

OSHA Rules for General Industry

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Library of Congress Catalog Card Number: 2015951807

ISBN: 978-1-68008-087-2

Canadian Goods and Services Tax (GST) Number: R123-317687

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Printed in the U.S.A.

OSHA Rules for General Industry

Introduction

This publication contains the word-for-word OSHA regulations that apply to “General Industry” employers (for example, manufacturing, warehouses, and retail), as well as the Part 1904 Injury and Illness Recordkeeping requirements and the 1903 regulations that outline the OSHA inspection and penalty process.

Examples of OSHA standards included in this Guide include those requirements for employers to:

- Provide fall protection;
- Prevent exposure to some infectious diseases;
- Ensure the safety of workers who enter confined spaces;
- Prevent exposure to harmful chemicals;
- Put guards on dangerous machines;
- Provide respirators or other safety equipment;
- Provide training for certain dangerous jobs; and
- Maintain injury and illness logs.

The publication also contains the full text of the OSH Act, which serves as the basis for OSHA regulations and contains the General Duty Clause, which employers are also required to comply with. This clause requires employers to keep their workplaces free of serious recognized hazards and is generally cited when no specific OSHA standard applies to the hazard.

A handy subject index also helps you quickly locate regulations on specific topics.

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The Editors & Publisher
J. J. Keller & Associates, Inc.

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Published & Printed by

J. J. Keller & Associates, Inc.

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OSHA Rules for General Industry

Table of Contents

Part 1910

Subpart A—General

- §1910.1 Purpose and scope.
- §1910.2 Definitions.
- §1910.3 Petitions for the issuance, amendment, or repeal of a standard.
- §1910.4 Amendments to this part.
- §1910.5 Applicability of standards.
- §1910.6 Incorporation by reference.
- §1910.7 Definition and requirements for a nationally recognized testing laboratory.
Appendix A to §1910.7—OSHA recognition process for nationally recognized testing laboratories
- §1910.8 OMB control numbers under the Paperwork Reduction Act.
- §1910.9 Compliance duties owed to each employee.

Subpart B—Adoption and Extension of Established Federal Standards

- §1910.11 Scope and purpose.
- §1910.12 Construction work.
- §1910.15 Shipyard employment.
- §1910.16 Longshoring and marine terminals.
- §1910.17 Effective dates.
- §1910.18 Changes in established Federal standards.
- §1910.19 Special provisions for air contaminants.

Subpart C—[Reserved]

Subpart D—Walking-Working Surfaces

- §1910.21 Scope and definitions.
- §1910.22 General requirements.
- §1910.23 Ladders.
- §1910.24 Step bolts and manhole steps.
- §1910.25 Stairways.
- §1910.26 Dockboards.
- §1910.27 Scaffolds and rope descent systems.
- §1910.28 Duty to have fall protection and falling object protection.
- §1910.29 Fall protection systems and falling object protection—criteria and practices.
- §1910.30 Training requirements.

OSHA Rules for General Industry

Subpart E—Exit Routes and Emergency Planning

§1910.33 Table of contents.

§1910.34 Coverage and definitions.

§1910.35 Compliance with alternate exit route codes.

§1910.36 Design and construction requirements for exit routes.

§1910.37 Maintenance, safeguards, and operational features for exit routes.

§1910.38 Emergency action plans.

§1910.39 Fire prevention plans.

Appendix to Subpart E of Part 1910—Exit Routes, Emergency Action Plans, and Fire Prevention Plans

Subpart F—Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms

§1910.66 Powered platforms for building maintenance.

Appendix A to §1910.66, Guidelines (Advisory)

Appendix B to §1910.66—Exhibits (Advisory)

Appendix C to §1910.66—[Reserved]

Appendix D to §1910.66—Existing installations (Mandatory)

§1910.67 Vehicle-mounted elevating and rotating work platforms.

§1910.68 Manlifts.

Subpart G—Occupational Health and Environmental Control

§1910.94 Ventilation.

§1910.95 Occupational noise exposure.

Appendix A to §1910.95—Noise exposure computation

Appendix B to §1910.95—Methods for estimating the adequacy of hearing protector attenuation

Appendix C to §1910.95—Audiometric measuring instruments

Appendix D to §1910.95—Audiometric test rooms

Appendix E to §1910.95—Acoustic calibration of audiometers

Appendix F to §1910.95—Calculations and application of age corrections to audiograms

Appendix G to §1910.95—Monitoring noise levels non-mandatory-informational appendix

Appendix H to §1910.95—Availability of referenced documents

Appendix I to §1910.95—Definitions

§1910.97 Nonionizing radiation.

§1910.98 Effective dates.

OSHA Rules for General Industry

Subpart H—Hazardous Materials

§1910.101 Compressed gases (general requirements).

§1910.102 Acetylene.

§1910.103 Hydrogen.

§1910.104 Oxygen.

§1910.105 Nitrous oxide.

§1910.106 Flammable liquids.

§1910.107 Spray finishing using flammable and combustible materials.

§1910.108 [Reserved]

§1910.109 Explosives and blasting agents.

§1910.110 Storage and handling of liquefied petroleum gases.

§1910.111 Storage and handling of anhydrous ammonia.

§1910.112-1910.113 [Reserved]

§1910.119 Process safety management of highly hazardous chemicals.

Appendix A to §1910.119—List of highly hazardous chemicals, toxics and reactives (Mandatory)

Appendix B to §1910.119—Block Flow Diagram and Simplified Process Flow Diagram

Appendix C to §1910.119—Compliance guidelines and recommendations for process safety management (Non-mandatory)

Appendix D to §1910.119—Sources of further information (non-mandatory)

§1910.120 Hazardous waste operations and emergency response.

Appendix A to §1910.120—Personal protective equipment test methods

Appendix B to §1910.120—General description and discussion of the levels of protection and protective gear

Appendix C to §1910.120—Compliance guidelines

Appendix D to §1910.120—References

Appendix E to §1910.120—Training curriculum guidelines

§1910.121 [Reserved]

Dipping and coating operations

§1910.122 Dipping and coating operations: Table of contents.

§1910.123 Dipping and coating operations: Coverage and definitions.

§1910.124 General requirements for dipping and coating operations.

§1910.125 Additional requirements for dipping and coating operations that use flammable or liquids with flashpoints greater than 199.4°F (93°C). liquids.

§1910.126 Additional requirements for special dipping and coating operations.

OSHA Rules for General Industry

Subpart I—Personal Protective Equipment

§1910.132 General requirements.

§1910.133 Eye and face protection.

§1910.134 Respiratory protection.

Appendix A to §1910.134—Fit testing procedures (Mandatory)

Appendix B-1 to §1910.134: User seal check procedures (Mandatory)

Appendix B-2 to §1910.134—Respirator cleaning procedures (Mandatory)

Appendix C to §1910.134: OSHA respirator medical evaluation questionnaire (Mandatory)

Appendix D to §1910.134 (Mandatory) Information for employees using respirators when not required under the standard

§1910.135 Head protection.

§1910.136 Foot protection.

§1910.137 Electrical protective equipment.

§1910.138 Hand protection.

§1910.139 [Reserved]

§1910.140 Personal fall protection systems.

Appendix A to Subpart I to Part 1910—References for further information (Non-mandatory)

Appendix B to Subpart I to Part 1910—Non-mandatory compliance guidelines for hazard assessment and personal protective equipment selection

Appendix C to Subpart I of Part 1910—Personal fall protection systems non-mandatory guidelines (Effective January 17, 2017)

Appendix D to Subpart I of Part 1910—Test methods and procedures for personal fall protection systems non-mandatory guidelines

Subpart J—General Environmental Controls

§1910.141 Sanitation.

§1910.142 Temporary labor camps.

§1910.143 Nonwater carriage disposal systems. [Reserved]

§1910.144 Safety color code for marking physical hazards.

§1910.145 Specifications for accident prevention signs and tags.

§1910.146 Permit-required confined spaces.

§1910.147 The control of hazardous energy (lockout/tagout).

Appendix A to §1910.147—Typical minimal lockout procedure

OSHA Rules for General Industry

Subpart K—Medical and First Aid

§1910.151 Medical services and first aid.

Appendix A to §1910.151—First Aid Kits (Non-Mandatory)

§1910.152 [Reserved]

Subpart L—Fire Protection

§1910.155 Scope, application and definitions applicable to this subpart.

§1910.156 Fire brigades.

Portable fire suppression equipment

§1910.157 Portable fire extinguishers.

§1910.158 Standpipe and hose systems.

Fixed fire suppression equipment

§1910.159 Automatic sprinkler systems.

§1910.160 Fixed extinguishing systems, general.

§1910.161 Fixed extinguishing systems, dry chemical.

§1910.162 Fixed extinguishing systems, gaseous agent.

§1910.163 Fixed extinguishing systems, water spray and foam.

Other fire protection systems

§1910.164 Fire detection systems.

§1910.165 Employee alarm systems.

Subpart M—Compressed Gas and Compressed Air Equipment

§1910.166-1910.168 [Reserved]

§1910.169 Air receivers.

Subpart N—Materials Handling and Storage

§1910.176 Handling materials — general.

§1910.177 Servicing multi-piece and single piece rim wheels.

Appendix A—Trajectory

Appendix B to §1910.177—Ordering Information for OSHA Charts

§1910.178 Powered industrial trucks.

Appendix A to §1910.178—Stability of powered industrial trucks (Non-mandatory appendix to paragraph (l) of this section)

§1910.179 Overhead and gantry cranes.

§1910.180 Crawler locomotive and truck cranes.

§1910.181 Derricks.

§1910.183 Helicopters.

§1910.184 Slings

OSHA Rules for General Industry

Subpart O—Machinery and Machine Guarding

§1910.211 Definitions.

§1910.212 General requirements for all machines.

§1910.213 Woodworking machinery requirements.

§1910.214 Cooperage machinery. [Reserved]

§1910.215 Abrasive wheel machinery.

§1910.216 Mills and calenders in the rubber and plastics industries.

§1910.217 Mechanical power presses.

Appendix A to §1910.217—Mandatory requirements for certification/validation of safety systems for presence sensing device initiation of mechanical power presses

Appendix B to §1910.217—Non-mandatory guidelines for certification/validation of safety systems for presence sensing device initiation of mechanical power presses

Appendix C to §1910.217—Mandatory requirements for OSHA recognition of third-party validation organizations for the PSDI standard

Appendix D to §1910.217—Non-mandatory supplementary information

§1910.218 Forging machines.

§1910.219 Mechanical power-transmission apparatus.

Subpart P—Hand and Portable Powered Tools and Other Hand-Held Equipment

§1910.241 Definitions.

§1910.242 Hand and portable powered tools and equipment, general.

§1910.243 Guarding of portable powered tools.

§1910.244 Other portable tools and equipment.

Subpart Q—Welding, Cutting, and Brazing

§1910.251 Definitions.

§1910.252 General requirements.

§1910.253 Oxygen-fuel gas welding and cutting.

§1910.254 Arc welding and cutting.

§1910.255 Resistance welding.

Subpart R—Special Industries

§1910.261 Pulp, paper, and paperboard mills.

§1910.262 Textiles.

§1910.263 Bakery equipment.

§1910.264 Laundry machinery and operations.

§1910.265 Sawmills.

§1910.266 Logging operations.

OSHA Rules for General Industry

Appendix A to §1910.266—First aid kits (mandatory)

Appendix B to §1910.266—First aid and CPR training (mandatory)

Appendix C to §1910.266—Comparable ISO standards (non-mandatory)

§1910.267 [Reserved]

§1910.268 Telecommunications.

§1910.269 Electric power generation, transmission, and distribution.

Appendix B to §1910.269—Working on exposed energized parts

Appendix C to §1910.269—Protection From Hazardous Differences in Electric Potential

Appendix D to §1910.269—Methods of inspecting and testing wood poles

Appendix E to §1910.269—Protection from flames and electric arcs

Appendix F to §1910.269—Work-positioning equipment inspection guidelines

Appendix G to §1910.269—Reference Documents

§1910.272 Grain handling facilities.

Appendix A to §1910.272—Grain handling facilities

Appendix B to §1910.272—Grain handling facilities

Appendix C to §1910.272—Grain handling facilities

Subpart S—Electrical

General

§1910.301 Introduction.

Design safety standards for electrical systems

§1910.302 Electric utilization systems.

§1910.303 General.

§1910.304 Wiring design and protection.

§1910.305 Wiring methods, components, and equipment for general use.

§1910.306 Specific purpose equipment and installations.

§1910.307 Hazardous (classified) locations.

§1910.308 Special systems.

§1910.309-1910.330 [Reserved]

Safety-related work practices

§1910.331 Scope.

§1910.332 Training.

§1910.333 Selection and use of work practices.

§1910.334 Use of equipment.

§1910.335 Safeguards for personnel protection.

§§1910.336-1910.360 [Reserved]

OSHA Rules for General Industry

Safety-related maintenance requirements

§§1910.361-1910.380 [Reserved]

Safety requirements for special equipment

§§1910.381-1910.398 [Reserved]

Definitions

§1910.399 Definitions applicable to this subpart.

Appendix A—References for further information

Subpart T—Commercial Diving Operations

General

§1910.401 Scope and application.

§1910.402 Definitions.

Personnel requirements

§1910.410 Qualifications of dive team.

General operations procedures

§1910.420 Safe practices manual.

§1910.421 Pre-dive procedures.

§1910.422 Procedures during dive.

§1910.423 Post-dive procedures.

Specific operations procedures

§1910.424 Scuba diving.

§1910.425 Surface-supplied air diving.

§1910.426 Mixed-gas diving.

§1910.427 Liveboating.

Equipment procedures and requirements

§1910.430 Equipment.

Recordkeeping

§1910.440 Recordkeeping requirements.

Appendix A to Subpart T to Part 1910—Examples of conditions which may restrict or limit exposure to hyperbaric conditions

Appendix B to Subpart T to Part 1910—Guidelines for scientific diving

Appendix C to Subpart T to Part 1910—Alternative conditions under Sec. 1910.401(a)(3) for recreational diving instructors and diving guides (mandatory)

Subpart U—[Reserved]

Subpart V—[Reserved]

Subpart W—[Reserved]

OSHA Rules for General Industry

Subpart X—[Reserved]

Subparts Y—[Reserved]

Subpart Z—Toxic and Hazardous Substances

§1910.1000 Air contaminants.

§1910.1001 Asbestos. (online)

§1910.1002 Coal tar pitch volatiles; interpretation of term. (online)

§1910.1003 13 Carcinogens (4-nitrobiphenyl, etc.). (online)

§1910.1004 alpha-Naphthylamine. (online)

§1910.1005 [Reserved] (online)

§1910.1006 Methyl chloromethyl ether. (online)

§1910.1007 3,3'-Dichlorobenzidine (and its salts). (online)

§1910.1008 bis-Chloromethyl ether. (online)

§1910.1009 beta-Naphthylamine. (online)

§1910.1010 Benzidine. (online)

§1910.1011 4-Aminodiphenyl. (online)

§1910.1012 Ethyleneimine. (online)

§1910.1013 beta-Propiolactone. (online)

§1910.1014 2-Acetylaminofluorene. (online)

§1910.1015 4-Dimethylaminoazobenzene. (online)

§1910.1016 N-Nitrosodimethylamine. (online)

§1910.1017 Vinyl chloride. (online)

§1910.1018 Inorganic arsenic. (online)

§1910.1020 Access to employee exposure and medical records.

Appendix A to §1910.1020—Sample authorization letter for the release of employee medical record information to a designated representative (non-mandatory)

Appendix B to §1910.1020—Availability of NIOSH registry of toxic effects of chemical substances (RTECS) (non-mandatory)

§1910.1024 Beryllium. (online)

§1910.1025 Lead. (online)

§1910.1026 Chromium (VI). (online)

§1910.1027 Cadmium. (online)

§1910.1028 Benzene. (online)

§1910.1029 Coke oven emissions. (online)

§1910.1030 Bloodborne pathogens.

Appendix A to §1910.1030—Hepatitis B vaccine declination (mandatory)

OSHA Rules for General Industry

§1910.1043 Cotton dust. (online)

§1910.1044 1,2-dibromo-3-chloropropane. (online)

§1910.1045 Acrylonitrile. (online)

§1910.1047 Ethylene oxide. (online)

§1910.1048 Formaldehyde. (online)

§1910.1050 Methylenedianiline (MDA). (online)

§1910.1051 1,3-Butadiene. (online)

§1910.1052 Methylene chloride. (online)

§1910.1053 Respirable Crystalline Silica. (online)

§1910.1096 Ionizing radiation.

§1910.1200 Hazard communication.

Appendix A to §1910.1200—Health Hazard Criteria (Mandatory)

Appendix B to §1910.1200—Physical criteria (Mandatory)

Appendix C to §1910.1200—Allocation of label elements (Mandatory)

Appendix D to §1910.1200—Safety Data Sheets (Mandatory)

Appendix E to §1910.1200—Definition of “trade secret” (Mandatory)

Appendix F to §1910.1200—Guidance for Hazard Classifications Re: Carcinogenicity (Non-mandatory)

§1910.1201 Retention of DOT markings, placards and labels.

§1910.1450 Occupational exposure to hazardous chemicals in laboratories.

Appendix A to §1910.1450—National Research Council recommendations concerning chemical hygiene in laboratories (non-mandatory)

Appendix B to §1910.1450—References (non-mandatory)

Part 1903—Inspections, citations and proposed penalties

§1903.1 Purpose and scope.

§1903.2 Posting of notice; availability of the Act, regulations and applicable standards.

§1903.3 Authority for inspection.

§1903.4 Objection to inspection.

§1903.5 Entry not a waiver.

§1903.6 Advance notice of inspections.

§1903.7 Conduct of Inspections.

§1903.8 Representatives of employers and employees.

§1903.9 Trade secrets.

OSHA Rules for General Industry

§1903.10 Consultation with employees.

§1903.11 Complaints by employees.

§1903.12 Inspection not warranted; informal review.

§1903.13 Imminent danger.

§1903.14 Citations; notices of de minimis violations; policy regarding employee rescue activities.

§1903.14a Petitions for modification of abatement date.

§1903.15 Proposed penalties.

§1903.16 Posting of citations.

§1903.17 Employer and employee contests before the Review Commission.

§1903.18 Failure to correct a violation for which a citation has been issued.

§1903.19 Abatement verification.

§1903.20 Informal conferences.

§1903.21 State administration.

§1903.22 Definitions.

Part 1904—Recording and reporting occupational injuries and illnesses

Subpart A—Purpose

§1904.0 Purpose.

Subpart B—Scope

§1904.1 Partial exemption for employers with 10 or fewer employees.

§1904.2 Partial exemption for establishments in certain industries.

§1904.3 Keeping records for more than one agency.

Non-mandatory Appendix A to Subpart B—Partially exempt industries

Subpart C—Recordkeeping Forms and Recording Criteria

§1904.4 Recording criteria.

§1904.5 Determination of work-relatedness.

§1904.6 Determination of new cases.

§1904.7 General recording criteria.

§1904.8 Recording criteria for needlestick and sharps injuries.

§1904.9 Recording criteria for cases involving medical removal under OSHA standards.

§1904.10 Recording criteria for cases involving occupational hearing loss.

OSHA Rules for General Industry

§1904.11 Recording criteria for work-related tuberculosis cases.

§1904.12–1904.28 [Reserved]

§1904.29 Forms.

Subpart D—Other OSHA Injury and Illness Recordkeeping Requirements

§1904.30 Multiple business establishments.

§1904.31 Covered employees.

§1904.32 Annual summary.

§1904.33 Retention and updating.

§1904.34 Change in business ownership.

§1904.35 Employee involvement.

§1904.36 Prohibition against discrimination.

§1904.37 State recordkeeping regulations.

§1904.38 Variances from the recordkeeping rule.

Subpart E—Reporting Fatality, Injury and Illness Information to the Government

§1904.39 Reporting fatalities, hospitalizations, amputations, and losses of an eye as a result of work-related incidents to OSHA.

§1904.40 Providing accurate records to government representatives.

§1904.41 Electronic submission of injury and illness records to OSHA.

§1904.42 Requests from the Bureau of Labor Statistics for data.

Appendix A—Designated Industries for §1904.41(a)(2) Annual Electronic Submission of OSHA Form 300A Summary of Work-Related Injuries and Illnesses by Establishments With 20 or More Employees but Fewer Than 250 Employees in Designated Industries

Subpart F—Transition From the Former Rule

§1904.43 Summary and posting of the 2001 data.

§1904.44 Retention and updating of old forms.

§1904.45 OMB control numbers under the Paperwork Reduction Act.

Subpart G—Definitions

§1904.46 Definitions.

Subject Index

OSHA Rules for General Industry

Reference

OSH Act of 1970

About the Act

Glossaries

Glossary of Safety and Health Terms

Glossary of Safety and Health Acronyms

Violations

OSHA's Top Violations

Regulatory Agenda

The OSHA Rulemaking Process

OSHA's Semi-Annual Regulatory Agenda

Agency Contacts

Subpart Z: Toxic and hazardous substances

(2) Every employer shall maintain records in the same units used in tables in paragraph (b) of this section and Appendix B to 10 CFR Part 20.

(o) **Disclosure to former employee of individual employee's record.** (1) At the request of a former employee an employer shall furnish to the employee a report of the employee's exposure to radiation as shown in records maintained by the employer pursuant to paragraph (n)(1) of this section. Such report shall be furnished within 30 days from the time the request is made, and shall cover each calendar quarter of the individual's employment involving exposure to radiation or such lesser period as may be requested by the employee. The report shall also include the results of any calculations and analysis of radioactive material deposited in the body of the employee. The report shall be in writing and contain the following statement: "You should preserve this report for future reference."

(2) [Reserved]

(p) **Nuclear Regulatory Commission licensees-NRC contractors operating NRC plants and facilities-NRC Agreement State licensees or registrants.** (1) Any employer who possesses or uses source material, byproduct material, or special nuclear material, as defined in the Atomic Energy Act of 1954, as amended, under a license issued by the Nuclear Regulatory Commission and in accordance with the requirements of 10 CFR Part 20 shall be deemed to be in compliance with the requirements of this section with respect to such possession and use.

(2) NRC contractors operating NRC plants and facilities: Any employer who possesses or uses source material, byproduct material, special nuclear material, or other radiation sources under a contract with the Nuclear Regulatory Commission for the operation of NRC plants and facilities and in accordance with the standards, procedures, and other requirements for radiation protection established by the Commission for such contract pursuant to the Atomic Energy Act of 1954 as amended (42 U.S.C. 2011 et seq.), shall be deemed to be in compliance with the requirements of this section with respect to such possession and use.

(3) NRC-agreement State licensees or registrants:

(i) **Atomic Energy Act sources.** Any employer who possesses or uses source material, byproduct material, or special nuclear material, as defined in the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.), and has either registered such sources with, or is operating under a license issued by, a State which has an agreement in effect with the Nuclear Regulatory Commission pursuant to section 274(b) (42 U.S.C. 2021 (b)) of the Atomic Energy Act of 1954, as amended, and in accordance with the requirements of that State's laws and regulations shall be deemed to be in compliance with the radiation requirements of this section, insofar as his possession and use of such material is concerned, unless the Secretary of Labor, after conference with the Nuclear Regulatory Commission, shall determine that the State's program for control of these radiation sources is incompatible with the requirements of this section. Such agreements currently are in effect only in the States of Alabama, Arkansas, California, Kansas, Kentucky, Florida, Mississippi, New Hampshire, New York, North Carolina, Texas, Tennessee, Oregon, Idaho, Arizona, Colorado, Louisiana, Nebraska, Washington, Maryland, North Dakota, South Carolina, and Georgia.

(ii) **Other sources.** Any employer who possesses or uses radiation sources other than source material, byproduct ma-

terial, or special nuclear material, as defined in the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.), and has either registered such sources with, or is operating under a license issued by a State which has an agreement in effect with the Nuclear Regulatory Commission pursuant to section 274(b) (42 U.S.C. 2021(b)) of the Atomic Energy Act of 1954, as amended, and in accordance with the requirements of that State's laws and regulations shall be deemed to be in compliance with the radiation requirements of this section, insofar as his possession and use of such material is concerned, provided the State's program for control of these radiation sources is the subject of a currently effective determination by the Assistant Secretary of Labor that such program is compatible with the requirements of this section. Such determinations currently are in effect only in the States of Alabama, Arkansas, California, Kansas, Kentucky, Florida, Mississippi, New Hampshire, New York, North Carolina, Texas, Tennessee, Oregon, Idaho, Arizona, Colorado, Louisiana, Nebraska, Washington, Maryland, North Dakota, South Carolina, and Georgia.

§1910.1200 Hazard communication.

(a) **Purpose.** (1) The purpose of this section is to ensure that the hazards of all chemicals produced or imported are classified, and that information concerning the classified hazards is transmitted to employers and employees. The requirements of this section are intended to be consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Revision 3. The transmittal of information is to be accomplished by means of comprehensive hazard communication programs, which are to include container labeling and other forms of warning, safety data sheets and employee training.

(2) This occupational safety and health standard is intended to address comprehensively the issue of classifying the potential hazards of chemicals, and communicating information concerning hazards and appropriate protective measures to employees, and to preempt any legislative or regulatory enactments of a state, or political subdivision of a state, pertaining to this subject. Classifying the potential hazards of chemicals and communicating information concerning hazards and appropriate protective measures to employees, may include, for example, but is not limited to, provisions for: developing and maintaining a written hazard communication program for the workplace, including lists of hazardous chemicals present; labeling of containers of chemicals in the workplace, as well as of containers of chemicals being shipped to other workplaces; preparation and distribution of safety data sheets to employees and downstream employers; and development and implementation of employee training programs regarding hazards of chemicals and protective measures. Under section 18 of the Act, no state or political subdivision of a state may adopt or enforce any requirement relating to the issue addressed by this Federal standard, except pursuant to a Federally-approved state plan.

(b) **Scope and application.** (1) This section requires chemical manufacturers or importers to classify the hazards of chemicals which they produce or import, and all employers to provide information to their employees about the hazardous chemicals to which they are exposed, by means of a hazard communication program, labels and other forms of warning, safety data sheets, and information and training. In addition, this section requires distributors to transmit the required information to employers. (Employers who do not

Subpart Z: Toxic and hazardous substances

produce or import chemicals need only focus on those parts of this rule that deal with establishing a workplace program and communicating information to their workers.)

(2) This section applies to any chemical which is known to be present in the workplace in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency.

(3) This section applies to laboratories only as follows:

(i) Employers shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced;

(ii) Employers shall maintain any safety data sheets that are received with incoming shipments of hazardous chemicals, and ensure that they are readily accessible during each workshift to laboratory employees when they are in their work areas;

(iii) Employers shall ensure that laboratory employees are provided information and training in accordance with paragraph (h) of this section, except for the location and availability of the written hazard communication program under paragraph (h)(2)(iii) of this section; and,

(iv) Laboratory employers that ship hazardous chemicals are considered to be either a chemical manufacturer or a distributor under this rule, and thus must ensure that any containers of hazardous chemicals leaving the laboratory are labeled in accordance with paragraph (f) of this section, and that a safety data sheet is provided to distributors and other employers in accordance with paragraphs (g)(6) and (g)(7) of this section.

(4) In work operations where employees only handle chemicals in sealed containers which are not opened under normal conditions of use (such as are found in marine cargo handling, warehousing, or retail sales), this section applies to these operations only as follows:

(i) Employers shall ensure that labels on incoming containers of hazardous chemicals are not removed or defaced;

(ii) Employers shall maintain copies of any safety data sheets that are received with incoming shipments of the sealed containers of hazardous chemicals, shall obtain a safety data sheet as soon as possible for sealed containers of hazardous chemicals received without a safety data sheet if an employee requests the safety data sheet, and shall ensure that the safety data sheets are readily accessible during each work shift to employees when they are in their work area(s); and

(iii) Employers shall ensure that employees are provided with information and training in accordance with paragraph (h) of this section (except for the location and availability of the written hazard communication program under paragraph (h)(2)(iii) of this section), to the extent necessary to protect them in the event of a spill or leak of a hazardous chemical from a sealed container.

(5) This section does not require labeling of the following chemicals:

(i) Any pesticide as such term is defined in the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 *et seq.*), when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency;

(ii) Any chemical substance or mixture as such terms are defined in the Toxic Substances Control Act (15 U.S.C.

2601 *et seq.*), when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Environmental Protection Agency;

(iii) Any food, food additive, color additive, drug, cosmetic, or medical or veterinary device or product, including materials intended for use as ingredients in such products (e.g. flavors and fragrances), as such terms are defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 *et seq.*) or the Virus-Serum-Toxin Act of 1913 (21 U.S.C. 151 *et seq.*), and regulations issued under those Acts, when they are subject to the labeling requirements under those Acts by either the Food and Drug Administration or the Department of Agriculture;

(iv) Any distilled spirits (beverage alcohols), wine, or malt beverage intended for nonindustrial use, as such terms are defined in the Federal Alcohol Administration Act (27 U.S.C. 201 *et seq.*) and regulations issued under that Act, when subject to the labeling requirements of that Act and labeling regulations issued under that Act by the Bureau of Alcohol, Tobacco, Firearms and Explosives;

(v) Any consumer product or hazardous substance as those terms are defined in the Consumer Product Safety Act (15 U.S.C. 2051 *et seq.*) and Federal Hazardous Substances Act (15 U.S.C. 1261 *et seq.*) respectively, when subject to a consumer product safety standard or labeling requirement of those Acts, or regulations issued under those Acts by the Consumer Product Safety Commission; and,

(vi) Agricultural or vegetable seed treated with pesticides and labeled in accordance with the Federal Seed Act (7 U.S.C. 1551 *et seq.*) and the labeling regulations issued under that Act by the Department of Agriculture.

(6) This section does not apply to: (i) Any hazardous waste as such term is defined by the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901 *et seq.*), when subject to regulations issued under that Act by the Environmental Protection Agency;

(ii) Any hazardous substance as such term is defined by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. 9601 *et seq.*) when the hazardous substance is the focus of remedial or removal action being conducted under CERCLA in accordance with Environmental Protection Agency regulations.

(iii) Tobacco or tobacco products;

(iv) Wood or wood products, including lumber which will not be processed, where the chemical manufacturer or importer can establish that the only hazard they pose to employees is the potential for flammability or combustibility (wood or wood products which have been treated with a hazardous chemical covered by this standard, and wood which may be subsequently sawed or cut, generating dust, are not exempted);

(v) Articles (as that term is defined in paragraph (c) of this section);

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

(vii) Any drug, as that term is defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 *et seq.*),

Subpart Z: Toxic and hazardous substances

when it is in solid, final form for direct administration to the patient (*e.g.*, tablets or pills); drugs which are packaged by the chemical manufacturer for sale to consumers in a retail establishment (*e.g.*, over-the-counter drugs); and drugs intended for personal consumption by employees while in the workplace (*e.g.*, first aid supplies);

(viii) Cosmetics which are packaged for sale to consumers in a retail establishment, and cosmetics intended for personal consumption by employees while in the workplace;

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

(x) Nuisance particulates where the chemical manufacturer or importer can establish that they do not pose any physical or health hazard covered under this section;

(xi) Ionizing and nonionizing radiation; and,

(xii) Biological hazards.

(c) Definitions.

Article means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, *e.g.*, minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

Assistant Secretary means the Assistant Secretary of Labor for Occupational Safety and Health, U.S. Department of Labor, or designee.

Chemical means any substance, or mixture of substances.

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

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

Classification means to identify the relevant data regarding the hazards of a chemical; review those data to ascertain the hazards associated with the chemical; and decide whether the chemical will be classified as hazardous according to the definition of hazardous chemical in this section. In addition, classification for health and physical hazards includes the determination of the degree of hazard, where appropriate, by comparing the data with the criteria for health and physical hazards.

Commercial account means an arrangement whereby a retail distributor sells hazardous chemicals to an employer,

generally in large quantities over time and/or at costs that are below the regular retail price.

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

Container means any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

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

Director means the Director, National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designee.

Distributor means a business, other than a chemical manufacturer or importer, which supplies hazardous chemicals to other distributors or to employers.

Employee means a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers or bank tellers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

Employer means a person engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a contractor or subcontractor.

Exposure or exposed means that an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (*e.g.* accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry (*e.g.* inhalation, ingestion, skin contact or absorption.)

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

Hazard category means the division of criteria within each hazard class, *e.g.*, oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

Hazard class means the nature of the physical or health hazards, *e.g.*, flammable solid, carcinogen, oral acute toxicity.

Hazard not otherwise classified (HNOC) means an adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in this section. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this section, but the effect either falls below the cut-off value/

Subpart Z: Toxic and hazardous substances

concentration limit of the hazard class or is under a GHS hazard category that has not been adopted by OSHA (e.g., acute toxicity Category 5).

Hazard statement means a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Hazardous chemical means any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

Health hazard means a chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in Appendix A to §1910.1200—Health Hazard Criteria.

Immediate use means that the hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Importer means the first business with employees within the Customs Territory of the United States which receives hazardous chemicals produced in other countries for the purpose of supplying them to distributors or employers within the United States.

Label means an appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging.

Label elements means the specified pictogram, hazard statement, signal word and precautionary statement for each hazard class and category.

Mixture means a combination or a solution composed of two or more substances in which they do not react.

Physical hazard means a chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. See Appendix B to §1910.1200—Physical Hazard Criteria

Pictogram means a composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under this standard for application to a hazard category.

Precautionary statement means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

Produce means to manufacture, process, formulate, blend, extract, generate, emit, or repackage.

Product identifier means the name or number used for a hazardous chemical on a label or in the SDS. It provides

a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.

Pyrophoric gas means a chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F (54.4 degrees C) or below.

Responsible party means someone who can provide additional information on the hazardous chemical and appropriate emergency procedures, if necessary.

Safety data sheet (SDS) means written or printed material concerning a hazardous chemical that is prepared in accordance with paragraph (g) of this section.

Signal word means a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are “danger” and “warning.” “Danger” is used for the more severe hazards, while “warning” is used for the less severe.

Simple asphyxiant means a substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

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

Substance means chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Trade secret means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer’s business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. Appendix E to §1910.1200—Definition of Trade Secret, sets out the criteria to be used in evaluating trade secrets.

Use means to package, handle, react, emit, extract, generate as a byproduct, or transfer.

Work area means a room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

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

(d) **Hazard classification.** (1) Chemical manufacturers and importers shall evaluate chemicals produced in their workplaces or imported by them to classify the chemicals in accordance with this section. For each chemical, the chemical manufacturer or importer shall determine the hazard classes, and, where appropriate, the category of each class that apply to the chemical being classified. Employers are not required to classify chemicals unless they choose not to rely on the classification performed by the chemical manufacturer or importer for the chemical to satisfy this requirement.

Subpart Z: Toxic and hazardous substances

(2) Chemical manufacturers, importers or employers classifying chemicals shall identify and consider the full range of available scientific literature and other evidence concerning the potential hazards. There is no requirement to test the chemical to determine how to classify its hazards. Appendix A to §1910.1200 shall be consulted for classification of health hazards, and Appendix B to §1910.1200 shall be consulted for the classification of physical hazards.

(3) **Mixtures.** (i) Chemical manufacturers, importers, or employers evaluating chemicals shall follow the procedures described in Appendices A and B to §1910.1200 to classify the hazards of the chemicals, including determinations regarding when mixtures of the classified chemicals are covered by this section.

(ii) When classifying mixtures they produce or import, chemical manufacturers and importers of mixtures may rely on the information provided on the current safety data sheets of the individual ingredients, except where the chemical manufacturer or importer knows, or in the exercise of reasonable diligence should know, that the safety data sheet misstates or omits information required by this section.

(e) **Written hazard communication program.** (1) Employers shall develop, implement, and maintain at each workplace, a written hazard communication program which at least describes how the criteria specified in paragraphs (f), (g), and (h) of this section for labels and other forms of warning, safety data sheets, and employee information and training will be met, and which also includes the following:

(i) A list of the hazardous chemicals known to be present using a product identifier that is referenced on the appropriate safety data sheet (the list may be compiled for the workplace as a whole or for individual work areas); and,

(ii) The methods the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels), and the hazards associated with chemicals contained in unlabeled pipes in their work areas.

(2) **Multi-employer workplaces.** Employers who produce, use, or store hazardous chemicals at a workplace in such a way that the employees of other employer(s) may be exposed (for example, employees of a construction contractor working on-site) shall additionally ensure that the hazard communication programs developed and implemented under this paragraph (e) include the following:

(i) The methods the employer will use to provide the other employer(s) on-site access to safety data sheets for each hazardous chemical the other employer(s)' employees may be exposed to while working;

(ii) The methods the employer will use to inform the other employer(s) of any precautionary measures that need to be taken to protect employees during the workplace's normal operating conditions and in foreseeable emergencies; and,

(iii) The methods the employer will use to inform the other employer(s) of the labeling system used in the workplace.

(3) The employer may rely on an existing hazard communication program to comply with these requirements, provided that it meets the criteria established in this paragraph (e).

(4) The employer shall make the written hazard communication program available, upon request, to employees, their

designated representatives, the Assistant Secretary and the Director, in accordance with the requirements of 29 CFR 1910.20(e).

(5) Where employees must travel between workplaces during a workshift, *i.e.*, their work is carried out at more than one geographical location, the written hazard communication program may be kept at the primary workplace facility.

(f) **Labels and other forms of warning—**(1) **Labels on shipped containers.** The chemical manufacturer, importer, or distributor shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged, or marked. Hazards not otherwise classified do not have to be addressed on the container. Where the chemical manufacturer or importer is required to label, tag or mark the following information shall be provided:

(i) Product identifier;

(ii) Signal word;

(iii) Hazard statement(s);

(iv) Pictogram(s);

(v) Precautionary statement(s); and,

(vi) Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

(2) The chemical manufacturer, importer, or distributor shall ensure that the information provided under paragraphs (f)(1)(i) through (v) of this section is in accordance with Appendix C to §1910.1200, for each hazard class and associated hazard category for the hazardous chemical, prominently displayed, and in English (other languages may also be included if appropriate).

(3) The chemical manufacturer, importer, or distributor shall ensure that the information provided under paragraphs (f)(1)(ii) through (iv) of this section is located together on the label, tag, or mark.

(4) **Solid materials.** For solid metal (such as a steel beam or a metal casting), solid wood, or plastic items that are not exempted as articles due to their downstream use, or shipments of whole grain, the required label may be transmitted to the customer at the time of the initial shipment, and need not be included with subsequent shipments to the same employer unless the information on the label changes;

(i) The label may be transmitted with the initial shipment itself, or with the safety data sheet that is to be provided prior to or at the time of the first shipment; and,

(ii) This exception to requiring labels on every container of hazardous chemicals is only for the solid material itself, and does not apply to hazardous chemicals used in conjunction with, or known to be present with, the material and to which employees handling the items in transit may be exposed (for example, cutting fluids or pesticides in grains).

(5) Chemical manufacturers, importers, or distributors shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged, or marked in accordance with this section in a manner which does not conflict with the requirements of the Hazardous Materials Transportation Act (49 U.S.C. 1801 *et seq.*) and regulations issued under that Act by the Department of Transportation.

(6) Workplace labeling. Except as provided in paragraphs (f)(7) and (f)(8) of this section, the employer shall ensure

Subpart Z: Toxic and hazardous substances

that each container of hazardous chemicals in the workplace is labeled, tagged or marked with either:

(i) The information specified under paragraphs (f)(1)(i) through (v) of this section for labels on shipped containers; or,

(ii) Product identifier and words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

(7) The employer may use signs, placards, process sheets, batch tickets, operating procedures, or other such written materials in lieu of affixing labels to individual stationary process containers, as long as the alternative method identifies the containers to which it is applicable and conveys the information required by paragraph (f)(6) of this section to be on a label. The employer shall ensure the written materials are readily accessible to the employees in their work area throughout each work shift.

(8) The employer is not required to label portable containers into which hazardous chemicals are transferred from labeled containers, and which are intended only for the immediate use of the employee who performs the transfer. For purposes of this section, drugs which are dispensed by a pharmacy to a health care provider for direct administration to a patient are exempted from labeling.

(9) The employer shall not remove or deface existing labels on incoming containers of hazardous chemicals, unless the container is immediately marked with the required information.

(10) The employer shall ensure that workplace labels or other forms of warning are legible, in English, and prominently displayed on the container, or readily available in the work area throughout each work shift. Employers having employees who speak other languages may add the information in their language to the material presented, as long as the information is presented in English as well.

(11) Chemical manufacturers, importers, distributors, or employers who become newly aware of any significant information regarding the hazards of a chemical shall revise the labels for the chemical within six months of becoming aware of the new information, and shall ensure that labels on containers of hazardous chemicals shipped after that time contain the new information. If the chemical is not currently produced or imported, the chemical manufacturer, importer, distributor, or employer shall add the information to the label before the chemical is shipped or introduced into the workplace again.

(g) **Safety data sheets.** (1) Chemical manufacturers and importers shall obtain or develop a safety data sheet for each hazardous chemical they produce or import. Employers shall have a safety data sheet in the workplace for each hazardous chemical which they use.

(2) The chemical manufacturer or importer preparing the safety data sheet shall ensure that it is in English (although the employer may maintain copies in other languages as well), and includes at least the following section numbers and headings, and associated information under each heading, in the order listed (See Appendix D to §1910.

1200—Safety Data Sheets, for the specific content of each section of the safety data sheet):

(i) Section 1, Identification;

(ii) Section 2, Hazard(s) identification;

(iii) Section 3, Composition/information on ingredients;

(iv) Section 4, First-aid measures;

(v) Section 5, Fire-fighting measures;

(vi) Section 6, Accidental release measures;

(vii) Section 7, Handling and storage;

(viii) Section 8, Exposure controls/personal protection;

(ix) Section 9, Physical and chemical properties;

(x) Section 10, Stability and reactivity;

(xi) Section 11, Toxicological information;

(xii) Section 12, Ecological information;

(xiii) Section 13, Disposal considerations;

(xiv) Section 14, Transport information;

(xv) Section 15, Regulatory information; and

(xvi) Section 16, Other information, including date of preparation or last revision.

Note 1 to paragraph (g)(2): To be consistent with the GHS, an SDS must also include the headings in paragraphs (g)(2)(xii) through (g)(2)(xv) in order.

Note 2 to paragraph (g)(2): OSHA will not be enforcing information requirements in sections 12 through 15, as these areas are not under its jurisdiction.

(3) If no relevant information is found for any sub-heading within a section on the safety data sheet, the chemical manufacturer, importer or employer preparing the safety data sheet shall mark it to indicate that no applicable information was found.

(4) Where complex mixtures have similar hazards and contents (i.e. the chemical ingredients are essentially the same, but the specific composition varies from mixture to mixture), the chemical manufacturer, importer or employer may prepare one safety data sheet to apply to all of these similar mixtures.

(5) The chemical manufacturer, importer or employer preparing the safety data sheet shall ensure that the information provided accurately reflects the scientific evidence used in making the hazard classification. If the chemical manufacturer, importer or employer preparing the safety data sheet becomes newly aware of any significant information regarding the hazards of a chemical, or ways to protect against the hazards, this new information shall be added to the safety data sheet within three months. If the chemical is not currently being produced or imported, the chemical manufacturer or importer shall add the information to the safety data sheet before the chemical is introduced into the workplace again.

(6)(i) Chemical manufacturers or importers shall ensure that distributors and employers are provided an appropriate safety data sheet with their initial shipment, and with the first shipment after a safety data sheet is updated;

Subpart Z: Toxic and hazardous substances

(ii) The chemical manufacturer or importer shall either provide safety data sheets with the shipped containers or send them to the distributor or employer prior to or at the time of the shipment;

(iii) If the safety data sheet is not provided with a shipment that has been labeled as a hazardous chemical, the distributor or employer shall obtain one from the chemical manufacturer or importer as soon as possible; and,

(iv) The chemical manufacturer or importer shall also provide distributors or employers with a safety data sheet upon request.

(7)(i) Distributors shall ensure that safety data sheets, and updated information, are provided to other distributors and employers with their initial shipment and with the first shipment after a safety data sheet is updated;

(ii) The distributor shall either provide safety data sheets with the shipped containers, or send them to the other distributor or employer prior to or at the time of the shipment;

(iii) Retail distributors selling hazardous chemicals to employers having a commercial account shall provide a safety data sheet to such employers upon request, and shall post a sign or otherwise inform them that a safety data sheet is available;

(iv) Wholesale distributors selling hazardous chemicals to employers over-the-counter may also provide safety data sheets upon the request of the employer at the time of the over-the-counter purchase, and shall post a sign or otherwise inform such employers that a safety data sheet is available;

(v) If an employer without a commercial account purchases a hazardous chemical from a retail distributor not required to have safety data sheets on file (*i.e.*, the retail distributor does not have commercial accounts and does not use the materials), the retail distributor shall provide the employer, upon request, with the name, address, and telephone number of the chemical manufacturer, importer, or distributor from which a safety data sheet can be obtained;

(vi) Wholesale distributors shall also provide safety data sheets to employers or other distributors upon request; and,

(vii) Chemical manufacturers, importers, and distributors need not provide safety data sheets to retail distributors that have informed them that the retail distributor does not sell the product to commercial accounts or open the sealed container to use it in their own workplaces.

(8) The employer shall maintain in the workplace copies of the required safety data sheets for each hazardous chemical, and shall ensure that they are readily accessible during each work shift to employees when they are in their work area(s). (Electronic access and other alternatives to maintaining paper copies of the safety data sheets are permitted as long as no barriers to immediate employee access in each workplace are created by such options.)

(9) Where employees must travel between workplaces during a workshift, *i.e.*, their work is carried out at more than one geographical location, the safety data sheets may be kept at the primary workplace facility. In this situation, the employer shall ensure that employees can immediately obtain the required information in an emergency.

(10) Safety data sheets may be kept in any form, including operating procedures, and may be designed to cover groups of hazardous chemicals in a work area where it may

be more appropriate to address the hazards of a process rather than individual hazardous chemicals. However, the employer shall ensure that in all cases the required information is provided for each hazardous chemical, and is readily accessible during each work shift to employees when they are in their work area(s).

(11) Safety data sheets shall also be made readily available, upon request, to designated representatives, the Assistant Secretary, and the Director, in accordance with the requirements of §1910.1020(e).

(h) **Employee information and training.** (1) Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new chemical hazard the employees have not previously been trained about is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.

(2) **Information.** Employees shall be informed of:

(i) The requirements of this section;

(ii) Any operations in their work area where hazardous chemicals are present; and,

(iii) The location and availability of the written hazard communication program, including the required list(s) of hazardous chemicals, and safety data sheets required by this section.

(3) **Training.** Employee training shall include at least:

(i) Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area (such as monitoring conducted by the employer, continuous monitoring devices, visual appearance or odor of hazardous chemicals when being released, etc.);

(ii) The physical, health, simple asphyxiation, combustible dust, and pyrophoric gas hazards, as well as hazards not otherwise classified, of the chemicals in the work area;

(iii) The measures employees can take to protect themselves from these hazards, including specific procedures the employer has implemented to protect employees from exposure to hazardous chemicals, such as appropriate work practices, emergency procedures, and personal protective equipment to be used; and,

(iv) The details of the hazard communication program developed by the employer, including an explanation of the labels received on shipped containers and the workplace labeling system used by their employer; the safety data sheet, including the order of information and how employees can obtain and use the appropriate hazard information.

(i) **Trade secrets.** (1) The chemical manufacturer, importer, or employer may withhold the specific chemical identity, including the chemical name, other specific identification of a hazardous chemical, or the exact percentage (concentration) of the substance in a mixture, from the safety data sheet, provided that:

(i) The claim that the information withheld is a trade secret can be supported;

Subpart Z: Toxic and hazardous substances

(ii) Information contained in the safety data sheet concerning the properties and effects of the hazardous chemical is disclosed;

(iii) The safety data sheet indicates that the specific chemical identity and/or percentage of composition is being withheld as a trade secret; and,

(iv) The specific chemical identity and percentage is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of this paragraph (i).

(2) Where a treating physician or nurse determines that a medical emergency exists and the specific chemical identity and/or specific percentage of composition of a hazardous chemical is necessary for emergency or first-aid treatment, the chemical manufacturer, importer, or employer shall immediately disclose the specific chemical identity or percentage composition of a trade secret chemical to that treating physician or nurse, regardless of the existence of a written statement of need or a confidentiality agreement. The chemical manufacturer, importer, or employer may require a written statement of need and confidentiality agreement, in accordance with the provisions of paragraphs (i)(3) and (4) of this section, as soon as circumstances permit.

(3) In non-emergency situations, a chemical manufacturer, importer, or employer shall, upon request, disclose a specific chemical identity or percentage composition, otherwise permitted to be withheld under paragraph (i)(1) of this section, to a health professional (i.e. physician, industrial hygienist, toxicologist, epidemiologist, or occupational health nurse) providing medical or other occupational health services to exposed employee(s), and to employees or designated representatives, if:

(i) The request is in writing;

(ii) The request describes with reasonable detail one or more of the following occupational health needs for the information:

(A) To assess the hazards of the chemicals to which employees will be exposed;

(B) To conduct or assess sampling of the workplace atmosphere to determine employee exposure levels;

(C) To conduct pre-assignment or periodic medical surveillance of exposed employees;

(D) To provide medical treatment to exposed employees;

(E) To select or assess appropriate personal protective equipment for exposed employees;

(F) To design or assess engineering controls or other protective measures for exposed employees; and,

(G) To conduct studies to determine the health effects of exposure.

(iii) The request explains in detail why the disclosure of the specific chemical identity or percentage composition is essential and that, in lieu thereof, the disclosure of the following information to the health professional, employee, or designated representative, would not satisfy the purposes described in paragraph (i)(3)(ii) of this section:

(A) The properties and effects of the chemical;

(B) Measures for controlling workers' exposure to the chemical;

(C) Methods of monitoring and analyzing worker exposure to the chemical; and,

(D) Methods of diagnosing and treating harmful exposures to the chemical;

(iv) The request includes a description of the procedures to be used to maintain the confidentiality of the disclosed information; and,

(v) The health professional, and the employer or contractor of the services of the health professional (i.e. downstream employer, labor organization, or individual employee), employee, or designated representative, agree in a written confidentiality agreement that the health professional, employee, or designated representative, will not use the trade secret information for any purpose other than the health need(s) asserted and agree not to release the information under any circumstances other than to OSHA, as provided in paragraph (i)(6) of this section, except as authorized by the terms of the agreement or by the chemical manufacturer, importer, or employer.

(4) The confidentiality agreement authorized by paragraph (i)(3)(iv) of this section:

(i) May restrict the use of the information to the health purposes indicated in the written statement of need;

(ii) May provide for appropriate legal remedies in the event of a breach of the agreement, including stipulation of a reasonable pre-estimate of likely damages; and,

(iii) May not include requirements for the posting of a penalty bond.

(5) Nothing in this standard is meant to preclude the parties from pursuing non-contractual remedies to the extent permitted by law.

(6) If the health professional, employee, or designated representative receiving the trade secret information decides that there is a need to disclose it to OSHA, the chemical manufacturer, importer, or employer who provided the information shall be informed by the health professional, employee, or designated representative prior to, or at the same time as, such disclosure.

(7) If the chemical manufacturer, importer, or employer denies a written request for disclosure of a specific chemical identity or percentage composition, the denial must:

(i) Be provided to the health professional, employee, or designated representative, within thirty days of the request;

(ii) Be in writing;

(iii) Include evidence to support the claim that the specific chemical identity or percent of composition is a trade secret;

(iv) State the specific reasons why the request is being denied; and,

(v) Explain in detail how alternative information may satisfy the specific medical or occupational health need without revealing the trade secret.

(8) The health professional, employee, or designated representative whose request for information is denied under paragraph (i)(3) of this section may refer the request and the written denial of the request to OSHA for consideration.

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