

## Side-by-Side Comparison of HCS 2012 to HCS 2024

Paragraph	HCS 2012	HCS 2024
a) Purpose	(a)(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 Labeling 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.	(a)(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 Labeling of Chemicals (GHS), <b>primarily</b> Revision 7. 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.
b) Scope and application	(b)(6)(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;	(b)(6)(x) Nuisance particulates where the chemical manufacturer or importer can establish that they do not pose any physical <b>hazard</b> , health hazard, <b>or other hazards</b> covered under this section;
c) Definitions	<p><i>Exposure or exposed</i> means that an employee is subjected in the course of employment to a chemical <b>that is a physical or health hazard</b>, 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.)</p>	<p><b><i>Bulk shipment</i> means any hazardous chemical transported where the mode of transportation (vehicle) comprises the immediate container (i.e., contained in tanker truck, rail car, or intermodal container).</b></p> <p><b><i>Combustible dust</i> means finely divided solid particulates of a substance or mixture that pose a flash-fire hazard or explosion hazard when dispersed in air or other oxidizing media.</b></p> <p><i>Exposure or exposed</i> means that an employee is subjected in the course of employment to a <b>hazardous</b> chemical <del>that is a physical or health hazard</del>, 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.)</p> <p><b><i>Gas</i> means a substance which: at 122°F (50°C) has a vapor pressure greater than 43.51 PSI (300 kPa) (absolute); or is</b></p>

	<p><i>Hazardous chemical</i> means any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, <b>pyrophoric gas</b>, or hazard not otherwise classified.</p> <p><i>Physical hazard</i> means a chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, <b>aerosols</b>, 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 -- <b>Physical Hazard Criteria</b>.</p>	<p><b>completely gaseous at 68°F (20°C) at a standard pressure of 14.69 PSI (101.3 kPa).</b></p> <p><i>Hazardous chemical</i> means any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, <del>pyrophoric gas</del>, or hazard not otherwise classified.</p> <p><b><i>Immediate outer package</i> means the first package enclosing the container of hazardous chemical.</b></p> <p><b><i>Liquid</i> means a substance or mixture which at 122°F (50°C) has a vapor pressure of not more than 43.51 PSI (300 kPa (3 bar)), which is not completely gaseous at 68°F (20°C) and at a standard pressure of 14.69 PSI (101.3 kPa), and which has a melting point or initial melting point of 68 °F (20°C) or less at a standard pressure of 14.69 PSI (101.3 kPa). Either ASTM D 4359-90 (2019) (Standard Test Method for Determining Whether a Material Is a Liquid or a Solid) (incorporated by reference; see §1910.6); or the test for determining fluidity (penetrometer test) prescribed in the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR), section 2.3.4 of Annex A (2019) (incorporated by reference; see §1910.6) can establish whether a viscous substance or mixture is a liquid if a specific melting point cannot be determined.</b></p> <p><i>Physical hazard</i> means a chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, liquids, or solids); <b>aerosols</b>; oxidizer (<b>gases, liquids, or solids</b>); self-reactive; pyrophoric (liquids or solids); self-heating; organic peroxide; corrosive to metal; gas under pressure; <del>or</del> in contact with water emits flammable gas; <b>or desensitized explosive. See-The criteria for determining whether a chemical is classified as a physical hazard are detailed in Appendix B to this section.</b></p> <p><b><i>Physician or other licensed health care professional (PLHCP)</i> means an individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows the individual to independently provide or be delegated the responsibility to provide some or all of the health care services referenced in paragraph (i) of this section.</b></p>
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d) Hazard classification	<p>(d)(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.</p>	<p>(d)(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. <b>The hazard classification shall include any hazards associated with the chemical's intrinsic properties including:</b></p> <p><b>(i) a change in the chemical's physical form and;</b></p> <p><b>(ii) chemical reaction products associated with known or reasonably anticipated uses or applications.</b></p> <p>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 <b>paragraph (d)(1).</b></p>
e) Written hazard communication program	<p>(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 1910.1020 (e).</p>	<p>(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 <del>29 CFR</del> 1910.1020 (e).</p>
f) Labels and other forms of warning	<p>(f)(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 shall be provided:</p>	<p>(f)(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 <b>and hazards identified and classified under (d)(1)(ii)</b> do not have to be addressed on the container. Where the chemical manufacturer, <del>or</del> importer, <b>or distributor</b> is required to label, tag or mark the following <b>information</b> shall be provided:</p>

<p>(i) Product identifier;</p> <p>(ii) Signal word;</p> <p>(iii) Hazard statement(s);</p> <p>(iv) Pictogram(s);</p> <p>(v) Precautionary statement(s); and,</p> <p>(vi) Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.</p> <p>(f)(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.</p> <p>f)(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</p>	<p>(i) Product identifier;</p> <p>(ii) Signal word;</p> <p>(iii) Hazard statement(s);</p> <p>(iv) Pictogram(s);</p> <p>(v) Precautionary statement(s); and,</p> <p>(vi) Name, <b>U.S.</b> address, and <b>U.S.</b> telephone number of the chemical manufacturer, importer, or other responsible party.</p> <p>(f)(5) <b>Transportation.</b></p> <p>(i) 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.</p> <p><b>(ii) The label for bulk shipments of hazardous chemicals must be on the immediate container, transmitted with the shipping papers or the bills of lading or, with the agreement of the receiving entity, transmitted by technological or electronic means so that it is immediately available to workers in printed form on the receiving end of shipment.</b></p> <p><b>(iii) Where a pictogram required by the Department of Transportation under Title 49 of the Code of Federal Regulations appears on a shipped container, the pictogram specified in Appendix C.4 of this section for the same hazard is not required on the label.</b></p> <p>(f)(11) <b>Label Updates.</b> 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</p>
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	<p>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.</p>	<p>chemicals shipped after that time contain the new information. <b>For chemicals that have been released for shipment and are awaiting future distribution, chemical manufacturers, importers, distributors, or employers have the option not to relabel those containers; however, if they do not relabel the containers, they must provide the updated label for each individual container with each shipment.</b></p> <p>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.</p> <p><b>(f)(12) Small container labelling.</b></p> <p><b>(i) This paragraph (f)(12) applies where the chemical manufacturer, importer, or distributor can demonstrate that it is not feasible to use pull-out labels, fold-back labels, or tags containing the full label information required by paragraph (f)(1) of this section.</b></p> <p><b>(ii) For a container less than or equal to 100 ml capacity, the chemical manufacturer, importer, or distributor must include, at a minimum, the following information on the label of the container:</b></p> <ul style="list-style-type: none"><li><b>(A) Product identifier;</b></li><li><b>(B) Pictogram(s);</b></li><li><b>(C) Signal word;</b></li><li><b>(D) Chemical manufacturer's name and phone number; and</b></li><li><b>(E) A statement that the full label information for the hazardous chemical is provided on the immediate outer package.</b></li></ul> <p><b>(iii) For a container less than or equal to 3 ml capacity, where the chemical manufacturer, importer, or distributor can demonstrate that any label interferes with the normal use of the container, no</b></p>
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g) Safety data sheets	<p>(g)(2) The chemical manufacturer or importer <b>preparing the safety data sheet</b> shall ensure that <b>it</b> 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 <b>§1910.1200--Safety Data Sheets</b>, for the specific content of each section of the safety data sheet):</p> <p>(g)(10) Safety data sheets may be kept in any form, including operating procedures, and may be <b>designed</b> 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).</p>	<p>(g)(2) The chemical manufacturer or importer <del>preparing the safety data sheet</del> shall ensure that <b>the safety data sheet it</b> 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 <b>this section §1910.1200--Safety Data Sheets</b> for the specific content of each section of the safety data sheet):</p> <p>(g)(10) Safety data sheets may be kept in any form, including <b>as</b> operating procedures, and may be <del>designed</del> <b>stored in such a way</b> 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 workshift to employees when they are in their work area(s).</p>
i) Trade secrets	<p>(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:</p> <p>(i) The claim that the information withheld is a trade secret can be supported;</p>	<p>(i)(1) The chemical manufacturer, importer, or employer may withhold the specific chemical identity, including the chemical name, other specific identification of a hazardous chemical, <b>and/or</b> the exact percentage (concentration) <b>or concentration range</b> of the substance in a mixture, from <b>section 3 of</b> the safety data sheet, provided that:</p> <p>(i) The claim that the information withheld is a trade secret can be supported;</p>

<p>(ii) Information contained in the safety data sheet concerning the properties and effects of the hazardous chemical is disclosed;</p> <p>(iii) The safety data sheet indicates that the specific chemical identity and/or <b>percentage</b> of composition is being withheld as a trade secret; and,</p>	<p>(ii) Information contained in the safety data sheet concerning the properties and effects of the hazardous chemical is disclosed;</p> <p>(iii) The safety data sheet indicates that the specific chemical identity and/or <b>percentage-concentration or concentration range</b> of composition is being withheld as a trade secret; <b>and,</b></p> <p><b>(iv) If the concentration or concentration range is being claimed as a trade secret, then the safety data sheet provides the ingredient's concentration as one of the prescribed ranges below in paragraphs (i)(1)(iv)(A) through (M) of this section.</b></p> <p><b>(A) From 0.1% to 1%;</b></p> <p><b>(B) From 0.5% to 1.5%;</b></p> <p><b>(C) From 1% to 5%;</b></p> <p><b>(D) From 3% to 7%;</b></p> <p><b>(E) From 5% to 10%;</b></p> <p><b>(F) From 7% to 13%;</b></p> <p><b>(G) From 10% to 30%;</b></p> <p><b>(H) From 15% to 40%;</b></p> <p><b>(I) From 30% to 60%;</b></p> <p><b>(J) From 45% to 70%;</b></p> <p><b>(K) From 60% to 80%;</b></p> <p><b>(L) From 65% to 85%; and</b></p> <p><b>(M) From 80% to 100%.</b></p> <p><b>(v) The prescribed concentration range used must be the narrowest range possible. If the exact concentration range falls</b></p>
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	<p>(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.</p> <p>(i)(2) Where a treating <b>physician or nurse</b> determines that a medical emergency exists and the specific chemical identity and/or specific <b>percentage of composition</b> 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 <b>physician or nurse</b>, 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.</p> <p>(i)(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:</p>	<p><b>between 0.1% and 30% and does not fit entirely into one of the prescribed concentration ranges, a single range created by the combination of two applicable consecutive ranges (e.g., between (i)(1)(iv)(A) and (G)) may be disclosed instead, provided that the combined concentration range does not include any range that falls entirely outside the exact concentration range in which the ingredient is present.</b></p> <p><b>(v) Manufacturers may provide a range narrower than those prescribed in (i)(1)(v).</b></p> <p>(vii) The specific chemical identity and <del>percentage-exact concentration or concentration range</del> is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of this paragraph (i).</p> <p>(i)(2) Where a treating <del>physician or nurse</del> PLHCP determines that a medical emergency exists and the specific chemical identity and/or specific <del>percentage of composition</del> <b>concentration or concentration range</b> 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 <del>physician or nurse</del> PLHCP, 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.</p> <p>(i)(3) In non-emergency situations, a chemical manufacturer, importer, or employer shall, upon request, disclose a specific chemical identity or <del>percentage-composition</del> <b>exact concentration or concentration range</b>, otherwise permitted to be withheld under paragraph (i)(1) of this section, to a health professional (<del>i.e., physician</del> PLHCP, industrial hygienist, toxicologist, <del>or epidemiologist, or occupational health nurse</del>) providing medical or other occupational health services to exposed employee(s), and to employees or designated representatives, if:</p>
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<p>j) Dates</p>	<p><b>(j) Effective dates.</b></p> <p>(1) Employers shall train employees regarding the new label elements and safety data sheets format by <b>December 1, 2013</b>.</p> <p>(2) Chemical manufacturers, importers, distributors, and employers shall be in compliance with all modified provisions of this section no later than June 1, 2015, except:</p> <p>(i) After December 1, 2015, the distributor shall not ship containers labeled by the chemical manufacturer or importer unless the label has been modified to comply with paragraph (f)(1) of this section.</p> <p>(ii) All employers shall, as necessary, update any alternative workplace labeling used under paragraph (f)(6), update the hazard communication program required by paragraph (h)(1), and provide any additional employee training in accordance with paragraph (h)(3) for newly identified physical or health hazards no later than June 1, 2016.</p>	<p><del>(j) Effective dates</del><b>Dates.</b></p> <p><del>(j)(1) Employers shall train employees regarding the new label elements and safety data sheets format by December 1, 2013</del><b>This section shall become effective July 19, 2024.</b></p> <p><b>(j)(2) Substances</b></p> <p><b>(i) Chemical manufacturers, importers, and distributors and employers evaluating substances shall be in compliance with all modified provisions of this section no later than January 19, 2026.</b></p> <p><b>(ii) For substances, all employers shall, as necessary, update any alternative workplace labeling used under paragraph (f)(6) of this section, update the hazard communication program required by paragraph (h)(1), and provide any additional employee training in accordance with paragraph (h)(3) for newly identified physical hazards, health hazards, or other hazards covered under this section no later than July 20, 2026.</b></p> <p><b>(j)(3) Mixtures</b></p> <p><b>(i) Chemical manufacturers, importers, and distributors evaluating mixtures shall be in compliance with all modified provisions of this section no later than July 19, 2027. <del>the effective date. After December 1, 2015, (ii) the distributor shall not ship containers labeled by the chemical manufacturer or importer unless the label has been modified to comply with paragraph (f)(1) of this section no later than 24 months after the publication of the standard</del></b></p> <p><b>(ii) For mixtures, all employers shall, as necessary, update any alternative workplace labeling used under paragraph (f)(6) of this section, update the hazard communication program required by paragraph (h)(1), and provide any additional employee training in accordance with paragraph (h)(3) for newly identified physical hazard, or health hazards or other hazards covered under this section no later than January 19, 2028.</b></p> <p><del>All employers shall, as necessary, update any alternative workplace labeling used under paragraph (f)(6) of this section, update the hazard communication program required by paragraph (h)(1), and provide</del></p>
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	<p><b>(3)</b> Chemical manufacturers, importers, distributors, and employers may comply with either §1910.1200 revised as of October 1, 2011, or the current version of this standard, or both during the transition period.</p>	<p><del>any additional employee training in accordance with paragraph (h)(3) for newly identified physical hazard, or health hazards or other hazards covered under this section no later than June 1, 2016 24 months after publication of the standard.</del></p> <p><b>(j)(4)</b> Chemical manufacturers, importers, distributors, and employers may comply with either §1910.1200 revised as of October August 1, 2019<del>1</del>, or the current version of this standard, or both during the transition period. <b>Chemical manufacturers, importers, distributors, and employers may comply with either §1910.1200 revised as of [DATE OF PUBLICATION IN THE FEDERAL REGISTER], or the previous version of this standard, or both during the transition period.</b></p>
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*Please refer to the redline strikeout document to view the changes to the Appendices*