 1975. Amendment filed January 26, 1976; effective April 15, 1976. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repeal and new rule filed March 31, 1983; effective June 15, 1983. Amendment filed November 25, 1983; effective February 13, 1984. Repeal and new rule filed January 11, 2002; effective May 31, 2002.*

0800-01-01-.05 APPLICABILITY OF STANDARDS.

(1) Except as provided in paragraph (2) of this rule, the standards contained in this chapter shall apply with respect to employments performed in all workplaces in the State of Tennessee.

(2) None of the standards in this chapter shall apply to working conditions of employees exempted from coverage under the Act. These are:

(a) Employees of the federal government, including its departments, agencies and instrumentalities;

(b) Employees whose safety and health are subject to protection under the Atomic Energy Act of 1954, as amended (42 USC §§ 2011-2296);

(c) Employees whose safety and health are subject to protection under the federal Coal Mine Health and Safety Act of 1969 (30 USC § 801 et seq.), the federal Metal and Nonmetallic Mine Safety Act (30 USC § 725) [repealed], or Tennessee Code Annotated, Title 59;

(d) Railroad employees whose safety and health are subject to protection under the federal Safety Appliances Act (45 USC § 1 et seq.) or the federal Railroad Safety Act of 1970 (45 USC §§ 431-441);

(e) Domestic workers; and

(f) RESERVED

(g) Any employee engaged in agriculture who is employed on a farm, each of the employees of which is related to the employer as a spouse, child, parent, grandparent or grandchild.

(3) Applicability of specific vs. general standards.

(a) If a particular standard is specifically applicable to a condition, practice, means, method, operation or process, it shall prevail over any different general standard which might otherwise be applicable to the same condition, practice, means, method, operation or process. For example, the standard 29 CFR 1910.217 as adopted by rules of this chapter prescribes guarding for mechanical power presses. Such a standard shall apply, and shall not be deemed modified or superseded by any different general standard whose provisions might otherwise be applicable, such as the standard 29 CFR 1910.212 as adopted by rules of this chapter which prescribes general requirements for all machines.

(Rule 0800-01-01-.05, continued)

(b) On the other hand, any standard shall apply according to its terms to any employment and place of employment in any industry, as standards 29 CFR 1910.261 through 29 CFR 1910.272 (Appendix C) as adopted by rules of this chapter or 29 CFR 1926 as adopted by rules in Chapter 0800-1-6. For example, the general standard regarding noise exposure, 29 CFR 1910.95 as adopted by rules of this chapter, applies to employments and places of employment in pulp, paper and paperboard mills covered by the standard 29 CFR 1910.261 as adopted by rules of this chapter.

(4) In the event a standard protects on its face a class of persons larger than employees, the standard shall be applicable under the Act only to those employees and their employment and places of employment.

(5) An employer who is in compliance with any standard in this chapter shall be deemed to be in compliance with the requirement of T.C.A. § 50-3-105(1), but only to the extent of the condition, practice, means, method, operation or process covered by the standard.

Authority: *T.C.A. §§ 4-3-1411, 50-3-105, and 50-3-201.* ***Administrative History:*** *Original rule filed September 14, 1976; effective October 14, 1976. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repeal and new rule filed March 31, 1983; effective June 15, 1983. Amendment filed November 25, 1983; effective February 13, 1984. Repeal and new rule filed January 11, 2002; effective May 31, 2002. Amendment filed April 14, 2016; effective July 13, 2016.*

0800-01-01-.06 ADOPTION AND CITATION OF FEDERAL STANDARDS.

(1) The federal occupational safety and health standards adopted by the Commissioner of Labor and Workforce Development in this chapter shall be cited using the designation in Title 29, Code of Federal Regulations, Part 1910, i.e., 29 CFR 1910.38, 29 CFR 1910.137(a)(1)(ii)(E), etc. Where adoption to the current Title 29, Code of Federal Regulations, Part 1910, is an exception, the citation shall be to 29 CFR 1910 as published in the Federal Register or to the appropriate rule in this chapter. See Rule 0800-01-01-.07 for exceptions.

(2) The Commissioner of Labor and Workforce Development adopts the federal occupational safety and health standards codified in Title 29, Code of Federal Regulations, Part 1910, as of July 1, 2016 except as provided in Rule 0800-01-01-.07 of this chapter.

Authority: *T.C.A. §§ 4-3-1411 and 50-3-201.* ***Administrative History:*** *Original rule filed January 15, 1977; effective February 13, 1977. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repeal and new rule filed March 31, 1983; effective June 15, 1983. Amendment filed August 13, 1999; effective December 29, 1999. Amendment filed November 30, 2000; effective March 30, 2001. Amendment filed March 27, 2001; effective July 30, 2001. Repeal and new rule filed January 11, 2002; effective May 31, 2002. Amendment filed September 13, 2002; effective January 28, 2003. Amendment filed November 25, 2002; effective March 28, 2003. Amendment filed May 14, 2003; effective September 26, 2003. Amendment filed November 13, 2003; effective March 29, 2004. Amendment filed April 21, 2004; effective August 27, 2004. Amendment filed September 7, 2004; effective January 28, 2005. Amendment filed February 16, 2005; effective June 28, 2005. Amendment filed September 12, 2005; effective January 27, 2006. Amendment filed April 26, 2006; effective August 28, 2006. Amendment filed November 16, 2006; effective date March 30, 2007. Amendment filed April 5, 2007; effective August 28, 2007. Amendment filed October 17, 2007; effective February 28, 2008. Amendment filed February 21, 2008; effective June 27, 2008. Amendment filed September 22, 2008; effective January 28, 2009. Amendment filed March 9, 2009; effective July 29, 2009. Amendment filed August 19, 2009; effective January 29, 2010. Amendment filed February 12, 2010; effective July 29, 2010. Amendment filed October 1, 2010; effective March 31, 2011. Amendment filed April 4, 2011; effective September 28, 2011. Amendment filed September 23, 2011; effective February 28, 2012. Amendment filed April 25, 2012; effective September 28, 2012. Amendment filed April 3, 2013; effective September 28, 2013. Amendment filed October 10, 2013; effective March 31, 2014. Amendment filed April 2, 2014; effective*

(Rule 0800-01-01-.06, continued)
September 28, 2014. Amendment filed September 19, 2014; effective December 18, 2014. Amendment filed May 1, 2015; effective July 30, 2015. Amendment filed September 1, 2015; effective November 30, 2015. Amendment filed April 14, 2016; effective July 13, 2016.
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0800-01-01-.07 EXCEPTIONS TO ADOPTION OF FEDERAL STANDARDS IN 29 CFR PART 1910.

(1) The Commissioner of Labor and Workforce Development does not adopt the following federal occupational safety and health standards:

(a) 29 CFR 1910.1 Purpose and scope.

(b) 29 CFR 1910.2 Definitions.

(c) 29 CFR 1910.3 Petitions for the issuance, amendment, or repeal of a standard.

(d) 29 CFR 1910.4 Amendments to this part.

(e) 29 CFR 1910.15 Shipyard employment.

(f) 29 CFR 1910.16 Longshoring and marine terminals.

(2) In lieu of the current federal occupational safety and health standards codified in Title 29, Code of Federal Regulations, Part 1910, Rule 0800-01-01-.06 of this chapter, or the absence thereof because of repeal or revocation, the Commissioner of Labor and Workforce Development adopts the standards limiting exposure to air contaminants as contained in subparagraph (b) of this rule. The information contained therein was compiled and adopted from the following federal occupational safety and health standards as published in the Federal Register in the volume and on the page(s) indicated.

(a) 29 CFR 1910.1000 at 54 FR 2920-2983 and the following corrections and amendments thereto:

1. 29 CFR 1910.1000 at 54 FR 28054-28061.

2. 29 CFR 1910.1000 at 54 FR 36767-36768.

3. 29 CFR 1910.1000 at 54 FR 41244.

4. 29 CFR 1910.1000 at 54 FR 47513.

5. 29 CFR 1910.1000 at 54 FR 50372-50373.

6. 29 CFR 1910.1000 at 55 FR 3724.

7. 29 CFR 1910.1000 at 55 FR 12819.

8. 29 CFR 1910.1000 at 55 FR 19259.

9. 29 CFR 1910.1000 at 55 FR 46950.

10. 29 CFR 1910.1000 at 57 FR 29204-29206.

11. 29 CFR 1910.1000 at 57 FR 42388-42389.

(Rule 0800-01-01-.07, continued)

(b) Subpart Z - Toxic and Hazardous Substances 29 CFR 1910.1000 - Air Contaminants as adopted by subparagraph (a) of this rule reads as follows: An employee's exposure to any substance listed in Table Z-1-A shall be limited in accordance with the following requirements:

1. Limits for Air Contaminants Columns. An employee's exposure to any substance listed in Table Z-1-A shall not exceed the Time Weighted Average (TWA), Short Term Exposure Limit (STEL) and Ceiling Limit specified for that substance in Table Z-1-A.

2. Skin Designation. To prevent or reduce skin absorption, an employee's skin exposure to substances listed in Table Z-1-A with an "X" in the Skin Designation column following the substance name shall be prevented or reduced to the extent necessary in the circumstances through the use of gloves, coveralls, goggles, or other appropriate personal protective equipment, engineering controls or work practices.

3. Definitions. The following definitions are applicable to the limits for air contaminants columns of Table Z-1-A:

(i) Time weighted average (TWA) is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.

(ii) Short term exposure limit (STEL) is the employee's 15-minute time weighted average exposure which shall not be exceeded at any time during the work day unless another time limit is specified in a parenthetical notation below the limit. If another time period is specified, the time weighted average exposure over that time period shall not be exceeded at any time during the working day.

(iii) Ceiling is the employee's exposure which shall not be exceeded during any part of the work day. If instantaneous monitoring is not feasible, then the ceiling shall be assessed as a 15-minute time weighted average exposure which shall not be exceeded at any time over a working day.

4. Additional Definition. The terms "substance", "air contaminant", and "material" are equivalent in meaning for 29 CFR 1910.1000.

(c) Computation formulae. The computation formula which shall apply to employee exposure to more than one substance for which 8-hour time weighted averages are listed in Subpart Z of 29 CFR Part 1910 in order to determine whether an employee is exposed over the regulatory limit is as follows:

1. The cumulative exposure for an 8-hour work shift shall be computed as follows:
$E = (CaTa + CbTb + . . . CnTn) \div 8$

Where:

E is the equivalent exposure for the working shift.
C is the concentration during any period of time T where the concentration remains constant.
T is the duration in hours of the exposure at the concentration C.

(Rule 0800-01-01-.07, continued)

2. To illustrate the formula prescribed above, assume that Substance A has an 8-hour time weighted average limit of 100 ppm noted in Table Z-1-A. Assume that an employee is subject to the following exposure:

   Two hours exposure at 150 ppm
   Two hours exposure at 75 ppm
   Four hours exposure at 50 ppm

   The value of E shall not exceed the 8-hour time weighted average specified in Subpart Z of 29 CFR Part 1910 for the material involved.

   Substituting this information in the formula, we have:
   2 x 150 + 2 x 75 + 4 x 50) ÷ 8 = 81.25 ppm.

   Since 81.25 ppm is less than 100 ppm, the 8-hour time weighted average limit, the exposure is acceptable.

3. In case of a mixture of air contaminants, an employer shall compute the equivalent exposure as follows: Em = (C1 ÷ L1) + (C2 ÷ L2) + . . . (Cn ÷ Ln)

   Where:
   Em is the equivalent exposure for the mixture.
   C is the concentration of a particular contaminant.
   L is the exposure limit for that substance specified in Subpart Z of 29 CFR Part 1910.
   The value of Em shall not exceed unity (1).

4. To illustrate the formula prescribed above, consider the following exposures:

Substance	Actual concentration of 8 hour exposure (ppm)	8 hr. TWA PEL (ppm)
B	500	1000
C	45	200
D	40	200

   Substituting in the formula, we have: Em = 500 ÷ 1000 + 45 ÷ 200 + 40 ÷ 200
   Em = 0.500 + 0.225 + 0.200
   Em = 0.925

   Since Em is less than unity (1), the exposure combination is within acceptable limits.

(d) To achieve compliance with subparagraphs (b) and (c) of this rule, administrative or engineering controls must first be determined and implemented whenever feasible. When such controls are not feasible to achieve full compliance, protective equipment or any other protective measures shall be used to keep the exposure of employees to air contaminants within the limits prescribed herein. Any equipment and/or technical measures used for this purpose must be approved for each particular use by a competent industrial hygienist or other technically qualified person. Whenever respirators are used, their use shall comply with 29 CFR 1910.134.

(e) Note: Abbreviations used in Table Z-1-A.

1. As determined from breathing-zone air samples:

(Rule 0800-01-01-.07, continued)

(i) ppm -Parts of vapor or gas per million parts of contaminated air by volume at 25 degrees C and 760 torr.

(ii) mg/m3 -Approximate milligrams of substance per cubic meter of air.

(iii) STEL - Short Term Exposure Limit, duration is 15 minutes, unless otherwise noted.

2. CAS No. - Chemical Abstract Service Number, the CAS number is for information only. Enforcement is based on the substance name. For an entry covering more than one metal compound measured as the metal, the CAS number for the metal is given-not the CAS numbers for the individual compounds.

(3) TABLE Z - 1 - A - Limits For Air Contaminants.

Substance	CAS No.	TWA		STEL		Ceiling		Skin designation
		ppm	mg/m3	ppm	mg/m3	ppm	mg/m3	
Acetaldehyde	75-07-0	100	180	150	270	—	—	—
Acetic acid	64-19-7	10	25	—	—	—	—	—
Acetic anhydride	108-24-7	—	—	—	—	5	20	—
Acetone	67-64-1	750	1800	1000	2400	—	—	—
Acetonitrile	75-05-8	40	70	60	105	—	—	—
2-Acetylaminofluorine; see 29 CFR 1910.1003	53-96-3	—	—	—	—	—	—	—
Acetylene dichloride; see 1,2-Dichloroethylene								
Acetylene tetrabromide	79-27-6	1	14	—	—	—	—	—
Acetylsalicylic acid (Asprin)	50-78-2	—	5	—	—	—	—	—
Acrolein	107-02-8	0.1	0.25	0.3	0.8	—	—	—
Acrylamide	79-06-1	—	0.03	—	—	—	—	X
Acrylic acid	79-10-7	10	30	—	—	—	—	X
Acrylonitrile; see 29 CFR 1910.1045	107-13-1	—	—	—	—	—	—	—
Aldrin	309-00-2	—	0.25	—	—	—	—	X
Allyl alcohol	107-18-6	2	5	4	10	—	—	X
Allyl chloride	107-05-1	1	3	2	6	—	—	—
Allyd glycidl either (AGE)	106-92-3	5	22	10	44	—	—	—
Allyl propyl disulfide	2179-59-1	2	12	3	18	—	—	—
alpha-Alumina	1344-28-1	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Aluminum (As al) Metal	7429-90-5							
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Pyro powders	—	—	5	—	—	—	—	—
Welding fumes	—	—	5	—	—	—	—	—
Soluble salts	—	—	2	—	—	—	—	—
Alkyls	—	—	2	—	—	—	—	—
4-Aminodiphenyl; see 29 CFR 1910.1003	92-67-1							

(Rule 0800-01-01-.07, continued)

2-Aminoethanol; see Ethanolamine								
2-Aminopyridine	504-29-0	0.5	2	—	—	—	—	—
Amitrole	61-82-5	—	0.2	—	—	—	—	—
Ammonia	7664-41-7	—	—	35	27	—	—	—
Ammonium chloride fume	12125-02-9	—	10	—	20	—	—	—
Ammonium sulfamate	7773-06-0							
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
n-Amyl acetate	628-63-7	100	525	—	—	—	—	—
Sec-Amyl acetate	626-38-0	125	650	—	—	—	—	—
Aniline and homologs	62-53-3	2	8	—	—	—	—	X
Anisidine (o-,p-isomers)	29191-52-4	—	0.5	—	—	—	—	X
Antimony and compounds (as Sb)	7440-36-0	—	0.5	—	—	—	—	—
ANTU (alpha Naphthylthiourea)	86-88-4	—	0.3	—	—	—	—	—
Arsenic, organic compounds (as As)	7440-38-2	—	0.5	—	—	—	—	—
Arsenic, inorganic compounds (as As); see 29 CFR 1910.1018	7440-38-2							
Arsine	7784-42-1	0.05	0.2	—	—	—	—	—
Asbestos; see 29 CFR 1910.1001 and 29 CFR 1926.1101	Varies							
Atrizine	1912-24-9	—	5	—	—	—	—	—
Azinphos-methyl	86-50-0	—	0.2	—	—	—	—	X
Barium, soluble compounds (as Ba)	7440-39-3	—	0.5	—	—	—	—	—
Barium sulfate	7727-43-7							
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Benomyl	17804-35-2							
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Benzene; see 29 CFR 1910.1028	71-43-2							
Industries excluded from 29 CFR 1910.1028 (STEL – 10 minutes)		10	—	25	—	50	—	—
Benzidine; see 29 CFR 1910.1003	92-87-5							
p-Benzoquinone; see Quinone								
Benzo(a)pyrene; see Coal tar pitch volatiles								
Benzoyl peroxide	94-36-0	—	5	—	—	—	—	—
Benzyl chloride	100-44-7	1	5	—	—	—	—	—
Beryllium and beryllium Compounds (as Be) (STEL – 30 minutes)	7440-41-7	—	0.002	—	0.005	—	0.025 —	—
Biphenyl; see Diphenyl								
Bismuth telluride, Undoped	1304-82-1							
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Bismuth telluride, Se-doped	—	—	5	—	—	—	—	—
Borates, tetra, sodium salts								
Anhydrous	1330-43-4	—	10	—	—	—	—	—
Decahydrate	1303-96-4	—	10	—	—	—	—	—
Pentahydrate	12179-04-3	—	10	—	—	—	—	—
Boron oxide	1303-86-2							
Total dust	—	—	10	—	—	—	—	—
Boron tribromide	10294-33-4	—	—	—	—	1	10	—
Boron trifluoride	7637-07-2	—	—	—	—	1	3	—

(Rule 0800-01-01-.07, continued)

Bromacil	314-40-9	1	10	—	—	—	—	—
Bromine	7726-95-6	0.1	0.7	0.3	2	—	—	—
Bromine pentafluoride	7789-30-2	0.1	0.7	—	—	—	—	—
Bromoform	75-25-2	0.5	5	—	—	—	—	X
Butadiene (1,3-Butadiene) see 29 CFR 1910.1051	106-99-8							
Butane	106-97-8	800	1900	—	—	—	—	—
Butanethiol; see Butyl mercaptan								
2-Butanone (Methyl ethyl ketone)	78-93-3	200	590	300	885	—	—	—
2-Butoxyethanol	111-76-2	25	120	—	—	—	—	X
n-butyl-acetate	123-86-4	150	710	200	950	—	—	—
Sec-Butyl acetate	105-46-4	200	950	—	—	—	—	—
Tert-Butyl acetate	540-88-5	200	950	—	—	—	—	—
Butyl acrylate	141-32-2	10	55	—	—	—	—	—
n-Butyl alcohol	71-36-3	—	—	—	—	50	150	X
Sec-Butyl alcohol	78-92-2	100	305	—	—	—	—	—
Tert-Butyl alcohol	75-65-0	100	300	150	450	—	—	—
Butylamine	109-73-9	—	—	—	—	5	15	X
Tert-Butyl chromate (as CrO3)	1189-85-1	—	—	—	—	—	0.1	X
n-Butyl glycidyl ether (BGE)	2426-08-6	25	135	—	—	—	—	—
n-Butyl lactate	138-22-7	5	25	—	—	—	—	—
Butyl mercaptan	109-79-5	0.5	1.5	—	—	—	—	—
o-sec-Butylphenol	89-72-5	5	30	—	—	—	—	X
p-tert-Butyltoluene	98-51-1	10	60	20	120	—	—	—
Cadmium fume and dust (as Cd); see 29 CFR 1910.1027	7440-43-9							
Calcium carbonate	1317-65-3							
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Calcium cyanamide	156-62-7	—	0.5	—	—	—	—	—
Calcuim hydroxide	1305-62-0			—	—	—	—	—
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Calcium oxide	1305-78-8		5	—	—	—	—	—
Calcium silicate	1344-95-2							
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Calcium sulfate	7778-18-9							
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Camphor, synthetic	76-22-2	—	2	—	—	—	—	—
Caprolactam	105-60-2							
Dust	—	—	1	—	3	—	—	—
Vapor	—	5	20	10	40	—	—	—
Captafol (Difolatan®)	2425-06-1	—	0.1	—	—	—	—	—
Captan	133-06-2	—	5	—	—	—	—	—
Carbaryl (Sevin®)	63-25-2	—	5	—	—	—	—	—
Carbofluran (Furadan®)	1563-66-2	—	0.1	—	—	—	—	—
Carbon black	1333-86-4	—	3.5	—	—	—	—	—
Carbon dioxide	124-38-9	10,000	18,000	30,000	54,000	—	—	—
Carbon disulfide	75-15-0	4	12	12	36	—	—	X
Carbon monoxide (STEL – 5 minutes)	630-08-0	35	40	200	229	1500	—	—

(Rule 0800-01-01-.07, continued)

Carbon tetrabromide	558-13-4	0.1	1.4	0.3	4	—	—	—
Carbon tetrachloride	56-23-5	2	12.6	—	—	—	—	—
Carbonyl fluoride	353-50-4	2	5	5	15	—	—	—
Catechol (Pyrocatechol)	120-80-9	5	20	—	—	—	—	X
Cellulose	9004-34-6							
Total Dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Cesium hydroxide	21351-79-1	—	2	—	—	—	—	—
Chlordane	57-74-9	—	0.5	—	—	—	—	X
Chlorinated camphene	8001-35-2	—	0.5	—	1	—	—	X
Chlorinated diphenyl oxide	55720-99-5	—	0.5	—	—	—	—	—
Chlorine	7782-50-5	0.5	1.5	1	3	—	—	—
Chlorine dioxide	10049-04-4	0.1	0.3	0.3	0.9	—	—	—
Chlorine trifluoride	7790-91-2	—	—	—	—	0.1	0.4	—
Chloroacetaldehyde	107-20-0	—	—	—	—	1	3	—
a-Chloroacetophenone (Phenacyl chloride)	532-27-4	0.05	0.3	—	—	—	—	—
Chloroacetyl chloride	79-04-9	0.05	0.2	—	—	—	—	—
Chlorobenzene	108-90-7	75	350	—	—	—	—	—
o-Chlorobenzylidene malononitrile	2698-41-1	—	—	—	—	0.05	0.4	X
Chlorobromomethane	74-97-5	200	1050	—	—	—	—	—
2-Chloro-1,3-butadiene; see b-Chloroprene								
Chlorodifluoromethane	75-45-6	1000	3500	—	—	—	—	—
Chlorodiphenyl (42% Chlorine) (PCB)	53469-21-9	—	1	—	—	—	—	X
Chlorodiphenyl (54% Chlorine) (PCB)	11097-69-1	—	0.5	—	—	—	—	X
1-Chloro,2,3-epoxypropane; see Epichlorohydrin								
2-Chloroethanol; see Ethylene chlorohydrin								
Chloroethylene; see Vinyl chloride								
Chloroform (Trichloromethane)	67-66-3	2	9.78	—	—	—	—	—
Bis(Chloromethyl) ether see 29 CFR 1910.1003	542-88-1							
Chloromethyl methyl ether; see 29 CFR 1910.1003	107-30-2							
1-Chloro-1-nitropropane	600-25-9	2	10	—	—	—	—	—
Chloropentafluoroethane	76-15-3	1000	6320	—	—	—	—	—
Chloropicrin	76-06-2	0.1	0.7	—	—	—	—	—
Beta-Chloroprene	126-99-8	10	35	—	—	—	—	X
o-Chlorostyrene	2039-87-4	50	285	75	428	—	—	—
o-Chlorotoluene	95-49-8	50	250	—	—	—	—	—
2-Chloro-6-trichloro-methpyridine	1929-82-4							
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Chlorpyrifos	2921-88-2	—	0.2	—	—	—	—	X
Chromic acid and chromates (as CrO3)	Varies with compound	—	—	—	—	—	0.1	—
Chromium, sol chromic, chromous salts (as Cr)	7440-47-3	—	0.5	—	—	—	—	—
Chromium, metal and insoluble	7440-47-3	—	1	—	—	—	—	—

(Rule 0800-01-01-.07, continued)

Salts								
Chrysene; see Coal tar pitch volatiles								
Clopidol	2971-90-6							
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Coal dust (less than 5% SiO2) Respirable fraction	—	—	0.2	—	—	—	—	—
Coal dust (greater than or equal to 5% SiO2), Respirable quartz fraction	—	—	0.1	—	—	—	—	—
Coal tar pitch volatiles (benzene soluble fraction), anthrancene, BaP, phenanthrene, acidine, chrysene, pyrene	65966-93-2	—	0.2	—	—	—	—	—
Cobalt metal, dust, and fume (as Co)	7440-48-4	—	0.05	—	—	—	—	—
Cobalt carbonyl (as Co)	10210-68-1	—	0.1	—	—	—	—	—
Cobalt hydrocarbonyl (as Co)	16842-03-8	—	0.1	—	—	—	—	—
Coke oven emissions; see 29 CFR 1910.1029	—							
Copper	7440-50-8	—	—	—	—	—	—	—
Fume (as Cu)	—	—	0.1	—	—	—	—	—
Dusts and mists (as Cu)	—	—	1	—	—	—	—	—
Cotton dust (raw)	—	—	1	—	—	—	—	—
This 8-hour TWA applies to respirable dust as measured by a vertical elutriator cotton dust sampler or equivalent instruction. The time-weighted average applies to the cotton waste processing operations of waste recycling (sorting, blending, cleaning and willowing) and garnetting. See also 29 CFR 1910.1043 for cotton dust limits applicable to other sectors.								
Crag herbicide (Sesone)	136-78-7	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Cresol, all isomers	1319-77-3	5	22	—	—	—	—	X
Crotonaldehyde	123-73-9; 4170-30-3	2	6	—	—	—	—	—
Crufomate	299-86-5	—	5	—	—	—	—	—
Cumene	98-82-8	50	245	—	—	—	—	X
Cyanamide	420-04-2	—	2	—	—	—	—	—
Cyanides (as CN)	Varies with compound	—	5	—	—	—	—	—
Cyanogen	460-19-5	10	20	—	—	—	—	—
Cyanogen chloride	506-77-4	—	—	—	—	0.3	0.6	—
Cyclohexane	110-82-7	300	1050	—	—	—	—	—
Cyclohexanol	108-93-0	50	200	—	—	—	—	X
Cyclohexanone	108-94-1	25	100	—	—	—	—	X
Cyclohexene	110-83-8	300	1015	—	—	—	—	—
Cyclohexylamine	108-91-8	10	40	—	—	—	—	—
Cyclonite	121-82-4	—	1.5	—	—	—	—	X
Cyclopentadiene	542-92-7	75	200	—	—	—	—	—
Cyclopentane	287-92-3	600	1720	—	—	—	—	—
Cyhexatin	13121-70-5	—	5	—	—	—	—	—
2,4-D (Dichlorophenoxyacetic acid)	94-75-7	—	10	—	—	—	—	—
Decaborane	17702-41-9	0.05	0.3	0.15	0.9	—	—	X

(Rule 0800-01-01-.07, continued)

Demeton (Systox®)	8065-48-3	—	0.1	—	—	—	—	X
Dichlorodiphenyltrichloroethane (DDT)	50-29-3	—	1	—	—	—	—	X
Dichlorvos (DDVP)	62-73-7	—	1	—	—	—	—	X
Diacetone alcohol (4-Hydroxy-4-methyl-2-pentanone)	123-42-2	50	240	—	—	—	—	—
1,2-Diaminoethane; see Ethylenediamine								
Diazinon	333-41-5	—	0.1	—	—	—	—	X
Diazomethane	334-88-3	0.2	0.4	—	—	—	—	—
Diborane	19287-45-7	0.1	0.1	—	—	—	—	—
1,2-Dibromo-3-chloropropane; see 29 CFR 1910.1044	96-12-8							
2-N-Dibutylaminoethanol	102-81-8	2	14	—	—	—	—	—
Dibutyl phosphate	107-66-4	1	5	2	10	—	—	—
Dibutyl phthalate	84-74-2	—	5	—	—	—	—	—
Dichloroacetylene	7572-29-4	—	—	—	—	0.1	0.4	—
o-Dichlorobenzene	95-50-1	—	—	—	—	50	300	—
p-Dichlorobenzene	106-46-7	75	450	110	675	—	—	—
3,3'-Dichlorobenzidine see 29 CFR 1910.1003	91-94-1							
Dichlorodifluoromethane	75-71-8	1000	4950	—	—	—	—	—
1,3-Dichloro-5,5-dimethyl hydantion	118-52-5	—	0.2	—	0.4	—	—	—
1,1-Dichlorothane	75-34-3	100	400	—	—	—	—	—
1,2-Dichloroethylene	540-59-0	200	790	—	—	—	—	—
Dichloroethyl ether	111-44-4	5	30	10	60	—	—	X
Dichloromethane; see Methylene chloride								
Dichloromonofluoro-methane	75-43-4	10	40	—	—	—	—	—
1,1-Dichloro-1-nitroethane	594-72-9	2	10	—	—	—	—	—
1,2-Dichloropropane; see Propylenedichloride								
1,3-Dichloropropene	542-75-8	1	5	—	—	—	—	X
2,2-Dichloropropionic acid	75-99-0	1	6	—	—	—	—	—
Dichlorotetrafluoroethane	76-14-2	1000	7000	—	—	—	—	—
Dicrotophos	141-66-2	—	0.25	—	—	—	—	X
Dicyclopentadiene	77-73-6	5	30	—	—	—	—	—
Dicyclopentadienyl iron	102-54-5	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Dieldrin	60-57-1	—	0.25	—	—	—	—	X
Diethanolamine	111-42-2	3	15	—	—	—	—	—
Diethylamine	109-89-7	10	30	25	75	—	—	—
2-Diethylaminoethanol	100-37-8	10	50	—	—	—	—	X
Diethylene triamine	111-40-0	1	4	—	—	—	—	—
Diethyl ether, see Ethyl ether								
Diethyl ketone	96-22-0	200	705	—	—	—	—	—
Diethyl phthalate	84-66-2	—	5	—	—	—	—	—
Difluorodibromomethane	75-61-6	100	860	—	—	—	—	—
Diglycidyl ether (DGE)	2238-07-5	0.1	0.5	—	—	—	—	—
Dihydroxybenzene; see Hydroquinone								
Diisobutyl ketone	108-83-8	25	150	—	—	—	—	—

(Rule 0800-01-01-.07, continued)

Diisopropylamine	108-18-9	5	20	—	—	—	—	X
4-Dimethylaminoazo-benzene; see 29 CFR 1910.1003	60-11-7	—	—	—	—	—	—	—
Dimethoxymethane; see Methytal								
Dimethyl acetamide	127-19-5	10	35	—	—	—	—	X
Dimethylamine	124-40-3	10	18	—	—	—	—	—
Dimethylaminobenzene; see Xylidine								
Dimethylaniline (N,N-Dimethyl-analine)	121-69-7	5	25	10	50	—	—	X
Dimethylbenzene; see Xylene								
Dimethyl-1,2-dibromo-2,2-dichloroethyl phosphate	300-76-5	—	3	—	—	—	—	X
Dimethylformamide	68-12-2	10	30	—	—	—	—	X
2,6-Dimethyl-4-hepta-none; see Diisobutyl ketone								
1,1-Dimethylhydrazine	57-14-7	0.5	1	—	—	—	—	X
Dimethylphthalate	131-11-3	—	5	—	—	—	—	—
Dimethyl sulfate	77-78-1	0.1	0.5	—	—	—	—	X
Dinitolmide (3,5-Dinitro-o- toluamide	148-01-6	—	5	—	—	—	—	—
Dinitrobenzene (all isomers) (alpha-) (meta-) (para-)	 528-29-0 99-65-0 100-25-4	—	1	—	—	—	—	X
Dinitro-o-cresol	534-52-1	—	0.2	—	—	—	—	X
Dinitrotoluene	25321-14-6	—	1.5	—	—	—	—	X
Dioxane (Diethylene dioxide)	123-91-1	25	90	—	—	—	—	X
Dioxathion (Delnav)	78-34-2	—	0.2	—	—	—	—	X
Diphenyl (Biphenyl)	92-52-4	0.2	1	—	—	—	—	—
Diphenylamine	122-39-4	—	10	—	—	—	—	—
Diphenylmethane diisocyanate; see Methylene bisphenyl isocyanate								
Dipropylene glycol methyl ether	34590-94-8	100	600	150	900	—	—	X
Diprophy ketone	123-19-3	50	235	—	—	—	—	—
Diquat	85-00-7	—	0.5	—	—	—	—	—
Di-sec octyl phthalate (Di-2-ethylhexyl-phthalate)	117-81-7	—	5	—	10	—	—	—
Disulfiram	97-77-8	—	2	—	—	—	—	—
Disulfoton	298-04-4	—	0.1	—	—	—	—	X
2-6Di-tert-butyl-p-cresol	128-37-0	—	10	—	—	—	—	—
Diuron	330-54-1	—	10	—	—	—	—	—
Divinyl benzene	1321-74-0	10	50	—	—	—	—	—
Emery	12415-34-8	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Endosulfan	115-29-7	—	0.1	—	—	—	—	X
Endrin	72-20-8	—	0.1	—	—	—	—	X
Epichlorohdrin	106-89-8	2	8	—	—	—	—	X
EPN	2104-64-5	—	0.5	—	—	—	—	X
1,2-epoxypropane; see Propylene oxide								
2-3-Epoxy-1-propanol; see Glydicol								
Ethanethiol; see Ethy mercaptan								

(Rule 0800-01-01-.07, continued)

Ethanolamine	141-43-5	3	8	6	15	—	—	—
Ethion	563-12-2	—	0.4	—	—	—	—	X
2-Ethoxyethanol	110-80-5	200	740	—	—	—	—	X
2-Ethoxyethyl acetate (Cellosolve acetate)	111-15-9	100	540	—	—	—	—	X
Ethyl acetate	141-78-6	400	1400	—	—	—	—	—
Ethyl acrylate	140-88-5	5	20	25	100	—	—	X
Ethyl alcohol (Ethonal)	64-17-5	1000	1900	—	—	—	—	—
Ethylamine	75-04-7	10	18	—	—	—	—	—
Ethyl amyl ketone (5-Methyl-3-heptanone)	541-85-5	25	130	—	—	—	—	—
Ethyl benzene	100-41-4	100	435	125	545	—	—	—
Ethyl bromide	74-96-4	200	890	250	1110	—	—	—
Ethyl butyl ketone (3-Heptanone)	106-35-4	50	230	—	—	—	—	—
Ethyl chloride	75-00-3	1000	2600	—	—	—	—	—
Ethyl ether	60-29-7	400	1200	500	1500	—	—	—
Ethyl formate	109-94-4	100	300	—	—	—	—	—
Ethyl mercaptan	75-08-1	0.5	1	—	—	—	—	—
Ethyl silicate	78-10-4	10	85	—	—	—	—	—
Ethylene chlorohydrin	107-07-3	—	—	—	—	1	3	X
Ethylenediamine	107-15-3	10	25	—	—	—	—	—
Ethylene dibromide (STEL – 5 minutes)	106-93-4	20	—	—	30	—	50	—
Ethylene dichloride	107-06-2	1	4	2	8	—	—	—
Ethylene glycol	107-21-1	—	—	—	—	50	125	—
Ethylene glycol dinitrate	628-96-6	—	—	—	0.1	—	—	X
Ethylene glycol methyl acetate; see Methyl cellosolve acetate								
Ethyleneimine; see 29 CFR 1910.1003	151-56-4							
Ethylene oxide; see 29 CFR 1910.1047	75-21-8							
Ethylidene chloride; see 1,1-Dichloroethane								
Ethylidene norbormene	16219-75-3	—	—	—	—	5	25	—
Nethylmorpholine	100-74-3	5	23	—	—	—	—	X
Fenamiphos	22224-92-6	—	0.1	—	—	—	—	X
Fensulfothion (Dasanit)	115-90-2	—	0.1	—	—	—	—	—
Fenthion	55-38-9	—	0.2	—	—	—	—	X
Ferbam	14484-64-1	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Ferrovanadium dust	12604-58-9	—	1	—	3	—	—	—
Fluorides (as F)	Varies with compound	—	2.5	—	—	—	—	—
Fluorine	7782-41-4	01.	0.2	—	—	—	—	—
Fluorotrichloromethane (Trichlorofluoromethane)	75-69-4	—	—	—	—	1000	5600	—
Fonofos	944-22-9	—	0.1	—	—	—	—	X
Formaldehyde; see 29 CFR 1910.1048								
Formamide	75-12-7	20	30	30	45	—	—	—
Formic acid	64-18-6	5	9	—	—	—	—	—
Furfural	98-01-1	2	8	—	—	—	—	X

(Rule 0800-01-01-.07, continued)

Furfuryl alcohol	98-00-0	10	40	15	60	—	—	X
Gasoline	8006-61-9	300	900	500	1500	—	—	—
Bermanium tetrahydride	7782-65-2	0.2	0.6	—	—	—	—	—
Glutaraldehyde	111-30-8	—	—	—	—	0.2	0.8	—
Glycerin (mist)	56-81-5	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Glycidol	556-52-5	25	75	—	—	—	—	—
Glycol monoethyl ether see 2-Ethoxyethanol								
Grain dust (oat, wheat, barley)	—	—	10	—	—	—	—	—
Graphite, natural respirable dust	7782-42-5	—	2.5	—	—	—	—	—
Graphite, synthetic	—	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Guthion®, see Azinphos methyl								
Gypsum	13397-24-5							
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Hafnium	7440-58-6	—	0.5	—	—	—	—	—
Heptachlor	76-44-8	—	0.5	—	—	—	—	X
Heptane (n-Heptane)	142-82-5	400	1600	500	2000	—	—	—
Hexaclorobutadiene	87-68-3	0.02	0.24	—	—	—	—	—
Hexachlorocyclo-pentadiene	77-47-4	0.01	0.1	—	—	—	—	—
Hexacloroethane	67-72-1	1	10	—	—	—	—	X
Hexachloronapthalene	1335-87-1	—	0.2	—	—	—	—	X
Hexafluoroacetone	684-16-2	0.1	0.7	—	—	—	—	X
n-Hexane	110-54-3	50	180	—	—	—	—	—
Hexane isomers	Varies with compound	500	1800	1000	3600	—	—	—
2-Hexanone (Methyl n-butyl ketone)	591-78-6	5	20	—	—	—	—	—
Hexone (Methyl isobutyl ketone)	108-10-1	50	205	75	300	—	—	
sec-Hexyl acetate	108-84-9	50-	300	—	—	—	—	—
Hexylene glycol	107-41-5	—	—	—	—	25	125	—
Hydrazine	302-01-2	0.2	0.1	—	—	—	—	X
Hydrogenated terphenyls	61788-32-7	0.5	5	—	—	—	—	—
Hydrogen bromide	10035-10-6	—	—	—	—	3	10	—
Hydrogen chloride	7647-01-0	—	—	—	—	5	7	—
Hydrogen cyanide	74-90-8	—	—	4.7	5	—	—	X
Hydrogen fluoride (as F)	7664-39-3	3	—	6	—	—	—	—
Hydrogen peroxide	7722-84-1	1	1.4	—	—	—	—	—
Hydrogen selenide (as Se)	7783-07-5	0.05	0.2	—	—	—	—	—
Hydrogen sulfide	7783-06-4	10	14	15	21	—	—	—
Hydroquinone	123-31-9	—	2	—	—	—	—	—
2-Hydroxypropyl acrylate	999-61-1	0.5	3	—	—	—	—	X
Indene	95-13-6	10	45	—	—	—	—	—
Indium and compounds (as in)	7440-74-6	—	0.1	—	—	—	—	—
Iodine	7553-56-2	—	—	—	—	0.1	1	—
Iodoform	75-47-8	0.6	10	—	—	—	—	—
Iron oxide fume	1309-37-1	—	10	—	—	—	—	—
Iron pentacarbonyl (as Fe)	13463-40-6	0.1	0.8	0.2	1.6	—	—	—
Iron salts (soluble) (as Fe)	Varies with	—	1	—	—	—	—	—

(Rule 0800-01-01-.07, continued)

	compound							
Isoamyl acetate	123-92-2	100	525	—	—	—	—	—
Isoamyl alcohol (primary and secondary)	123-51-3	100	360	125	450	—	—	—
Isobutyl acetate	110-19-0	150	700	—	—	—	—	—
Isobutyl alcohol	78-83-1	50	150	—	—	—	—	—
Isooctyl alcohol	26952-21-6	50	270	—	—	—	—	X
Isophorone	78-59-1	4	23	—	—	—	—	—
Isophorone diisocyanate	4098-71-9	0.005	—	0.02	—	—	—	X
2-Isopropoxyethanol	109-59-1	25	105	—	—	—	—	—
Isopropyl acetate	108-21-4	250	950	310	1185	—	—	—
Isopropyl alcohol	67-63-0	400	980	500	1225	—	—	—
Isopropylamine	75-31-0	5	12	10	24	—	—	—
N-isopropylaniline	768-52-5	2	10	—	—	—	—	X
Isopropyl ether	108-20-3	500	2100	—	—	—	—	—
Isopropyl glycidyl ether (IGE)	4016-14-2	50	240	75	360	—	—	—
Kaolin								
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Ketene	463-51-4	0.5	0.9	1.5	3	—	—	—
Lead inorganic (as Pb); see 29 CFR 1910.1025	7439-92-1							
Limestone	1317-65-3							
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Lindane	58-89-9	—	0.5	—	—	—	—	X
Lithium hydride	7580-67-8	—	0.025	—	—	—	—	—
L.P.G. (liquefied petroleum gas)	68476-85-7	1000	1800	—	—	—	—	—
Magnesite	546-93-0	—	—	—	—	—	—	—
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Magnesium oxide fume	1309-48-4	—	—	—	—	—	—	—
Total particulate	—	—	10	—	—	—	—	—
Malathion	121-75-5	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	X
Maleic anhydride	108-31-6	0.25	1	—	—	—	—	—
Manganese compounds (as Mn)	7439-96-5	—	—	—	—	—	5	—
Manganese fume (as Mn)	7439-96-5	—	1	—	3	—	—	—
Manganese cyclopenta-dienyl tricarbonyl (as Mn)	12079-65-1	—	0.1	—	—	—	—	X
Manganese tetroxide (as Mn)	1317-35-7	—	1	—	—	—	—	—
Marble	1317-65-3	—	—	—	—	—	—	—
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Mercury (aryl and inorganic) (as Hg)	7439-97-6	—	—	—	—	—	0.1	X
Mercury (organo) alkyl compounds (as Hg)	7439-97-6	—	0.01	—	0.03	—	—	X
Mercury (vapor) (as Hg)	7439-97-6	—	0.05	—	—	—	—	X
Mesityl oxide	141-79-7	15	60	25	100	—	—	—
Methacrylic acid	79-41-4	20	70	—	—	—	—	X
Methanethiol; see Methyl mercapan								
Methomyl (Lannate)	16752-77-5	—	2.5	—	—	—	—	—

(Rule 0800-01-01-.07, continued)

Methoxychlor	72-43-5	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
2-Methoxyethanol; see Methyl cellosolve								
4-Methoxyphenol	150-76-5	—	5	—	—	—	—	—
Methyl acetate	79-20-9	200	610	250	760	—	—	—
Methyl acetylene (Propyne)	74-99-7	1000	1650	—	—	—	—	—
Methyl acetylene-propadiene mixture (MAPP)	—	1000	1800	1250	2250	—	—	—
Methyl acrylate	96-33-3	10	35	—	—	—	—	X
Methylacrylonitrile	126-98-7	1	3	—	—	—	—	X
Methylal (Dimethoxy-methane)	109-87-5	100	3100	—	—	—	—	—
Methyl alcohol	67-56-1	200	260	250	325	—	—	X
Methylamine	74-89-5	10	12	—	—	—	—	—
Methyl amyl alcohol; see Methyl isobutyl carbinol								
Methyl n-amyl ketone	110-43-0	100	465	—	—	—	—	—
Methyl bromide	74-83-9	5	20	—	—	—	—	X
Methyl butyl ketone; see 2-Hexanone								
Methyl cellosolve (2-Methoxyethanol)	109-86-4	25	80	—	—	—	—	X
Methyl cellosolve acetate (2-Methoxyethyl acetate)	110-49-6	25	120	—	—	—	—	X
Methyl chloride	74-87-3	50	105	100	210	—	—	—
Methyl chloroform (1,1,1-Trichloroethane)	71-55-6	350	1900	450	2450	—	—	—
Methyl 2-cyanoacrylate	137-05-3	2	8	4	16	—	—	—
Methyl cyclohexane	108-87-2	400	1600	—	—	—	—	—
Methylcyclohexanol	25639-42-3	50	235	—	—	—	—	—
o-Methylcyclohexanone	583-60-8	50	230	75	345	—	—	X
Methylcyclopentadienyl manganese tricarbonyl (as Mn)	12106-13-3	—	0.2	—	—	—	—	X
Methyl demeton	8022-00-2	—	0.5	—	—	—	—	X
4,4'-Methylene bis (2-chloroaniline (MBOCA)	101-14-4	0.02	0.22	—	—	—	—	X
Methylene bis (4-cyclohexy-isocyanate)	5124-30-1	—	—	—	—	0.01	0.11	X
Methylene chloride; see 29 CFR 1910.1052	75-09-2	—	—	—	—	—	—	—
Methylenedianiline; see 29 CFR 1910.1050								
Methyl ethyl ketone peroxide (MEKP)	1338-23-4	—	—	—	—	0.7	5	—
Methyl formate	107-31-3	100	250	150	375	—	—	—
Methyl hydrazine (monomethyl hydrazine)	60-34-4	—	—	—	—	0.2	0.35	X
Methyl iodide	74-88-4	2	10	—	—	—	—	X
Methyl isoamyl ketone	110-12-3	50	240	—	—	—	—	—
Methy isobutyl carbinol	108-11-2	25	100	40	165	—	—	X
Methyl isobutyl ketone; see Hexone								
Methyl isocyanate	624-83-9	0.02	0.05	—	—	—	—	X
Methyl isopropyl ketone	563-80-4	200	705	—	—	—	—	—

(Rule 0800-01-01-.07, continued)

Methyl mercaptan	74-93-1	0.5	1	—	—	—	—	—
Methyl methacrylate	80-62-6	100	410	—	—	—	—	—
Methyl parathion	298-00-0	—	0.2	—	—	—	—	X
Methyl propyl ketone; see 2-Pentanone								
Methyl silicate	681-84-5	1	6	—	—	—	—	—
alpha-Methyl styrene	98-83-9	50	240	100	485	—	—	—
Methylene disphenyl isocyanate (MDI)	101-68-8	—	—	—	—	0.02	0.2	—
Metribuzin	21087-64-9	—	5	—	—	—	—	—
Mica; see Silicates								
Molybdenum (as Mo)	7439-98-7							
Soluble compounds	—	—	5	—	—	—	—	—
Insoluble compounds								
Total dust	—	—	10	—	—	—	—	—
Monocrotophos (Azodrin®)	6923-22-4	—	0.25	—	—	—	—	—
Monomethyl aniline	100-61-8	0.5	2	—	—	—	—	X
Morpholine	110-91-8	20	70	30	105	—	—	X
Naphtha (Coal tar)	8030-30-6	100	400	—	—	—	—	—
Naphthalene	91-20-3	10	50	15	75	—	—	—
alpha-Naphthylamine; see 29 CFR 1910.1003	134-32-7							
beta-Naphthylamine; see 29 CFR 1910.1003	91-59-8							
Nickel carbonyl (as Ni)	13463-39-3	0.001	0.007	—	—	—	—	—
Nickel, metal and insoluble compounds (as Ni)	7440-02-0	—	1	—	—	—	—	—
Nickel, soluble compounds (as Ni)	7440-02-0	—	0.1	—	—	—	—	—
Nicotine	54-11-5	—	0.5	—	—	—	—	X
Nitric acid	7697-37-2	2	5	4	10	—	—	—
Nitric oxide	10102-43-9	25	30	—	—	—	—	—
p-Nitroaniline	100-01-6	—	3	—	—	—	—	X
Nitrobenzene	98-95-3	1	5	—	—	—	—	X
p-Nitrochlorobenzene	100-00-5	—	1	—	—	—	—	x
4-Nitrodiphenyl; see 29 CFR 1910.1003	92-93-3							
Nitroethane	79-24-3	100	310	—	—	—	—	—
Nitrogen dioxide	10102-44-0	—	—	1	1.8	—	—	—
Nitrogen trifluoride	7783-54-2	10	29	—	—	—	—	—
Nitroglycerinl	55-63-0	—	—	—	0.1	—	—	X
Nitromethane	75-52-5	100	250	—	—	—	—	—
1-Nitropropane	108-03-2	25	90	—	—	—	—	—
2-Nitropropane	79--46-9	10	35	—	—	—	—	—
N-Nitrosodimethylamine; see 29 CFR 1910.1016	62-79-9							
Nitrotoluene								
o-isomer	88-72-2	2	11	—	—	—	—	X
m-isomer	99-08-1	2	11	—	—	—	—	X
p-isomer	99-99-0	2	11	—	—	—	—	X
Nitrotrichloromethane; see Chloropicin								
Nonane	111-84-2	200	1050	—	—	—	—	—
Octachloronaphthalene	2234-13-1	—	0.1	—	0.3	—	—	X

(Rule 0800-01-01-.07, continued)

Octane	111-65-9	300	1450	375	1800	—	—	—
Oil mist, mineral	8012-95-1	—	5	—	—	—	—	—
Osmium tetroxide (as Os)	20816-12-0	0.0002	0.002	0.0006	0.006	—	—	—
Oxalic acid	144-62-7	—	1	—	2	—	—	—
Oxygen difluoride	7783-41-7	—	—	—	—	0.05	0.1	—
Ozone	10028-15-6	0.1	0.2	0.3	0.6	—	—	—
Paraffin wax fume	8002-74-2	—	2	—	—	—	—	—
Paraquat, respirable dust	1910-42-5 4685-14-7 2074-50-2	—	0.1	—	—	—	—	X
Parathion	5838-2	—	0.1	—	—	—	—	X
Particulates not otherwise regulated								
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Pentaborane	19624-22-7	0.005	0.01	0.015	0.03	—	—	—
Pentachloronaphthalene	1321-64-8	—	0.5	—	—	—	—	X
Pentachlorophenol	87-86-5	—	0.5	—	—	—	—	X
Pentaerythirtol	115-77-5	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Pentane	109-66-0	600	1800	750	2250	—	—	—
2-Pentanone (Methyl propyl ketone)	107-87-9	200	700	250	875	—	—	—
Perchloroethylene (Tetrachloroethylene)	127-18-4	25	170	—	—	—	—	—
Perchloromethyl mercaptan	594-42-3	0.1	0.8	—	—	—	—	—
Perchloryl fluoride	7616-94-6	3	14	6	28	—	—	—
Perlitte								
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Petroleum distillates (Naphtha) (Rubber Solvent)	—	400	1600	—	—	—	—	—
Phenol	108-95-2	5	19	—	—	—	—	X
Phenothiazine	92-84-2	—	5	—	—	—	—	X
p-Phenylene diamine	106-50-3	—	0.1	—	—	—	—	X
Phenyl ether, vapor	101-84-8	1	7	—	—	—	—	—
Phenyl ether-biphenyl mixture, vapor	—	1	7	—	—	—	—	—
Phenylethylene; see Styrene								
Phenyl glycidyl ether (PGE)	122-60-1	1	6	—	—	—	—	—
Phenylhydrazine	100-63-0	5	20	10	45	—	—	X
Phenyl mercaptan	108-98-5	0.5	2	—	—	—	—	—
Phenylphosphine	638-21-1	—	—	—	—	0.05	0.25	—
Phorate	298-02-2	—	0.05	—	0.2	—	—	X
Phosdrin (Mevinphos®)	7786-34-7	0.01	0.1	0.03	0.3	—	—	X
Phosgene (Carbonyl chloride)	75-44-5	0.1	0.4	—	—	—	—	—
Phosphine	7803-51-2	0.3	0.4	1	1	—	—	—
Phosphoric acid	7664-38-2	—	1	—	3	—	—	—
Phosphorus (yellow)	7723-14-0	—	0.1	—	—	—	—	—
Phosphorus oxychloride	10025-87-3	0.1	0.6	—	—	—	—	—
Phosphorus pentachloride	10026-13-8	—	1	—	—	—	—	—
Phosphorus pentasulfide	1314-80-3	—	1	—	3	—	—	—
Phosphorus trichloride	7719-12-2	0.2	1.5	0.5	3	—	—	—

(Rule 0800-01-01-.07, continued)

Phthalic anhydride	85-44-9	1	6	—	—	—	—	—
m-Phthalodinitrile	626-17-5	—	5	—	—	—	—	—
Picloram	1918-02-1	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Picric acid	88-89-1	—	0.1	—	—	—	—	x
Piperazine dihydro-chloride	142-64-3	—	5	—	—	—	—	—
Pindone (2-Pivalyl-1,3-indandione	83-26-1	—	0.1	—	—	—	—	—
Plaster of Paris	26499-65-0	—	—	—	—	—	—	—
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Platinum (as Pt)	7440-06-4	—	—	—	—	—	—	—
Metal	—	—	1	—	—	—	—	—
Soluble salts	—	—	0.002	—	—	—	—	—
Portland cement	65997-15-1	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Potassium hydroxide	1310-58-3	—	—	—	—	—	2	—
Propane	74-98-6	1000	1800	—	—	—	—	—
Propargl alcohol	107-19-7	1	2	—	—	—	—	X
beta-Propriolactone; see 29 CFR 1910.1013	57-57-8							
Propionic acid	79-09-4	10	30	—	—	—	—	—
Propoxur (Baygon)	114-26-1	—	0.5	—	—	—	—	—
n-Propyl acetate	109-60-40	200	840	250	1050	—	—	—
n-propyl alcohol	71-23-8	200	500	250	625	—	—	—
n-Propyl nitrate	627-13-4	25	105	40	170	—	—	—
Propylene dichloride	78-87-5	75	360	110	510	—	—	—
Propylene glycol dinitrate	6423-43-4	0.05	0.3	—	—	—	—	—
Propylene glycol monomethyl ether	107-98-2	100	380	150	540	—	—	—
Propylene imine	75-55-8	2	5	—	—	—	—	X
Propylene oxide	75-56-9	20	50	—	—	—	—	—
Propyne; see Methyl acetylene								
Pyrethrum	8003-34-7	—	5	—	—	—	—	—
Pyridine	110-86-1	5	15	—	—	—	—	—
Quinone	106-51-4	0.1	0.4	—	—	—	—	—
Resorcinol	108-46-3	10	45	20	90	—	—	—
Rhodium (as Rh), metal fume and insoluble compounds	7440-16-6	—	0.1	—	—	—	—	—
Rhodium (as Rh), soluble compounds	744-16-6	—	0.001	—	—	—	—	—
Ronnel	299-84-3	—	10	—	—	—	—	—
Rosin core solder pyrolysis products, as formaldehyde	—	—	0.1	—	—	—	—	—
Rotenone	83-79-4	—	5	—	—	—	—	—
Rouge								
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Selenium compounds (as Se)	7782-49-2	—	0.2	—	—	—	—	—
Selenium hexafluoride (as Se)	7783-79-1	0.05	0.4	—	—	—	—	—
Silica, amorphous, precipitated and gel	112926-00-8	—	6	—	—	—	—	—
Silica, amorphous, diatomaceous	61790-53-2	—	6	—	—	—	—	—

(Rule 0800-01-01-.07, continued)

earth, containing less than 1% crystaline silica								
Silica, crystaline cristobalite, respirable dust	14464-46-1	—	0.05	—	—	—	—	—
Silica, crystaline quartz, respirable dust	14808-60-7	—	0.1	—	—	—	—	—
Silica, crystaline tripoli (as quartz), respirable dust	1317-95-9	—	0.1	—	—	—	—	—
Silica, crystaline tridmite, respirable dust	15468-32-3	—	0.05	—	—	—	—	—
Silica, fused, respirable dust	60676-86-0	—	0.1	—	—	—	—	—
Silicates (less than 1% (crystaline silica)								
Mica (respirable dust)	12001-26-2	—	3	—	—	—	—	—
Soapstone, total dust	—	—	6	—	—	—	—	—
Soapstone, respirable dust	—	—	3	—	—	—	—	—
Talc (containing asbestos); use asbestos limit See 29 CFR 1910.1001								
Talc (containing no asbestos); Respirable dust	14807-96-6	—	2	—	—	—	—	—
Tremolite (use asbestos limit); See 29 CFR 1910.1001								
Silicon	7440-21-3							
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Silicon carbide	409-21-2							
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Silicon tetrahydride	7803-62-5	5	7	—	—	—	—	—
Silver, metal and soluble compounds (as Ag)	7440-22-4	—	0.01	—	—	—	—	—
Soapstone; see Silicates								
Sodium azide	26628-22-8							
(as HN3)	—	—	—	—	—	0.1	—	X
(as NaN3)	—	—	—	—	—	—	0.3	X
Sodium bisulfite	7631-90-5	—	5	—	—	—	—	—
Sodium fluoroacetate	62-74-8	—	0.05	—	0.15	—	—	X
Sodium hydroxide	1310-73-2	—	—	—	—	—	2	—
Sodium metabisulphite	7681-57-4	—	5	—	—	—	—	—
Starch	9005-25-8							
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Stibine	7803-52-3	0.1	0.5	—	—	—	—	—
Stoddard solvent	8052-41-3	100	525	—	—	—	—	—
Strychnine	57-24-9	—	0.15	—	—	—	—	—
Styrene	100-42-5	50	215	100	425	—	—	—
Subtilisins (Protolytic enzymes) sample 600-800 lpm for at least 60 minutes	9014-01-1	—	—	—	0.00006	—	—	—
Sucrose	57-50-1	—	—	—	—	—	—	—
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—

(Rule 0800-01-01-.07, continued)

Sulfur dioxide	7446-09-5	2	5	5	10	—	—	—
Sulfur hexafluoride	2551-62-4	1000	6000	—	—	—	—	—
Sulfuric acid	7664-93-9	—	1	—	—	—	—	—
Sulfur monochloride	10025-67-9	—	—	—	—	1	6	—
Sulfur pentafluoride	5714-22-7	—	—	—	—	0.01	0.1	—
Sulfur tetrafluoride	7783-60-0	—	—	—	—	0.1	0.4	—
Sulfuryl fluoride	2699-79-8	5	20	10	40	—	—	—
Sulprofos	35400-43-2	—	1	—	—	—	—	—
Systox®, see Demeton								
2,4,5-T	93-76-5	—	10	—	—	—	—	—
Talc; see Silicates								
Tantalum, metal and oxide dust	7440-25-7	—	5	—	—	—	—	—
TEDP (Sulfotep)	3689-24-5	—	0.2	—	—	—	—	X
Tellurium and compounds (as Te)	13494-80-9	—	0.1	—	—	—	—	—
Tellurium hexafluoride (as Te)	7783-80-4	0.02	0.2	—	—	—	—	—
Temephos	3383-96-8							
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
TEPP	107-49-3	—	0.05	—	—	—	—	X
Terphenyls	26140-60-3	—	—	—	—	0.5	5	—
1,1,1,2-Tetrachloro-2,2-difluoroethane	76-11-9	500	4170	—	—	—	—	—
1,1,2,2-Tetrachloro-1,2-difluoroethane	76-12-0	500	4170	—	—	—	—	—
1,1,2,2-Tetrachloroethane	79-34-5	1	7	—	—	—	—	X
Tetrachoroethylene; see Perchloroethylene								
Tetrachloromethane; see Carbon tetrachloride								
Tetrachloronaphthalene	1335-88-2	—	2	—	—	—	—	X
Tetraethyl lead (as Pb)	78-00-2	—	0.075	—	—	—	—	X
Tetrahydrofuran	109-99-9	200	590	250	735	—	—	—
Tetramethyl lead, (as Pb)	75-74-1	—	0.75	—	—	—	—	X
Tetramethyl succinonitrile	3333-52-6	0.5	3	—	—	—	—	X
Tetranitromethane	509-14-8	1	8	—	—	—	—	—
Tetrasodium pyrophosphate	7722-88-5	—	5	—	—	—	—	—
Tetryl (2,4,6-Trinitrophenyl-methyl-nitramine)	479-45-8	—	1.5	—	—	—	—	X
Thalium, Soluble compounds (as Tl)	7440-28-0	—	0.1	—	—	—	—	X
4,4'-Thiobis(6-tert, Butyl-m-cresol)	96-69-5	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Thioglycolic acid	68-11-1	1	4	—	—	—	—	X
Thionyl chloride	7719-09-7	—	—	—	—	1	5	—
Thiram	137-26-8	—	5	—	—	—	—	—
Tin, inorganic compounds (except oxides) (as Sn)	7440-31-5	—	2	—	—	—	—	—
Tin, organic compounds (as Sn)	7440-31-5	—	0.1	—	—	—	—	X
Tin oxide (as Sn)	21651-19-4	—	2	—	—	—	—	—
Titanium dioxide	13463-67-7	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Toluene	108-88-3	100	375	150	580	—	—	—
Toluene-2,4-diisocynate (TDI)	584-84-9	0.005	0.04	0.02	0.15	—	—	—

(Rule 0800-01-01-.07, continued)

m-Toluidine	108-44-1	2	9	—	—	—	—	X
o-Toluidine	95-53-4	5	22	—	—	—	—	X
p-Toluidine	106-49-0	2	9	—	—	—	—	X
Toxaphene; see Chlorinated camphene								
Tremolite; see Silicates								
Tributyl phosphate	126-73-8	0.2	2.5	—	—	—	—	—
Trichloroacetic acid	76-03-9	1	7	—	—	—	—	—
1,2,4-Trichlorobenzene	120-82-1	—	—	—	—	5	40	—
1,1,1-Trichloroethane; see Methyl chloroform								
1,1,2-Trichloroethane	79-00-5	10	45	—	—	—	—	X
Trichloroethylene	79-01-6	50	270	200	1080	—	—	—
Trichloromethane; see Chloroform								
Trichloronaphthalene	1321-65-9	—	5	—	—	—	—	X
1,2,3-Trichloropropane	96-18-4	10	60	—	—	—	—	—
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	1000	7600	1250	9500	—	—	—
Triethylamine	121-44-8	10	40	15	60	—	—	—
Trifluorobromomethane	75-63-8	1000	6100	—	—	—	—	—
Trimellitic anhydride	552-30-7	0.005	0.04	—	—	—	—	—
Trimethylamine	75-50-3	10	24	15	36	—	—	—
Trimethyl benzene	25551-13-7	25	125	—	—	—	—	—
Trimethyl phosphite	121-45-9	2	10	—	—	—	—	—
2,4,6-Trinitrophenyl; see Picric acid								
2,4,6-Trinitrophenylmethyl nitamine; see Tetryl								
2,4,6-Trinitrotoluene (TNT)	118-96-7	—	0.5	—	—	—	—	X
Triorthocresyl phosphate	78-30-8	—	0.1	—	—	—	—	X
Triphenyl amine	603-34-9	—	5	—	—	—	—	—
Triphenyl phosphate	115-86-6	—	3	—	—	—	—	—
Tungsten (as W	7440-33-7	—	—	—	—	—	—	—
Insoluble compounds	—	—	5	—	10	—	—	—
Soluble compounds	—	—	1	—	3	—	—	—
Turpentine	8006-64-2	100	560	—	—	—	—	—
Uranium (as U)	7440-61-1	—	—	—	—	—	—	—
Soluble compounds	—	—	0.05	—	—	—	—	—
Insoluble compounds	—	—	0.2	—	0.6	—	—	—
n-Valeraldehyde	110-62-3	50	175	—	—	—	—	—
Vanadium fume and	1314-62-1	—	—	—	—	—	—	—
Respirable dust (as V2O5)	—	—	0.05	—	—	—	—	—
Vegetable oil mist	—							
Total dust	—	—	15	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Vinyl acetate	108-05-4	10	30	20	60	—	—	—
Vinyl benzene; see Styrene								
Vinyl bromide	593-60-2	5	20	—	—	—	—	—
Vinyl chloride; see 29 CFR 1910.1017	75-01-4	—	—	—	—	—	—	—
Vinyl cyanide; see Acrylonitrile								
Vinyl cyclohexene dioxide	106-87-6	10	60	—	—	—	—	X
Vinylidene chloride (1,1-Dichloro-ethylene)	75-35-4	1	4	—	—	—	—	—
Vinyl toluene	24994	100	480	—	—	—	—	—

(Rule 0800-01-01-.07, continued)

VM & P Naphtha	8032-32-4	300	1350	400	1800	—	—	—
Warfarin	81-81-2	—	0.1	—	—	—	—	—
Welding fumes (total particulate)	—	—	5	—	—	—	—	—
Wood dust, all soft and hard woods, except Western red cedar	—	—	5	—	10	—	—	—
Wood dust, Western red cedar	—	—	2.5	—	—	—	—	—
Xylenes (o-, m-, p- isomers)	1330-20-7	100	435	150	655	—	—	—
m-Xylene alpha, alpha-diamine	1477-55-0	—	—	—	—	—	0.1	X
Xylidine	1300-73-8	2	10	—	—	—	—	X
Yttrium	7440-65-5	—	1	—	—	—	—	—
Zinc chloride fume	7646-85-7	—	1	—	2	—	—	—
Zinc chromate (as CrO3)	Varies with compound	—	—	—	—	—	0.1	—
Zinc oxide fume	1314-13-2	—	5	—	10	—	—	—
Zinc oxide	1314-13-2	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Zinc stearate	557-05-1	—	—	—	—	—	—	—
Total dust	—	—	10	—	—	—	—	—
Respirable fraction	—	—	5	—	—	—	—	—
Zirconium compounds (as Zr)	7440-67-7	—	5	—	10	—	—	—

Authority: *T.C.A. §§ 4-3-1411, 50-3-105, 50-3-201, and 50-3-202.* ***Administrative History:*** *Original rule filed January 15, 1977; effective February 13, 1977. Repeal and new rule filed September 15, 1977; effective October 14, 1977. Repeal and new rule filed March 31, 1983; effective June 15, 1983. Repeal and new rule filed August 13, 1999; effective December 29, 1999. Repeal and new rule filed January 11, 2002; effective May 31, 2002. Amendment filed April 21, 2004; August 27, 2004. Amendment filed November 16, 2006; effective date March 30, 2007.*