OSHA INSTRUCTION

U.S. DEPARTMENT OF LABOR **Occupational Safety and Health Administration**

DIRECTIVE NUMBER: CPL 02-02-079	
SUBJECT: Inspection Procedures for the Hazard Communication Standard (HCS 2024)	
DIRECTORATE: Directorate of Enforcement Programs	
SIGNATURE DATE: 4/30/2026	**EFFECTIVE DATE:** 5/19/2026

ABSTRACT

Purpose: This Instruction establishes policies and procedures to ensure uniform enforcement of the Hazard Communication standard (HCS), 29 CFR § 1910.1200.

Scope: This Instruction applies OSHA-wide.

References: Federal Register, 89 FR at 44144, 29 CFR § 1910, *Hazard Communication Standard*; *Final Rule*, May 20, 2024 [HCS or HCS 2024].

Federal Register, 77 FR at 17574, 29 CFR § 1910, *Hazard Communication Standard; Final Rule*, March 26, 2012 [HCS 2012].

Federal Register, 59 FR at 2126, 29 CFR § 1910, *Hazard Communication Standard*; Final Rule, Federal Register, February 9, 1994.

OSHA Instruction, CPL-02-00-164, *Field Operations Manual (FOM)*, April 14, 2020.

OSHA Instruction, CPL 02-00-124, *Multi-Employer Citation Policy*, December 10, 1999.

Cancellations: OSHA Instruction, CPL 02-02-079*, Inspection Procedures for the Hazard Communication Standard*, July 9, 2015.

State Plan Impact: Notice of intent and equivalency required. State Plans are expected to have enforcement policies and procedures which are at least as effective as those in this Instruction.

Action Offices: OSHA National, Regional and Area Offices, State Plan and State Consultation Offices.

Originating Office: Office of Health Enforcement

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By and Under the Authority of

DAVID L. KEELING
Assistant Secretary

Executive Summary

The Hazard Communication standard (HCS) has been revised to align with the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), primarily Revision (Rev.) 7. This includes updates to definitions, hazard classification, labeling, and use of concentration ranges. In addition, the HCS 2024 includes additional changes to address implementation issues with the 2012 HCS update, and to better align with other federal agencies (e.g., Environmental Protection Agency (EPA), Department of Transportation (DOT)). This Instruction is designed to provide guidance to compliance safety and health officers (CSHOs) on how to enforce the revised Hazard Communication standard during its transition period and when fully implemented.

Significant Changes

This Instruction outlines the changes in enforcement due to the updated HCS, 29 CFR § 1910.1200, published in the Federal Register on May 20, 2024, and effective on July 19, 2024, which includes the following:

- Maintains alignment with the GHS (primarily Rev. 7) and U.S. trading partners.
  - Paragraph (i) – Trade secrets. If a concentration or concentration range is claimed as a trade secret, then the safety data sheet (SDS) must include the ingredient's concentration as one of the prescribed ranges in paragraph (i).
  - Appendix A (Health Hazard Criteria). Revised health hazard definitions and other provisions to better align with the GHS, including updates to the Skin corrosion/irritation and Serious eye damage/eye irritation chapters and the addition of non-animal test methods to skin corrosion/irritation to promote use of alternative methods.
  - Appendix B (Physical Hazard Criteria). Updates to Flammable gases (expanding the hazard categories), Desensitized explosives, and Aerosols (including an additional hazard category).
  - Appendix C (Allocation of Label Elements). Label elements for new or updated hazards and updated guidance.
  - Appendix D (Safety Data Sheets). Revisions to SDS Sections 1, 2, 3, 8, 9, 10, 11, and 14.
- Clarifies issues identified during implementation of the HCS 2012 update:
  - Paragraph (d) – Hazard classification. Clarifies which hazards must be evaluated.
  - Paragraph (f)(11) – Label updates. Adds flexibility for label updates on packages that have been released for shipment.
  - Paragraph (f)(12) – Small and very small container labeling. Clarifies labeling requirements for small packages.
- Improves alignment/coordination with other U.S. agencies
  - Paragraph (f)(5) – Transportation - provides increased coordination with DOT label for bulk shipment.

- Paragraph (c) - released for shipment definition – aligns with EPA definition.
- Updated references to OSHA directives, publications, and external websites, as needed.

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D. Federal Register, 91 FR 562, 29 CFR § 1910, *Hazard Communication Standard*; Final rule; correction and technical amendment, January 8, 2026.

E. Federal Register, 91 FR 1695, 29 CFR § 1910, *Hazard Communication Standard*; Final rule; extension of compliance dates, January 15, 2026.

F. Federal Register, 77 FR at 17574, 29 CFR § 1910, *Hazard Communication Standard; Final Rule*, March 26, 2012 [HCS 2012].

G. Federal Register, 59 FR at 6126, 29 CFR § 1910, *Hazard Communication Standard*; Final Rule, Federal Register, February 9, 1994.

H. OSHA Instruction, CPL-02-00-164*, Field Operations Manual (FOM)*, April 11, 2020.

I. OSHA Instruction, CPL 02-00-111, *Citation Policy for Paperwork and Written Program Violations*, November 27, 1995.

J. OSHA Instruction, CPL 02-00-124, *Multi-Employer Citation Policy,* December 10, 1999.

K. OSHA Memorandum, *Classification of Combustible Dusts under the Revised Hazard Communication Standard*, December 27, 2013.

L. OSHA Instruction, CSP 01-01-018, *State Standards*, August 31, 1984.

M. OSHA, Temporary Worker Initiative Bulletin No. 5, *Hazard Communication*, April 20, 2016.

N. United Nations *Globally Harmonized System of Classification and Labelling of Chemicals (GHS)* (Revision 7(2017) and Revision 8 (2019)).

O. International Agency for Research on Carcinogens (IARC) Monographs.

P. National Toxicology Program's (NTP) Report on Carcinogens, or most recent report.

Q. Centers for Disease Control and Prevention (CDC), Agency for Toxic Substances and Disease Registry (ATSDR), *Toxicological Profiles*.

R. American Conference of Governmental Industrial Hygienists (ACGIH), *Threshold Limit Values (TLVs®) and Biological Exposure Indices (BEIs®)*.

S. National Institute for Occupational Safety and Health (NIOSH), *NIOSH Pocket Guide to Chemical Hazards*.

T. U. S. Environmental Protection Agency, *Pesticide Registration Notice 2012-1, Material Safety Data Sheets as Pesticide Labeling,* April 20, 2012.

U. NIOSH, *Registry of Toxic Effects of Chemical Substances (RTECS)*.

V. National Fire Protection Association (NFPA) 654, *Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids*.

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A. Responsible Office.

Directorate of Enforcement Programs, Office of Health Enforcement.

B. Action Offices.
National, Regional and Area Offices, State Plan and State Consultation Offices.

C. Information Offices.
OSHA Training Institute (OTI), Consultation Program Managers, Voluntary Protection Plan (VPP) Managers and Coordinators, Compliance Assistance Coordinators, and Compliance Assistance Specialists.

VI. State Plan Impact.

This Instruction describes a Federal Program Change which establishes policies and procedures necessary for the enforcement of HCS. State Plans are required to establish enforcement policies and procedures which are at least as effective as those in this Instruction. State Plans have the option of adopting identical or different, but at least as effective, enforcement policies as those contained in this Instruction.

Within 60 days of the effective date of this directive, a State Plan must submit a notice of intent indicating if the State Plan will adopt or already has in place policies and procedures that are identical to or different from the federal program. State adoption, either identical or different, should be accomplished within six months. If adopting identically, the State Plan must provide the date of adoption to OSHA within 60 days of adoption. If the State Plan adopts or maintains policies that differ from those in this Instruction, the policies must be available for review. Within 60 days of adoption, the State Plan must provide an electronic copy of the policy or a link to where their policies are posted on the State Plan's website. The State Plan must also provide the date of adoption and identify differences, if any, between their policy and OSHA's. OSHA will provide summary information on the State Plan responses to this instruction on its website.

VII. Significant Changes

This Instruction outlines the changes in enforcement due to the release of the revised HCS, 29 CFR § 1910.1200, published in the Federal Register on May 20, 2024, and effective on July 19, 2024, which includes the following:

A. Maintaining alignment with the GHS (primarily Rev. 7) and U.S. trading partners.

1. Paragraph (i) – Trade secrets. If a concentration or ingredient's concentration range is claimed as a trade secret then the safety data sheet (SDS) must include the concentration as one of the prescribed ranges in paragraph (i).

2. Appendix A (Health Hazard Criteria). Revised health hazard definitions and other provisions to better align with the GHS, including updates to the Skin corrosion/irritation and Serious eye damage/eye irritation chapters and the addition of non-animal test methods to skin corrosion/irritation to promote use of alternative methods.
3. Appendix B (Physical Hazard Criteria). Updates to Flammable gases (expanding the hazard categories), Desensitized explosives, and Aerosols (including an additional hazard category).
4. Appendix C (Allocation of Label Elements). Label elements for new or updated hazards and updated guidance.
5. Appendix D (Safety Data Sheets). Revisions to SDS Sections 1, 2, 3, 8, 9, 10, 11 and 14.

B. Addressing issues identified during implementation of the HCS 2012 update:

1. Paragraph (d) – Hazard classification. Clarifies which hazards must be evaluated.
2. Paragraph (f)(11) – Label updates. Adds flexibility for label updates on packages that have been released for shipment.
3. Paragraph (f)(12) – Small and very small container labeling. Clarifies labeling requirements for small packages.

C. Improving alignment/coordination with other U.S. agencies

1. Paragraph (f)(5) – Transportation - provides increased coordination with DOT label for bulk shipment.
2. Paragraph (c) *released for shipment* definition – aligns with EPA definition.

D. Updating references to OSHA directives, publications, and external websites, as needed.

VIII. Background.

OSHA originally published the HCS in 1983 which covered manufacturing sectors only. Due to court rulings, the scope of the HCS was expanded on August 24, 1987, to cover all industry sectors. On February 9, 1994, OSHA published the final rule (59 Fed. Reg. 6126); included were minor changes and technical amendments to clarify the standard's requirements. On March 26, 2012, OSHA published the final rule (Vol 77, No. 58 Fed Reg, 17574) to update the HCS (known as HCS 2012), to align with the GHS Rev. 3, 2009.

On May 20, 2024, OSHA updated the HCS (hereinafter known as HCS 2024) to align with GHS Rev. 7 (2017) and international trading partners (*e.g.,* Canada, European Union (EU)). OSHA made additional changes to address implementation issues with the 2012 HCS rulemaking and to better align with other federal agencies (*e.g.*, EPA, DOT).

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, although community right-to-know laws would typically not be preempted by OSHA. OSHA's procedures for approving State Plan standards are covered by 29 CFR 1953.5 and discussed in OSHA's State Plan Policies and Procedures Manual, CSP 01-00-005. Contact the Directorate of Enforcement Programs and Directorate of Cooperative and State Programs with questions.

IX. Compliance Dates and Transition Period.

The HCS 2024 became effective 60 days after publication, on July 19, 2024.

On January 15, 2026, OSHA extended the compliance dates in the HCS 2024 by four months. Chemical manufacturers, importers and distributors must be in compliance with all modified provisions when evaluating substances no later than May 19, 2026, and when evaluating mixtures no later than November 19, 2027. Employers have an additional 6 months to update their hazard communication program, workplace labels, and training, as necessary. Employers' compliance dates are November 20, 2026, for substances and May 19, 2028, for mixtures, respectively.

During the transition period before the compliance dates, manufacturers, importers, distributors, and employers may comply with the HCS 2012, the HCS 2024, or both. See also Section X.J of this Instruction for further inspection and citation guidance related to the HCS 2024 compliance dates.

The specific standard sections outlined in this directive are from the HCS 2024. While the procedures for inspecting and determining if a violation have occurred are largely the same as in the HCS 2012 Directive, a CSHO citing a violation of HCS 2012 should refer to the archived HCS 2012 Directive for information specific to those provisions.

X. Inspection Guidelines.

The following guidelines apply to all inspections conducted to determine compliance with the HCS:

A. General Inspection Guidance.

1. Compliance with the GHS.

   HCS 2024 is based primarily on the GHS Rev. 7 (2017), and some sections of Rev 8. Some manufacturers, importers, distributors, or employers may want to comply with more recent or future versions of GHS issued by the UN, such as Rev. 9 or later. However, using Rev. 9 or a more recent version may result in non-compliance with HCS 2024 if it contradicts or casts doubt on OSHA-required information.

   OSHA will evaluate each situation on a case-by-case basis. Further discussion of when this may be appropriate can be found in the preamble to the HCS 2024 rule (89 FR at 44318).

   Note: The different versions of the GHS can be found on the United Nations Economic Commission for Europe (UNECE) webpage by clicking the "GHS" link, then clicking "GHS official text and corrigenda".

2. Citation Guidelines.

   a. For all violations, the CSHO shall document on the violation worksheet(s) the chemical name (and hazardous ingredients) or Chemical Abstract Service (CAS) number (or other unique identifier), the frequency and duration of use, the number of employees who may be exposed, and the health and physical hazards.

   b. The CSHO should include photos or video (e.g., of the label) of the chemicals in question and copies of safety data sheets (SDSs).

   c. During the transition period, manufacturers, importers, distributers, and employers may comply with HCS 2012 or HCS 2024. Accordingly, citations should not be issued unless the entity has not complied with either standard. In that situation, citations will be issued under HCS 2012 prior to the applicable compliance date. Section X.J of this Instruction provides guidance on the implementation dates for each type of business (e.g., manufacturer, importer, distributor, and employer). General guidance is provided below.

   d. After the relevant compliance dates, citations shall be issued only under HCS 2024.

e. Repeat violations and failure to abate (FTA) violations may still be issued under HCS 2024 following the citation guidance in CPL-02-00-164, Field Operations Manual (FOM), Chapter 4.

   If a CSHO proposes a repeat or a failure to abate (FTA) violation based on a citation originally issued under HCS 2012, and the citation under the new inspection is issued under HCS 2024, the possibility exists the cited paragraphs could be different, requiring the CSHO to clearly explain why the paragraphs are different. This was more likely to happen during the transition from HCS 1994 to 2012, rather than HCS 2012 to 2024; however, see an example below:

   - Under HCS 2012, where it is not feasible to use pull-out labels, fold back labels, or tags, containing the full HCS 2012 required information, manufacturers shipping small containers may be cited under 29 CFR § 1910.1200(f)(1) for failing to follow the practical accommodation developed by OSHA for labeling small, shipped containers (See archived HCS 2012 Directive).

   - However, under HCS 2024, subparagraphs of 29 CFR § 1910.1200(f)(12) may be cited where an employer has demonstrated that it is not feasible to use pull-out labels, fold-back labels, or tags containing the full label information, but fails to comply with the small container labeling requirements in 29 CFR § 1200(f)(12)(ii) or (iii). This formalizes the former HCS 2012 practical accommodation for small, shipped containers.

3. State Plan Preemption.

   a. Section 18 of the OSH Act prevents State Plans from requiring manufacturers or importers located outside of their state to have different information on their labels or SDSs than what is required by the federal HCS.

   b. However, a State Plan can have stricter requirements that it enforces on companies in that state so long as it does not unduly burden interstate commerce. Therefore, a State Plan could require more information on the labels and SDSs, but could not enforce its requirement on companies outside of the state.

   c. Before a State Plan may enforce any stricter HCS requirements, OSHA must approve of them as a part of the state plan, in accordance with section 18 of the OSH Act.

B. Scope and Application, Paragraph (b).

The HCS applies to any hazardous chemical present in the workplace in a manner that employees may be exposed under normal conditions of use and foreseeable emergencies. Virtually all chemicals manufactured or imported into the U.S. are covered by the HCS, unless exempted in paragraph (b). The manufacturer or importer must provide the information required by the standard on any hazardous chemicals which they manufacture or import. This information must cover the normal conditions of use (including downstream use) and foreseeable emergencies of the product. A manufacturer or importer is out of compliance if it does not provide hazard information on a known use for the chemical or should have reasonably been expected to know the use may occur, even if it is not the intended use for the chemical under normal conditions of use or foreseeable emergency. For example, a hair smoothing product used in professional hair salons where the intended use of the product created a different hazard due to chemical reaction, i.e., the chemical reaction formed formaldehyde. The manufacturer must inform downstream users of the of the known potential hazards of formaldehyde.

1. Normal use does not include incidental exposure. Employees such as office workers who use chemicals in "non-routine," isolated instances (e.g., products to clean a desk or computer) are not covered. However, a graphic arts worker who uses a product "routinely" (e.g., products such as paints, adhesives, cleaners), would be covered by the HCS.

2. “By-products” are covered by the HCS. A manufacturer's or importer's hazard determination or hazard classification must account for any hazardous by-products which may be formed and anticipate the full range of downstream uses and exposures of their product(s). For example, a manufacturer of gasoline must inform downstream users of the hazards of carbon monoxide since carbon monoxide is a hazardous chemical and is "known to be present" as a by-product resulting from the use of gasoline-powered equipment. Similarly, manufacturers of diesel fuel must inform downstream users of the potential human carcinogenicity of diesel exhaust on the SDS for diesel fuel.

3. “Known to be present” is an important part of the HCS; it includes chemicals to which employees may be exposed during normal operations or in a foreseeable emergency. Therefore, even though an employer was not responsible for the manufacture of the hazardous chemical, the employer has the responsibility for conveying information about the hazards to its employees. For example, the standard applies in the following situations: if

an employer is aware that his/her employees are exposed to chemicals brought onto a multi-employer worksite by other employer(s) or if service personnel are exposed to natural gas during furnace repair. An employer whose employees are exposed to chemicals "known to be present" must include in their hazard communication program information concerning the hazards of those chemicals.

4. Items that are covered by HCS include (this is not an exhaustive list):

    a. Bricks;

    b. Metal ingots;

    c. Wood products where the hazard is not just combustion (e.g., wood that is cut is covered since the sawdust created during the cut creates a respiratory hazard);

    d. Hazardous drugs not in final form or a solid (e.g., drugs that are crushed or dissolved prior to administration);

    e. Combustible dusts;

    f. Simple asphyxiants;

    g. Welding rods/wire;

    h. Acid batteries;

    i. Consumer products not used in the quantities and the manner that a consumer would use them; and

    j. Oil and gas products (including petroleum products); the producers are considered manufacturers under the HCS.

5. Exemption Guidelines.

    a. Paragraph (b)(3) deals with HCS coverage for laboratories not covered under 29 CFR § 1910.1450, Occupational Exposure to Hazardous Chemicals in Laboratories (Laboratory standard). Most quality control and production laboratories do not meet the definition of a laboratory under 29 CFR § 1910.1450 and are subsequently covered by the (b)(3) provisions of 29 CFR 1910.1200. See Section XI.D. for more information concerning the interface between the Laboratory standard and the

Hazard Communication standard. The only HCS requirements for laboratories that do not ship chemicals are in paragraph (b)(3):

- Maintenance of labels on incoming containers, (b)(3)(i);
- Maintenance of SDSs, (b)(3)(ii);
- Training, (b)(3)(iii); and,
- Per (b)(3)(iv), if the laboratory ships chemicals, it is considered to be either a chemical manufacturer or a distributor and must meet the label and SDS requirements in 29 CFR § 1910.1200(f) and (g).

b. Paragraph (b)(4) covers the exemptions for work operations where employees only handle chemicals in sealed containers which are not opened under normal conditions of use (such as those found in marine cargo handling, warehousing, and retail sales).

- Since containers are subject to leakage and breakage, employees who work in operations where they handle only sealed containers (such as warehousing) are potentially exposed to hazardous chemicals, and, therefore, need access to information as well as training. This training is dependent upon the type of chemicals involved and must cover the potential size of any spills or leaks, the type of work performed and what actions employees are expected to take when a spill or leak occurs.
- Employers are required to obtain an SDS for any chemical in a sealed container if an employee requests one, and to maintain and make available to employees all SDSs received.
- Employers must ensure that labels on incoming containers of hazardous chemicals are not removed or defaced. See Section X.F.10.i.

c. The (b)(5) labeling exemptions only apply to chemicals that are subject to the labeling requirements of certain other federal agencies (e.g., cosmetics for personal use covered by the U.S. Food and Drug Administration (FDA)). Although the HCS does not require labeling for these chemicals, hazard classification in accordance with paragraph (d) is still required to provide the required SDS(s).

- Paragraph (b)(5)(i) covers the labeling of pesticides as defined in the U.S. Environmental Protection Agency's Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Because EPA exercises statutory authority over pesticides subject to FIFRA labeling requirements, OSHA is preempted from enforcing most labeling requirements of the HCS. FIFRA labels approved by EPA preempt OSHA's label requirements, but not the requirements for SDSs and worker training (except for certified applicators and agricultural workers for whom EPA has training requirements. See explanation below). EPA has issued guidance covering SDS and labeling requirements. See EPA Pesticide Registration Notice (PRN) 2012-1: Material Safety Data Sheets as Pesticide Labeling. When a pesticide subject to FIFRA labeling is transferred into a container other than its original container (e.g., a smaller secondary container or in order to dilute a concentrate with water), OSHA may enforce the workplace labeling requirements of the HCS (paragraph (f)(6)) so long as the secondary container is being used in-house (i.e., in the workplace) and not being shipped downstream (i.e., for sale or further distribution) and there is no other basis for OSHA preemption. See Section X.F.4. for workplace labeling requirements and EPA Recommendations for Labeling Secondary and Service Containers.

- In addition to FIFRA, the EPA Agricultural Worker Protection Standard (WPS) preempts OSHA from enforcing the HCS for certain pesticide exposures. The WPS covers pesticide handler and agricultural worker exposures to pesticides on farms and in forests, nurseries, and greenhouses. Pesticide handler is defined as those who mix, load, or apply agricultural pesticides; clean or repair pesticide application equipment; or assist with the application of pesticides. Agricultural worker is defined as those who perform tasks related to growing and harvesting plants on farms or in greenhouses, nurseries or forests (e.g., carrying nursery stock, repotting plants, watering, or other tasks directly related to the production of agricultural plants at an agricultural establishment). See EPA's WPS webpage for additional information.

    - Agricultural (farm) workers exposed to hazardous chemicals other than pesticides continue to be covered by the provisions of the HCS.

    - OSHA covers workers in the manufacturing of pesticides and those not covered by the EPA WPS or FIFRA labeling requirements.

- See paragraph 1910.1200(b)(5) for additional exemptions.

d. Paragraph (b)(6) covers items which have a complete exemption from all the HCS requirements. This must not be confused with the specific labeling exemptions at (b)(5). The items covered by (b)(6) include:

- Paragraph (b)(6)(i) and (b)(6)(ii), covers exemption of hazardous waste and hazardous substances when subject to regulations issued under the EPA, such as the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

  Note: Chemicals which are used by employees at a hazardous waste site that are not hazardous waste are covered under the HCS. An example would be a basic chemical brought on site by the employer to neutralize an acidic waste product.

- Paragraph (b)(6)(iii) exempts tobacco or tobacco products.

- OSHA does not consider either radiation hazards ((b)(6)(xi)) or biological hazards ((b)(6)(xii)) to be covered by the HCS. If, however, the radiological or biological is accompanied by an otherwise covered hazardous chemical, (e.g., a container with a biological sample packed in an organic solvent), then the hazardous chemical would be subject to the requirements of the HCS.

- Biological hazards – The HCS does not cover the biological hazards that may be posed by or accompany plants (e.g., endotoxin, mold, fungi). However, the HCS applies to hazardous chemicals that may pose a physical or health hazard (e.g., grain dust) to workers, as well as hazardous chemicals extracted from or used in the production of plant byproducts (e.g., solvents, other plant extracts).

See paragraph 1910.1200(b)(6) for additional exemptions.

6. Citation Guidelines.

a. Citations shall not be issued under the scope and application paragraphs. Citations shall be issued under the applicable paragraph of the regulation, e.g., labeling. Follow the guidelines outlined in each section of this directive.

b. For both the article exemption (paragraph (b)(6)(v)) and items not meeting the consumer product exemption (paragraph (b)(6)(ix)), the specific hazardous chemical in the product/item must be described in the citation. Where available, include a copy of the cited product's SDS in the case file.

c. In instances where manufactured items which under normal conditions of use may release hazardous chemicals, CSHOs must document in the case file worksheet information why the item is not exempted as an article. Air sampling is not required to document worker exposure. This information should include at a minimum the following:

- What is the hazardous chemical in the item to which employees were exposed?
- Was this item included in the employer's hazardous chemical inventory?
- What were the activities/operations that resulted in employee exposure to the hazardous chemical(s)?
- Did the release of the covered chemical(s) pose any potential physical hazard or health risk to the employees?

d. 29 CFR § 1910.1200(b)(6)(ix) covers the exemption for consumer products. NOTE: "Consumer product" means any article, or component part thereof, produced or distributed (i) for sale to a consumer for use in or around a permanent or temporary household or residence, a school, in recreation, or otherwise, or (ii) for the personal use, consumption or enjoyment of a consumer in or around a permanent or temporary household or residence, a school, in recreation, or otherwise. See 15 U.S.C. 2052. See X.C.7. of this Instruction for further definition of a consumer product.

- It is the Agency's policy not to issue citations for consumer products unless the CSHO can document that the product was used in the workplace in a manner not intended by the manufacturer or the frequency and duration of use results in exposures that are significantly greater than those experienced by a normal consumer. Citations may only be issued in cases where the CSHO can document that the use falls outside of the (b)(6)(ix) exemption.

- To ensure that citations of the HCS for consumer products are adequately documented, the following elements must be included in the case file:

- What information established the chemical/product as a consumer product? For instance, was the container/product label subject to the Consumer Product Safety Act provisions?

- What is/are the hazardous chemical(s) present in the product to which employees were exposed? What is/are the concentration(s) of the hazardous chemical(s) present? Was the product included in the employer's hazardous chemical inventory?

- What is the duration of use of the product, i.e., for what period of time did the employees use or were exposed to the chemical during the workshift and workweek? Did it greatly exceed normal or expected use by a consumer?

- Was the frequency of employee use significantly greater than that of a normal consumer?
    - A product would not be covered by HCS if a worker chooses to clean their personal workspace with a product that is meant for cleaning purposes.
    - Employers would be required to comply with HCS if a worker's job duty includes custodial work such as cleaning desks, offices, and bathrooms.
- How was the product used and in what amounts? Was the product used in the workplace for the purpose intended by the manufacturer or importer?

- When available, include in the file the SDS(s) for the cited product(s) to aid in determining coverage and intended use(s).

- A product may be labeled according to the consumer product exemption in subparagraph (b)(5)(v), but the usage may be covered by the HCS.

- In the case of mixtures, the concentration of the hazardous chemical must also be noted. For example, a citation must not simply state that "glue" or "dishwashing liquid" was the hazardous consumer product, or that a "brick" was the hazardous chemical in a

manufactured item. The citation must state the name of the hazardous chemical (e.g., methyl ethyl ketone, sodium hydroxide, silica) and the concentration of the chemical in the mixture (e.g., 50% silica).

C. Definitions, Paragraph (c).

This paragraph of the standard is not citable. New definitions have been added to the standard to reflect revised GHS criteria and other definitions have been changed or removed. Specific definitions are outlined herein for clarification and to aid in the interpretation and application of the standard. Definitions that are in *italics* are carried over from the HCS 1994 and 2012 standards; definitions that are in **bold** are from the HCS 2024 standard, the appendices, or this Instruction. Where questions have arisen concerning what OSHA means by particular language, additional definitions have been provided herein for clarification.

1. *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 the HCS), and does not pose a physical hazard or health risk to employees. Examples of articles are stainless steel tables, vinyl upholstery, tires, and adhesive tape.

    a. Articles do not include items which may release hazardous chemicals when used. This includes such things as drugs that will be crushed prior to administration, wood products that will be cut, drilled or sawed, gaskets that when deteriorated or replaced may release asbestos, metal ingots that will be melted, mercury switches that may break in use or during maintenance operations, bricks that are cut, and coated materials that are welded, cut, or ground, etc.

    b. Exposures that may occur during the destruction of the product do not change the classification of the product as an article, as long as only a trace amount of the hazardous chemical is released.

    c. In evaluating an article, one must consider the health risk which exposure to that article presents. The term “risk” as opposed to “hazard” is used here, since the hazard is an inherent property of the chemical and exists no matter the quantity of exposure. To be exempted as an article, exposure must not pose a risk to employee health.

2. *Bridging principles* are methods used for classifying the hazards of mixtures that have not been tested to determine their toxicity by comparison to similar mixtures that have been tested. Each hazard class specifies which bridging principles are applicable for that class. This determination is based on data for the individual ingredients and/or similar tested mixtures. See Appendix A of the standard for additional information.

3. **Bulk shipment** means any hazardous chemical transported where the mode of transportation comprises the immediate container (i.e. contained in tanker truck, rail car, or intermodal container).

4. *Chemical* means any substance, or mixture of substances. The standard's definition of "chemical" is much broader than that which is commonly used. Thus, steel coils which are cut and processed, castings which are subsequently ground or welded upon, bricks that are dry sawed or drilled, carbide blades which are sharpened, are all examples of products that contain chemicals, which, if available for exposure, are covered by the HCS.

5. *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 the standard. 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.

6. **Combustible dust** 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.

   HCS Appendix C, C.4.31, footnote 2, states, where chemicals are not shipped in a dust form but may be used under normal conditions of use by a downstream user in such a way as to create a combustible dust hazard, the responsible party must provide labels. If the material meets the solid material exemption or the only hazard is combustible dust, the responsible party may provide labels in accordance with 1910.1200(f)(4) or may provide labels in accordance with 1910.1200(f)(1) if they so choose. This would apply to combustible dust in both solid and liquid (after drying) forms.

10. *Consumer product.* Paragraphs 1910.1200(b)(5)(v) and (b)(6)(ix) of the HCS provide certain limited exemptions for “consumer products” as defined in the Consumer Product Safety Act (CPSA) and “hazardous substances” as defined in the Federal Hazardous Substance Act (FHSA) when subject to

labeling requirements under those statutes.

a. OSHA looks to the Consumer Product Safety Commission law in determining whether a hazardous chemical falls within these limited exemptions. Area Offices should consult with their regional office and RSOL for interpretative assistance whenever needed. The following are general guidelines for applying these exemptions.

b. In general, a "consumer product" under the CPSA is one that:

   - Is for sale to a consumer for use in or around a permanent or temporary household or residence, a school, in recreation, or otherwise; or

   - Is for the personal use, consumption or enjoyment of a consumer in or around a permanent or temporary household or residence, a school, in recreation, or otherwise. (15 U.S.C. 2052(a)).

c. "Hazardous substance," as defined under the FHSA overlaps significantly with the HCS definition of hazardous chemical. In general, a FHSA hazardous substance is one that:

   Any substance or mixture of substances which (i) is toxic, (ii) is corrosive, (iii) is an irritant, (iv) is a strong sensitizer, (v) is flammable or combustible, or (vi) generates pressure through decomposition, heat, or other means, if such substances or mixture of substances may cause substantial personal injury or substantial illness during or as a proximate result of any customary or reasonably foreseeable handling or use, including reasonably foreseeable ingestion by children. [15 U.S.C. 1261(f)(1)(A)].

d. The key to applying the limited exemptions in 1910.1200(b)(5)(v) and (b)(6)(ix) for a FHSA hazardous substance is to initially determine whether FHSA labeling requirements apply. In general, this occurs when the hazardous substance is "intended, or packaged in a form suitable, for use in the household or by children." [15 USC 1261(p)].

e. The label for a consumer product may be exempt from the HCS labeling requirements, although the use may be covered if it is used in a manner not intended by the manufacturer or the frequency and duration of use results in exposures that are significantly greater than those experienced by a normal consumer. See X.B.6.d. of this instruction.

11. *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 the HCS, pipes or piping systems, engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

    a. In the case of fuel, the fuel producer still has an obligation to assess the hazards associated with the fuels, including their by-products.

        - For example, liquid propane (LP) cylinders that serve as the source of fuel used to operate lift trucks, would not have to be labeled once the fuel tank is installed. Even though containers of fuel such as gasoline and LP clearly are within the scope of the HCS, no requirement exists to label those containers operating the lift truck.

        - The spare LP cylinder(s) in storage must be labeled since they are containers.

    b. Bricks that are palletized and bound (e.g., by metal bands) are considered to be containers that are to be labeled.

    c. Gas cylinders (e.g., oxygen, nitrogen, acetylene) are considered containers under HCS.

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

    a. A company that repackages, blends, mixes, or otherwise changes the composition of a chemical is considered a chemical manufacturer under the HCS.

        - Employees in these operations are considered to use hazardous chemicals.

        - Under these conditions, the distributor will not be able to claim the sealed container provision in paragraph (b)(4) and will need to meet all applicable provisions of the HCS for manufacturers.

    b. Paragraph (g)(7) distinguishes between a "distributor" and a "retail distributor." This distinction has been made to recognize that retail establishments primarily deal with the general public. Retail distributors that sell to both employers and the general public only need to provide an SDS upon request. Wholesaler distributors that sell to employers

over-the-counter must post a sign or otherwise inform them that a SDS is available and shall provide an SDS to such employers upon request.

c. Scrap dealers are generally considered distributors and, to the extent that their products are not articles, would need to comply with the HCS 2024.

- If the company (supplier) providing the goods to the scrap dealer is furnishing articles which the supplier did not manufacture (such as a broken refrigerator, li-ion batteries), the supplier is not required to provide a label or SDS, unless the supplier was provided them by the manufacturer or importer.

- However, if a supplier sent a product that contained hazardous chemicals, as would be the case if a company scraps pipes containing a hazardous chemical or its residue, that could be released in more than small or trace quantities, present a physical hazard, or present a health risk, then the item is not an article. The supplier must provide a label and SDSs to the scrap dealer.

- Similarly, manufacturers are also required to pass on any information (labels and SDSs) they have regarding known contaminants of the scrap, as would be the case if cutting fluids were present.

- In addition, article manufacturers that sell for scrap or recyclers those produced items that fail specification or suppliers who provide, for example, metal tailings from a manufacturing process or li-ion batteries, must develop and transmit SDSs and labels to downstream scrap dealers or recycling operators.

- Generally, non-manufacturing scrap dealers may comply with the duty to provide labels and safety data sheets for the scrap they sell by sending their downstream users the labels and SDSs the dealer received from employers who have scrapped the materials.

13. *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.

14. *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.

15. **Exposure or exposed** means that an employee is subjected in the course of employment to a hazardous chemical, 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.)

16. *Foreseeable emergency* means any reasonably anticipated occurrence in the workplace use of the chemical 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. Employee exposures in the event of an accidental fire are not considered a foreseeable emergency.

17. **Gas** means a substance which (i) at 122^{o}F (50°C) has a vapor pressure greater than 43.51 PSI (300 kPa) (absolute); or (ii) is completely gaseous at 68^{o}F (20°C) at a standard pressure of 14.69 PSI (101.3 kPa).

18. *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.

19. **Hazardous chemical** means any chemical that is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, or hazard not otherwise classified.

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

21. *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 the standard.

    a. For example, an HNOC is polymerization that may release heat. Polymerization is a chemical reaction in which a large number of relatively simple molecules combine to form a chain-like macromolecule. The combining units are called monomers (e.g., methyl methacrylate), the product is a polymer (e.g., polymethyl methacrylate).

    b. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in the section, but the effect either falls below the cut-off value/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).

c. An adverse physical or health effect is a material impairment of health or functional capacity, as that phrase is used in section 6(b)(5) of the OSH Act, 29 U.S.C. § 655(b)(5), resulting from workplace exposure to a chemical.

d. A health effect is determined in accordance with the weight-of-evidence criteria in Appendix A of the standard, paragraph A.0.3.

e. The term physical effect generally refers to a material impairment of health or functional capacity caused by the intrinsic hazard(s) of a particular chemical in normal conditions of use or foreseeable emergencies. Scalds caused by exposure to chemicals at high temperatures or slips and falls caused by treading on a solid chemical shaped in a rounded form or spilled liquids, are not covered physical effects under the HNOC definition.

- For example, water is not classified as an HNOC merely because an employee might be scalded by contact with boiling water or because an employee might contract hypothermia by being immersed in cold water for a long period of time.

- Similarly, water is not classified as an HNOC by virtue of the fact that an employee might be injured when slipping and falling on a wet surface or when sprayed by water at high pressure. The foregoing examples of adverse physical effects that are outside the scope of HNOCs are designed to assist in better understanding the concept of HNOCs. They are not intended to be exhaustive or limited to chemicals, such as water, which are not hazardous chemicals.

NOTE: OSHA's definition above for HNOC ensures that hazards previously covered under HCS 1994 and 2012 remain covered under HCS 2024.

22. *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. See Section X.F.2.c of this Instruction for the discussion on hazard statements.

23. **Immediate outer package** means the first package enclosing the container of hazardous chemical.

24. *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. See Section X.G.1.p. Responsibility for SDS for discussion on importer responsibilities.

25. *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. However, (f)(1) requires the label on each container and, therefore, labeling only the outside package is not compliant.

26. **Liquid** 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 (R2019) (incorporated by reference, see § 1910.6); or the test for determining fluidity (penetrometer test) prescribed in section 2.3.4 of ADR 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.

27. *Manufacturer* means an employer that manufactures, processes, formulates, or repackages a hazardous chemical. The first employer meeting the definition of a manufacturer will be responsible for performing the hazard classification, developing or obtaining the SDSs, and labeling containers of the hazardous chemicals.

    a. Manufacturers include those companies which repackage, blend or mix chemicals.

    b. If a downstream employer meeting the definition of a manufacturer alters a product (e.g., chemically react) and/or removes the original manufacturer's name and/or contact information, then the downstream user becomes the responsible party for the product and needs to consider all the known or intended uses of the product.

    c. The first employer meeting the definition of a manufacturer does not need to consider downstream uses that are more than one step away from the manufacturer's chemical as sold in the chemical manufacturing supply chain (i.e. downstream uses that involve using a version of their product that has already been chemically reacted after its sale). An

example of this is a company providing methyl methacrylate to a second manufacturer who creates polymethyl methacrylate and then makes products from the polymethyl methacrylate; the first manufacturer does not need to warn on the hazards of the products made from the polymethyl methacrylate.

d. Examples of manufacturers:

- Oil and gas producers (e.g., petroleum products) are chemical manufacturers because they process hazardous chemicals for use or distribution.

- Sawmills are considered to be manufacturers since they are the first employers who process the product. A sawmill processes timber into lumber, thereby creating wood dust, which is a hazardous chemical under the HCS.

- Operators of grain elevators also meet the definition of a manufacturer.

28. **Physical hazard** means a chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, liquids, or solids); aerosols; oxidizer (gases, liquids, or solids); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; in contact with water emits flammable gas; or desensitized explosive. The criteria for determining whether a chemical is classified as a physical hazard are detailed in Appendix B to the HCS standard.

29. **Physician or other licensed health care professional (PLHCP)** 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) the HCS standard.

30. *Produce* means to manufacture, process, formulate, blend, extract, generate, emit or repackage. This includes the extraction of naturally occurring substances, such as clay and stone which contain crystalline silica.

31. **Released for shipment** means a chemical that has been packaged and labeled in the manner in which it will be distributed or sold.

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

necessary. This could be the manufacturer or importer or a company contracted to provide more information. The name and address of the responsible party MUST be the same on the SDS and the label.

33. *Safety data sheet (SDS)* means written or printed material concerning a hazardous chemical that is prepared in accordance with paragraph (g) of the HCS standard.

34. *Shipped container* means any container leaving the workplace, whether through normal shipping routes or physically handed to another person.

35. *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/or death. Examples of a simple asphyxiant are nitrogen, helium, argon, neon, and methane.

36. **Solid** means a substance or mixture which does not meet the definitions of liquid or gas.

37. *Stationary process container* means a container that is not mobile, in which a process other than storage takes place, or which contains a liquid (other than water) (e.g., used for dipping and coating).

    a. Examples of stationary process containers are permanent dip tanks, and permanent mixing vessels.

    b. Items which are not stationary process containers are storage tanks (even if connected to a distribution system), and portable dip tanks.

    This definition applies only to the Hazard Communication standard. It does not change the scope or coverage of any other OSHA standard (e.g., 29 CFR § 1910.119 - Process Safety Management of Highly Hazardous Chemicals).

38. *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.

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

40. *Weight of evidence* means that all scientific data bearing on the classification of a chemical shall be considered together, including the results of valid *in vitro* tests, relevant animal data, and human experience such as epidemiological and clinical studies, and well-documented case reports and observations. See Appendix A, Chapter A.0.3 of the standard for a further discussion on how to use the weight of evidence for classification.

D. Hazard Classification, Paragraph (d).

This section outlines the classification of chemicals under the revised standard. Virtually all chemicals manufactured in or imported into the U.S. are covered by the HCS, unless exempted in paragraph (b). The Directorate of Standards and Guidance (DSG) and Directorate of Technical Support and Emergency Management (DTSEM)'s OSHA Technical Center (OTC) are available to assist CSHOs in the review of a manufacturer's or importer's classification scheme, if necessary.

1. General Information on Classification.

OSHA does not classify, approve, or have responsibility for the classifications of chemicals for manufacturers, importers, and distributors.

Chemical manufacturers and importers are required to classify the hazards of the chemicals they produce or import (e.g., determine the hazard classes, and where appropriate, the category of each class that applies 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. If an employer chooses to do its own classifications, it is responsible for complying with the classification requirements of the HCS.

a. Classification criteria.

- Appendix A in §1910.1200 provides classification criteria of health hazards and Appendix B in §1910.1200 provides classification criteria of physical hazards.

- Hazard classification must follow the requirements outlined in Appendices A and B of the standard. A listing of the sections in Appendices A and B of the standard can be found in Appendix A of this Instruction. Deviations from Appendices A and B of the standard (e.g., using split entry) are not in compliance with the HCS. See April 2, 2013 letter of interpretation to Brian Karlovich on split entry.

- The classification of hazards is to be performed based on the criteria provided for each individual hazard class. Manufacturers or importers who are evaluating the hazards of the chemicals must consider all available data on the hazards.

- Classifiers must consider any hazards posed by the product in normal conditions of use and foreseeable emergencies and must consider the full range of available information about those hazards.

- The classification shall include any hazards associated with the chemical's intrinsic properties including (i) a change in the chemical's physical form, and (ii) chemical reactions associated with known or reasonably anticipated uses or applications.

    - The information required by paragraph (d)(1)(ii) shall be included in Section 2 of the SDS but need not appear on the label.

    - When determining what qualifies as a known or reasonably anticipated use or application, if a chemical has a very wide range of uses downstream an employer cannot reasonably anticipate all the ways its chemical could be combined with other chemicals. Similarly, it is not reasonable to require a manufacturer, importer, or distributor to know or reasonably anticipate a downstream use if the chemical is used in a proprietary process that produces derivatives that are trade secrets. Additionally, when a manufacturer, importer, or distributor has recently learned new information regarding downstream uses, CSHOs should refer to paragraph (g)(5), which is not new to the HCS 2024, and allows chemical classifiers three months to update SDSs after becoming aware of new information regarding the hazards of a chemical. If a manufacturer or supplier asserts it was unable to comply with this provision of the standard by the compliance dates, the CSHO must determine if the manufacturer has exercised reasonable diligence and good faith efforts to comply with the terms of the standard. See Section X.J.7. for further guidance.

- The quality and consistency of the data shall be considered. Information on chemicals related to the material being classified shall be considered as appropriate, as well as site of action and mechanism or mode of action study results.

- Both positive and negative results shall be considered together in a single weight-of-evidence determination.

- Positive studies which are consistent with the criteria for classification will normally justify classification. See Appendix A of the standard, chapter A.0.3.3.

- The specific bridging principles that can be used for each classification are found in the appropriate sections of Appendix A of the standard.

- There is no requirement for testing to determine the classification; however, the manufacturer or importer may test if so desired.

    - While the HCS does not require testing of chemicals to determine their individual hazards, such testing is allowed and some SDS preparers may choose to do so.

    - If a chemical manufacturer chooses to test a mixture as a whole, the chemical manufacture may perform the full range of tests, including tests to determine health risks and physical hazards, or test certain properties of a chemical and rely on the literature for others.

- Where impurities, additives or individual constituents of a substance or mixture have been identified and are themselves classified, they should be taken into account during classification if they exceed the cut-off value/concentration limit for a given hazard class.

- Known intermediates and by-products are covered by the HCS and must be addressed in the hazard classification.

- Decomposition products which are produced during normal conditions of use or in foreseeable emergencies for the product (e.g., plastics which are injection molded, diesel fuel emissions) are covered.

b. Carcinogenicity.

- The mandatory criteria for classification of a chemical for carcinogenicity under HCS 2024 are found in Appendix A, chapter A.6 of the standard.

- Unless OSHA has determined that the chemical is a carcinogen, these classifications are to be based on all existing data, such as internal documents, peer-reviewed published studies, and additional data accepted by other agencies, e.g., National Institute for Occupational Safety and Health (NIOSH) evaluations. Those chemicals that OSHA has determined in Subpart Z to be carcinogenic shall be addressed appropriately as carcinogens on labels and SDSs.

- The National Toxicology Program's (NTP) Report on Carcinogens, or the International Agency for Research on Carcinogens (IARC) monographs may be used instead of the manufacturer or importer performing their own weight-of-evidence classification. These sources shall be treated as providing information to be used in the weight-of-evidence decisions that are appropriate under the GHS-aligned criteria.

- Use the information provided in Appendix F, part A of the standard when checking the classification of carcinogens. Please see Appendix C of this Instruction for more information on evaluation of carcinogenicity.

- As discussed below, classification of mixtures has a specific order of precedence; however, it does not apply to Carcinogenicity, Germ Cell Mutagenicity and Reproductive Toxicity (see Appendix A of the standard, chapter A.0, subparagraph A.0.4.2 and chapter A.6, for Carcinogenicity).

c. Cut-off values/concentration limits.

- The HCS 2024 classification approach does not have one single cut-off value for classification. Each physical or health hazard has its own specified cut-off values for each specific category. See Appendices A and B of the standard for each specific cut-off value. A partial list of cut-off values can be found in Appendix B of this Instruction.

- When classifying mixtures the manufacturer or importer must use the information contained in Appendices A and B of the standard.

- Regardless of whether the classification is based on testing of the mixture as a whole or based on the hazards of individual ingredients, information about the ingredients presenting health hazards must be disclosed in Section 3 of the SDS when:

- Ingredients/components are present at or above the cut-offs.

- Ingredients/components are present below the cut-off value but still present a health risk at the lower level, e.g., isocyanates that are below the cut-off limit but can cause sensitization at the lower concentration. Also, where a component present below the cut-off may be released above an OSHA permissible exposure limit (PEL) or American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV®).

- An employer may rely upon the hazard classification performed by the chemical manufacturer or importer to satisfy paragraph (d)(1).

d. Intermediates.

- Manufacturers and importers must classify and create SDSs and labels for intermediates that are formed in a discrete step in the process of making the final product. This ensures that the employees are protected and the information is available in the case of an emergency. The manufacturer or importer must classify with the available information.

    - For example, in the process of creating chemical E that is formed in two steps, A + B = C and C + D = E, the creation of C is a discrete stopping point and can be isolated.

    - Therefore, OSHA would require the creation of an SDS for C as well as the SDS for E.

- Manufacturers and importers are not required to classify, label, or create SDSs for intermediates that cannot be isolated as discrete entities from the reactant materials. In other words, classification is required for intermediates created in transition that have not completely reacted and do not form a discrete product. An example of this would be A+B makes C which continues to react with B to form D. If C cannot be isolated, then OSHA would not require an SDS.

- Whoever performs the classification is responsible for the accuracy of the information. The evaluation must assess the hazards associated with the chemicals including hazards related to any anticipated or known use or foreseeable emergency which may result in worker exposure. Usually, the chemical manufacturer possesses knowledge

of hazardous intermediates, by-products, and decomposition products that can be emitted by their product.

e. Specific Target Organ Toxicity (STOT) – Single Exposure (SE)/Repeated Exposure (RE) classification.

- Mixtures containing from 1% to less than 10% of Category 1 STOT-SE ingredients may be classified as Category 2 STOT-SE under the following limited circumstances.

  - A.8.3.1 of the standard allows for the classification of mixtures under the criteria as used for substances. Where the classification of the ingredients is based on animal data only (see A.8.2.1.6 of the standard), the use of the guidance values in Table A.8.1 of the standard is appropriate as a part of the total weight-of-evidence approach.

  - It may be appropriate, in light of the guidance values, to classify a mixture containing from 1% to less than 10% of Category 1 STOT-SE substances as a Category 2 STOT-SE hazard, where warranted by the weight of evidence. Such a classification must be consistent with all of the criteria in A.8.2.1 ("Substances of Category 1 and Category 2") of the standard, including consideration of the severity of the effect observed. However, a mixture containing 1% or more of a STOT ingredient must be classified as a STOT hazard when classification is based solely on the application of the guidance value and the dose concentration in the mixture.

- Mixtures containing from 1% to less than 10% of Category 1 STOT-RE ingredients may be classified as Category 2 STOT-RE under the following limited circumstances.

  - A.9.3.1 of the standard allows for the classification of mixtures under the criteria used for substances. Where the classification of the ingredients is based on animal data only (see A.9.2.6 of the standard) the use of the guidance values in Tables A.9.1 and A.9.2 of the standard is appropriate as a part of the total weight-of-evidence approach.

  - It may be appropriate, in light of the guidance values, to classify a mixture containing from 1% to less than 10% of Category 1 STOT-RE substances as a Category 2 STOT-RE hazard, where warranted

by the weight of evidence. Such a classification must be consistent with all of the criteria in A.9.2 ("Classification Criteria for Substances"), including consideration of the severity of the effect observed. However, a mixture containing 1% or more of a STOT ingredient must be classified as a STOT hazard when classification is based solely on the application of the guidance value and the dose concentration in the mixture.

f. Petroleum streams have unique classification issues. The classification of petroleum streams is outlined in Appendix D of this Instruction.

More information on the classification requirements can be found in Appendices B, C, and D of this Instruction, and also in Appendices A and B of the standard.

2. Inspection Guidelines.

a. The adequacy of a company's hazard classification should be assessed primarily by examining the outcome of that classification, i.e., the accuracy and adequacy of the information on labels and SDSs and, if available, by reviewing the manufacturer's or importer's hazard classification procedures and calculations.

b. The hazard classification must include an assessment of all hazards. The chemical manufacturer or importer must consider the potential exposures that may occur when downstream employers use the product and identify the hazards that may result from that use on the label and/or SDS prepared for the product.

c. In the event there are questions concerning the adequacy of the scientific data underlying a chemical manufacturer's hazard classification the CSHO shall collect the information from the studies the manufacturer used to classify the chemical(s), and the rationale the manufacturer or importer used to determine the classification. The Area Director should then contact the regional hazard communication coordinator, who then may refer those findings to DSG or OTC for review, as necessary.

3. Citation Guidelines.

a. If the chemical manufacturer or importer has not classified the chemicals produced or imported, (d)(1) should normally be cited.

b. If the chemical manufacturer or importer has not considered the full range of scientific literature, e.g., ignoring the studies that do not support their conclusions (such as not including a study showing reproductive toxicity while including five other studies that do not show reproductive toxicity), (d)(2) should normally be cited.

c. While performing inspections of manufacturers the CSHOs shall review labels and SDSs. If discrepancies are noted or questions concerning the classification arise, the CSHOs should contact the regional hazard communication coordinator who will determine if DSG or the OTC should be contacted. If the chemical manufacturer or importer has not properly utilized Appendices A and B of the standard to classify the hazards of mixtures, (d)(3)(i) should normally be cited.

d. When classifying mixtures, a chemical manufacturer or importer may rely on the information provided on the SDSs for individual ingredients. However, if the chemical manufacturer or importer knows, or by exercising reasonable diligence should have known, that the information provided on the SDS for those individual ingredients was misstated or omitted, and relied on this information, (d)(3)(ii) should normally be cited.

e. Where a manufacturer or importer has not adequately classified the chemical or mixture, grouped citations for (d)(1) and (d)(2) (and (d)(3) if for a mixture) should be considered.

f. In general, citations for hazard classifications should be cited as serious.

E. Written Hazard Communication Program, Paragraph (e).

In most cases, enforcement for the written program should not be affected by the implementation dates of the revisions to the standard. However, if there are changes to the written program based on updated information received from manufacturers, importers or distributors, employers must update programs by November 20, 2026, for substances and May 19, 2028, for mixtures.

1. Program Coverage, (e)(1).

a. All employers with employees who are or are potentially exposed to hazardous chemicals known to be present in their workplaces, must develop, implement, and maintain at each workplace a written hazard communication program that includes labeling and other forms of warning (f), safety data sheets (g), and training (h).

b. Programs must be developed whether the employer generates the hazard or the hazard is generated by other employers.

2. Multi-Employer Worksites, (e)(2).

   a. On a multi-employer worksite, the CSHOs should refer to enforcement policies for multi-employer worksites in the FOM and CPL 02-00-124, Multi-Employer Citation Policy.

   b. The HCS obligates all employers, including those on multi-employer worksites who may expose their employees or employees of other employers (e.g., temporary workers and contractors) to hazardous chemicals, to develop a written program.

   c. An employer on a multi-employer worksite must include the methods they will use in their program to provide other employers with on-site access to SDSs. This covers each hazardous chemical to which the other employers' employees may be exposed. Therefore, an employer does not have to physically provide the other employer the SDSs but rather must inform others of the location where the SDSs will be maintained. (e.g., in the general contractor's trailer). The HCS allows employers to decide on the method of information exchange.

3. Program Access, (e)(4).

   a. HCS does not specify how the program is to be maintained, but it does specify that employees must have access to the written hazard communication program. Therefore, the employer may maintain the program either on paper or in electronic format, if the program meets all other requirements of the standard.

   b. The employer must ensure that employees know how to access the document and that there are no barriers to employees' access (e.g., storage in a locked room/cabinet/computer).

4. Inspection Guidelines for the Written HCS Program.

   CSHOs must review the written program to ascertain whether all applicable requirements of paragraph (e), (f), (g), and (h) are covered and have been implemented in the workplace in addition to observing possible violations while conducting the walkaround. The written program must address the following items:

a. Paragraph (e)(1)(i) - Chemical Inventory.

   - The inventory must have a product identifier for each chemical known to be present that aligns with the SDS and label.

   - The inventory can be for the entire facility or for individual work areas.

   - The inventory must include all chemicals present (even if the chemicals are stored/not in use).

b. Paragraph (e)(1)(ii) -Non-Routine Tasks/Unlabeled Pipes.

   The program must cover the methods the employer will use to inform employees of the hazards in non-routine tasks, and the hazards associated with chemicals contained in unlabeled pipes in their work areas.

c. Paragraph (e)(2) - Multi-Employer Worksites.

   - Paragraph (e)(2)(i) - Method(s) to provide the other employers on-site access to SDSs for each hazardous chemical the other employer(s)' employees may be exposed.

   - Paragraph (e)(2)(ii) - Method(s) to inform other employers about any necessary precautionary measures to protect employees.

   - Paragraph (e)(2)(iii) - How to inform other employer(s) about the labeling system used.

d. Paragraph (e)(4) - Availability of the Program to Employees, Employee Representatives, NIOSH, and OSHA Representatives upon request, and in accordance with 29 CFR 1910.1020, Access to Employee Exposure and Medical Records.

e. Paragraph (f) - Labels and Other Forms of Warning; this must include:

   - Designation of the person(s) responsible for labeling on shipped containers.

   - Designation of the person(s) responsible for workplace labeling.

- Description of labeling system(s) used.

- Description of alternative to labeling for workplace containers, where applicable.

- Procedures to review and update label information when necessary (for employer's workplace labeling and for shipped container labels).

f. Paragraph (g) - Safety Data Sheets.

- Designation of the person(s) responsible for obtaining/maintaining the SDSs.

- How the data sheets are to be maintained (e.g., available on computer, in notebooks in the work area(s), in a pick-up truck at the jobsite, via third party maintainer); procedures on how to retrieve SDSs electronically, including back-up systems to be used in the event of failure of the electronic equipment; and how employees obtain access to the SDSs.

- Procedure to follow if the SDS is not received at the time of the first shipment.

- Procedure to follow if it is suspected that the SDS does not include all of the required information (e.g., missing chemical ingredients or hazards).

- Procedure to follow to determine if the SDS is current.

- For chemical manufacturers or importers, procedures for updating the SDS when new and significant health information are found.

g. Paragraph (h) – Training.

- Designation of the person responsible for conducting the training.

- How the training is to be conducted (e.g., written, visual presentation using multi-media, verbal).

- The required elements of the training program. The program must address the duties in (h)(1) through (h)(3), including how to train employees in a language and at a literacy level they understand.

- Procedure to train new employees at the time of their initial assignment and to train employees when a new hazard is introduced into the workplace.

- Procedure to train employees when they are potentially exposed to chemicals used by other employers, multi-employer worksites.

5. Citation Guidelines.

   a. When evaluating an employer's hazard communication program the CSHO must determine if the employer has fulfilled all of the requirements of the program but has not put it in writing, has no program and has not implemented specific parts of the HCS, or has an inadequate written program.

      - Generally, all violations of paragraph (e) should be grouped with the violated element(s) listed in the subparagraphs of (e) and/or violations of paragraphs (f), (g), and (h) as appropriate, since (e)(1) is the only provision under paragraph (e) which addresses the development, implementation, and maintenance of the written hazard communication program.

      - If an employer has done nothing to comply with the HCS, citations for violations of paragraphs (e), (f), (g), and (h) of the standard may be issued as separate items, with separate penalties. Normally these employers should be cited for violations of (e)(1), (f)(6), (g)(1) and (h)(2) & (3).

      - Where employees are exposed or potentially exposed to a hazardous chemical, and labeling, SDS, chemical inventory, and training requirements are met, but there is no written program, a citation for (e)(1) should not be issued, as it is considered a de minimis violation.

      - If an employer has not developed a written hazard communication program and has not implemented the other parts of the HCS, a citation should normally be issued for (e)(1) and grouped with the section(s) of the standard that the employer is not complying with, e.g., not maintaining SDS, (g)(8).

- If the employer has developed a written hazard communication program but the program does not cover all the required elements or is deficient in one or more element(s), that specific element(s) should be cited, e.g., (e)(1)(i) when the employer has not developed a chemical inventory.

b. Employers in multi-employer worksites must include information in their program concerning SDS access, precautionary measures and workplace labeling.

   - Employers (e.g., a general contractor) who do not use hazardous chemicals, but whose employees are exposed to the chemicals used by other employers, are required to have a program and train their employees on the hazards of the chemicals in the work areas. If an employer fails to comply with this, CSHOs should normally cite paragraphs (e)(1) and appropriate sections of (h), Training.

   - A citation for (e)(2)(i) should normally be issued if an employer fails to include the methods by which the employer will inform other employers about on-site access to SDSs.

   - A citation for (e)(2)(ii) should normally be issued if an employer fails to include the methods for informing other employers about precautionary measures needed.

   - A citation for (e)(2)(iii) should normally be issued if an employer fails to include the methods by which the employer will inform other employers about the workplace labeling system used.

c. The employer is required to provide the written program to employees, their designated representatives, the Assistant Secretary for OSHA, and the Director of NIOSH upon their request, in accordance with 29 CFR § 1910.1020, Access to Employee Exposure and Medical Records. This requirement means that the employer must provide a copy of the written program within the time periods discussed in 29 CFR § 1910.1020 (i.e., no later than 15 working days after the request for access is made). If the employer does not comply, citations may be issued for 29 CFR § 1910.1200(e)(4).

d. All citations related to an employer's HCS written program should be cited in accordance with CPL 02-00-111, Citation Policy for Paperwork

and Written Program Violations, Section G.5. Citations shall generally be issued as serious unless otherwise noted.

F. Labels and Other Forms of Warning, Paragraph (f).

1. General Labeling Requirements.

a. Where necessary to comply with HCS 2024, manufacturers, importers, and distributors must update labels for substances by May 19, 2026, and labels for mixtures by November 19, 2027. Where there were such changes, employers must update workplace labels for substances by November 20, 2026 and for mixtures by May 19, 2028.

b. During the classification process, the manufacturer, or importer, or distributor will determine the appropriate classification and category of a product. This will result in the required elements: precautionary statements, hazard statements, pictograms and the signal word ("Danger" or "Warning"), to be placed on the label. A few classifications do not result in the use of a signal word. All the label elements for each hazard class can be found in Appendix C of the standard.

c. All labels must be in English; however they can be provided in other languages as well.

d. The manufacturer, importer or responsible party name on the label must be the same as on the SDS.

e. OSHA does not specify the format of the label, just the minimum information required on the label. A manufacturer, importer or distributor may add supplemental information to a label, as long as it does not lead to unnecessarily wide variation or undermine the required information.

Supplemental information need not be physically separated from the required information on the label; however, paragraph C.3.2 of Appendix C of the HCS 2024 provides that the placement of supplemental information must not impede identification of the information required by HCS 2024.

f. Quality control samples taken in a plant must be labeled, tagged, or marked unless the person taking the sample is also going to be performing the analysis, and thus the sample would come under the portable container exemption under paragraph (f)(8). A hand-written

label may be utilized as long as the required label information is present. This may be done under paragraph (f)(1) or (f)(6) depending on the circumstance.

g. Labels must be prominently displayed and in English. Labels must be legible without the use of any aid (except corrective lenses if the person reading the label normally has to wear glasses). Therefore, if the label is not legible, the label is out of compliance with (f)(2) (for manufacturer/importer labels) or (f)(10) (for workplace labels).

h. A hazard not otherwise classified (HNOC) is not required to be noted on the label but may be included as supplementary hazard information.

i. The manufacturer, importer, or distributor can also choose to list the environmental effects and use the environmental pictogram on the label, if applicable, so long as the additional information does not impede the required information.

j. OSHA does not approve or endorse labels. The use of wording such as "OSHA certified/approved/compliant" on an HCS label is prohibited.

k. For additional guidance, see OSHA Brief, Hazard Communication Standard: Labels and Pictograms.

2. Shipped Containers.

Manufacturers, importers, and distributors are required to ensure that each container of hazardous chemicals is appropriately labeled. Hazards not otherwise classified (HNOC) and hazards identified and classified under (d)(1)(ii) do not have to be addressed on the container (but shall be addressed in Section 2 of the SDS). Labeling requirements apply for shipped containers leaving the workplace regardless of whether the intended destination is interstate or intrastate. Shipped container labels must include:

a. Paragraph (f)(1)(i) - Product Identifier (this must correlate to the SDS).

b. Paragraph (f)(1)(ii) - Signal Word, i.e., Danger or Warning.

"Danger" and "Warning" are the only signal words allowed. The use of any other signal-type word is not in compliance with paragraph (f)(1)(ii). Only one signal word is allowed on the label, see Appendix C, C.2.1.1 of the standard.

c. Paragraph (f)(1)(iii) – Hazard Statement(s).

- If the chemical manufacturer or importer can document that all or part of the hazard statement is not appropriate then the manufacturer or importer may omit that portion or that statement. See Appendix C, C.2.2.2 of the standard.

- The manufacturer or importer may combine hazard statements to save space and improve readability so long as all the required hazard information is conveyed. See Appendix C, C.2.2.1 of the standard.

d. Paragraph (f)(1)(iv) - Pictogram(s).

- A list of the pictograms is in Appendix F of this Instruction.

- Pictograms on shipped containers must have a white background with a red border.

- The size of the pictogram must be “sufficiently wide to be clearly visible.” See Appendix C, C.2.3.1 of the standard.

- Labels may not contain blank diamonds (red borders with no symbol).

- Blacked out pictogram borders are compliant with the requirements of HCS 2024 as they are not a "square red frame set at a point without a hazard symbol." However, if a blank red frame is not fully covered or filled in, the label is not in compliance.

- The exclamation mark pictogram is permitted (but not required) for HNOCs as long as the words “Hazard Not Otherwise Classified” or the letters “HNOC” appear below the pictogram.

- A particular pictogram may only appear on a label once, even if multiple classifications use the same pictogram and the product’s classification would result in the same pictogram for multiple hazards. See Appendix C, C.2.3.4 of the standard.

    - For example, if a chemical is classified as a STOT Category 1 and the chemical is also toxic to reproduction, the health hazard pictogram shall appear only once.

- Where a product label was to have multiple, identical, HCS pictograms, a user might incorrectly assume that the product is more hazardous than another product that is labeled with one pictogram; therefore, multiple, identical, HCS pictograms are not in compliance with the HCS.

e. Paragraph (f)(1)(v) - Precautionary Statement.

- Precautionary statements are required to be written out. It is not adequate to reference the GHS precautionary statement number. The precautionary statements for each hazard category are listed in Appendix C of the standard.

- With a few exceptions, all precautionary statements must be included on the label (Note: The European CLP (classification, labelling and packaging regulation) allows no more than six precautionary statements).

  Several exceptions are listed below:

  - Precautionary statements may incorporate minor textual variations from the text prescribed in Appendix C if these variations assist in communicating safety information (e.g., spelling variations, synonyms or other equivalent terms) and the safety advice is not diluted or compromised. Any variations must be applied and used consistently on the label and in SDS. See Appendix C, C.2.4.7 of the standard.

  - Where a chemical is classified for a number of hazards, and the precautionary statements are similar, the most stringent must be included on the label. See Appendix C, C.2.4.8 of the standard.

  - In some cases, the precautionary statement is not appropriate for the hazard, and following the precautionary statement will result in an increased hazard (e.g., treating someone exposed to a water-reactive chemical by wrapping the area in wet bandages). If the labeler has omitted a precautionary statement on the grounds that it is not appropriate, the labeler must be able to provide adequate information supporting its claim. If the supporting claim is adequate, no citation shall be issued for the omission.

- Where a substance or mixture is classified for a number of health hazards, this may trigger multiple precautionary statements relating to medical response, *e.g.*, calling a poison center/doctor and getting medical advice/attention.

  In general, the following principles should be applied:

  - Where the classification of a substance or mixture triggers several different precautionary statements, a system of prioritization should be applied. Usually, the label needs only to include one precautionary statement reflecting the response at the highest level with the greatest urgency, which should always be combined with at least one route of exposure or symptom "IF" statement.

  - Routes of exposure, including "If exposed or concerned," may be combined when triggered with a medical response statement. If the response statement is triggered with three or more routes of exposure, "If exposed or concerned" may be used. However, relevant "If" statements describing symptoms must be included in full. If a route of exposure is triggered multiple times, it need only be included once.

  - This does not apply to "Get medical advice/attention if you feel unwell" or "Get immediate medical advice/attention" when they are combined with an "If" statement and must appear without prioritization. See Appendix C, C.2.4.10 of the standard

- In some cases, the precautionary statement for health hazards, "store locked up," may not be appropriate for a particular chemical. If the labeler can document that a chemical will never present the hazard during storage, but only during use or processing, this precautionary statement may be omitted.

- If a downstream user has a question about the presence or absence of a precautionary statement, the user should contact the manufacturer or importer or responsible party for further information.

- It is not acceptable for a manufacturer, importer or responsible party to omit a precautionary statement without data or based only on anecdotal evidence.

- The precautionary statements can be arranged by the manufacturer, importer or distributor to create an order of preference; however, all precautionary statements must be listed except as otherwise provided in Appendix C, C.2.4.5, C.2.4.6 and C.2.4.9 of the standard.

- Precautionary statements may be combined to save space and improve readability. See Appendix C, C.2.4.6 of the standard.

- In Appendix C of the standard, the precautionary statements are broken out into, "Prevention", "Response", "Storage" and "Disposal," and listed in four columns. All four types/columns listed are precautionary statements and all must be included on the label (with the exceptions listed above).

- In Appendix C of the standard three full stops symbol "…" on precautionary statements is to indicate that all applicable conditions are not listed, and the classifier is to fill in the appropriate information, e.g., the route of exposure.

- The backslash or diagonal symbol "/" is used in Appendix C of the standard to indicate that the classifier is to choose one of the precautionary statement options, e.g., "wear protective clothing/eye protection" could be either "wear protective clothing" or "wear eye protection" or "wear eye protection and protective clothing."

- The square bracket symbol "[ ]", in Appendix C of the standard, indicates a section of a precautionary statement that may not be appropriate for all situations and the classifier must choose whether it is appropriate.

f. Paragraph (f)(1)(vi) - Name, U.S. address and U.S. telephone number of the chemical manufacturer, importer, or other responsible party.

- The U.S. phone number listed must be reachable, and the person answering the phone must be able to respond to questions in English.

- The phone number does not have to be a 24-hour emergency number.

- The U.S. address must either be the mailing address (P.O. Box may be used) or the physical location of the company. A web address may not be used in place of a physical or mailing address but may be

included as supplemental information. The company name and address must be the same as that on the SDS.

g. Supplemental Information.

May be included on the label as long as it does not cast doubt or contradict the validity of the label information required by HCS 2024 or impede the user's ability to identify the information required by HCS 2024. Therefore, any information, such as the Hazardous Materials Identification System (HMIS) or NFPA, can be included as long as it does not cast doubt or contradict the validity of the label information.

3. Paragraph (f)(5) - Department of Transportation (DOT) Labeling:

a. Paragraph (c), defines pictogram as "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." The DOT requires diamond-shaped placards (labels) containing hazard symbols for the transport of chemicals. Therefore, because DOT labels contain symbols, they are considered pictograms under HCS 2024.

b. During transportation, the DOT label requirements take precedence over the requirements of HCS 2024, as indicated in (f)(5). Paragraph (f)(5)(iii), of the standard, states: "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 C.4 for the same hazard is not required on the label." This acknowledges that it is optional to include the HCS pictogram and the DOT regulations allow for GHS pictogram(s) to be on the shipped container.

- For example: If a chemical is shipped in its immediate container (e.g., a 55-gallon drum) it is required to have both DOT and HCS labels. In such scenario, where the chemical's classification requires pictograms under both DOT and OSHA requirements, the manufacturer or importer has two options:

- The manufacturer, importer, or distributor may choose to display only the DOT pictogram for the hazard on the label, or

- The manufacturer, importer, or distributor may choose to display both the DOT pictogram and the HCS pictogram for the hazard on the label.

- For hazards where DOT requires no pictograms (e.g., carcinogens), HCS pictograms must appear.

c. Bulk Shipment Labeling (i.e., tanker truck, rail car, or intermodal container).

- In situations where a tank truck, rail car, or intermodal container comprise the container for the hazardous chemical, the labeling information must either be on the immediate container, transmitted with the accompanying 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. 29 CFR 1910.1200(f)(5)(ii). See DOT/OSHA joint guidance and OSHA letter of interpretation to Ms. Sarah J. Sorenson (November 9, 2022).

  (Note the exemption in (f)(4)(i) for solid metals, plastic items, shipments of whole grain, and solid wood (i.e., untreated lumber)).

- If a manufacturer, importer, or distributor uses electronic transmission of product labels for bulk shipments, they must ensure the downstream user/recipient chooses to "opt-in" to accept the electronic transmission of product labels for bulk shipments into their hazard communication program. A downstream user/recipient may choose to "opt-out" of an electronic distribution system from a manufacturer, importer, or distributor at any time. If a downstream user/ recipient does opt out, the manufacturer, importer, or distributor must then ensure a product label on each bulk shipment is in accordance with 29 CFR § 1910.1200(f)(1) or provide a hard copy of the product label with shipping papers or bills of lading.

- If the tanker truck or railroad tank car is stored (wheels chocked and cab/engine disconnected from the tanker/rail car) prior to offloading, the requirements of HCS apply and the labels must comply with (f)(7). (OSHA is allowing this to be labeled as a stationary process container).

- If a tanker truck or railroad tank car that is labeled in accordance with the DOT labeling requirements arrives at a facility and is offloaded into a storage tank, without storage of the tanker truck or railroad car, the DOT labeling would be sufficient on the tanker truck or railroad car. However, the employer must then ensure the storage tank is labeled appropriately.

- If the tanker truck or railroad tank car becomes part of the process (e.g., hooked up to the piping system, used as a process container), it must be labeled in accordance with paragraph (f)(7). OSHA is allowing this to be labeled as a stationary process container.

- If the tanker truck or railroad tank car is used as a transport container in-house (e.g., internal railroad car system), (f)(7) does not apply and the container must be labeled in compliance with the workplace labeling rules in (f)(6)(i) or (ii), as the container is no longer stationary.

4. Paragraph (f)(6) - Workplace Labels (sometimes called secondary, internal or in-house labels

   a. Employers must update workplace labels by November 20, 2026 for substances and May 19, 2028 for mixtures when there are classification changes from the manufacturer, importer or distributor. Workplace labels must include:

      - Either the information in paragraph (f)(1)(i) through (f)(1)(v) as specified in (f)(6)(i); or,

      - Product identifier and words, pictures, symbols, or a combination thereof, providing general information on the hazards of the chemicals, and which, in conjunction, with 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, (f)(6)(ii). If symbols are used they must not contradict the pictograms, or use of the wrong symbol for a given hazard (e.g., using the symbol for oxidizers to signify carcinogens).

      - Employers using alternative labeling systems must ensure that their employees are aware of all information required to be conveyed under the HCS. OSHA will make a plant-specific determination of the effectiveness of the complete program when an inspection is conducted. Any employer who relies on one of these types of alternative labeling systems, instead of using labels containing complete health effects information will - in any enforcement action alleging the inadequacy of the labeling system - bear the burden of establishing that it has achieved a level of employee awareness which equals or exceeds that which would have been achieved if the

employer had used labels containing complete health effects information (59 FR 6156).

- The key to evaluating the effectiveness of any alternative labeling method is to determine whether employees can correlate the visual warning on the in-plant container with the applicable chemical and its appropriate hazard warnings. The alternative labeling system must also be readily accessible to all employees in their work area throughout each work shift. For purposes of this provision, the term "other information immediately available" does not include safety data sheets used in lieu of labels.

b. Pictograms.

- The workplace (i.e., in-house) label does not need to include the pictogram or a description of the pictogram.

- If a pictogram is used, it can be used with a black border. This is acceptable ONLY for in-house labels.

c. Precautionary statements and hazard statements may be used on the in-house labels but are not required.

d. Rating Systems.

- The NFPA or HMIS rating systems do not directly correlate with the HCS classifications (e.g., the NFPA rating of 1 ("low") does not correlate with HCS classification of 1 ("high")) (See OSHA Quick Card Comparison of NFPA 704 Labels and HazCom 2024 Labels). However, the HMIS or NFPA system may be used as part of an employer's workplace labeling system, if used in accordance with the NFPA and HMIS guidelines and as long as it does not cast doubt or contradict the validity of the label information. Employers must ensure that their training program instructs employees on how to use and understand the alternative labeling systems so that employees are aware of the effects of the hazardous chemicals to which they are potentially exposed. CSHOs should determine whether workers can recognize what hazards correspond to what code ratings/symbols. This can be achieved through employee interviews.

- Workplace labels must include the product identifier and general information regarding all of the hazards of the chemical(s) even when using the NFPA or HMIS system. In some cases, all hazards are not

addressed by a particular rating system (e.g., chronic health hazards), and therefore, hazards not addressed must be communicated by words, pictures, symbols, or a combination thereof in addition to the NFPA or HMIS rating system. If any of the required label information is missing, it is not compliant with the standard.

e. If a material received was shipped under the (f)(4) solid materials special label transmission rules, the workplace labeling requirements in (f)(6) would begin only once the chemical is brought into the work area where it will be processed in a way to create a hazardous condition, e.g., combustible dust.

- If the chemical will first be placed in a stationary process container (e.g., grinder) where it will be processed in a way that creates a combustible dust hazard, the downstream user would be required to label the stationary process container with the Section 1910.1200(f)(6) label, or may comply with the alternative labeling methods provided by Section 1910.1200(f)(7), and need not label the shipping container.

- If the chemical will first be placed in a non-stationary process container where it will be processed in a way that creates a combustible dust hazard, the downstream user would be required to label the non-stationary process container with the Section 1910.1200(f)(6) label, but not the shipping container.

f. The workplace labeling requirements in (f)(6) apply only to chemicals that are in containers. Therefore, items which may be hazardous but are not in containers do not need to have workplace labeling. Some of these products may be received under the (f)(4) solid materials labeling exemption.

- Individual boards or pipes that might create a combustible dust hazard when cut do not need to be labeled under (f)(6).

- The employer has other responsibilities under HCS 2024 for products not requiring workplace labels, including training, maintaining SDSs, and providing SDSs to employees.

5. Stationary Process Containers.

a. Employers may use, for example, signs, placards, process sheets, batch tickets or operating procedures instead of affixing labels to individual

stationary process container. The alternative method must identify the container(s) to which it is applicable and convey the information required by paragraph (f)(6).

b. The employer must ensure that the written material (e.g., batch sheets) is readily available to each employee in the work area during their work shift.

6. Paragraph (f)(11) - Label Updates.

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.

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.

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.

7. Paragraph (f)(12) – Small Container Labeling (e.g., small vial, bottle, tube).

a. Paragraph (f)(12)(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. OSHA will evaluate, on a case-by-case basis, the infeasibility to provide the full label information when labeling smaller containers. This evaluation will be to determine compliance of a specific container and not as an approval of a specific labeling system. OSHA does not consider an increase in cost for the use of tags, fold-back labels, or pull-out labels an acceptable reason not to provide the full label information required by (f)(1).

b. Paragraph (f)(12)(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:

- Product identifier;
- Pictogram(s);
- Signal word;
- Chemical manufacturer's name and phone number; and
- A statement that the full label information for the hazardous chemical is provided on the immediate outer package.

c. Paragraph (f)(12)(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 label is required, but the container must bear, at a minimum, the product identifier.

d. Paragraph (f)(12)(iv) - For all small containers covered by paragraph (f)(12)(ii) or (iii) of this section, the immediate outer package must include:

- The full label information required by paragraph (f)(1) of this section for each hazardous chemical in the immediate outer package. The label must not be removed or defaced, as required by paragraph (f)(9) of this section.

- A statement that the small container(s) inside must be stored in the immediate outer package bearing the complete label when not in use.

The immediate outer package, at a minimum, must comply with the following:

- All the applicable label elements, as defined in (f)(1).

- The immediate outer package described above is the first package (e.g., bag, box) enclosing the small container of the hazardous chemical; it does not refer to the exterior shipping container.

- This outer package must be clearly marked to ensure the complete label elements are visible, and it must clearly inform users that the small container must be stored in the outer container bearing the

complete label. The complete label must be maintained on the outer package (e.g., not torn, defaced, destroyed).

- The manufacturer must ensure that the requirement to store the chemicals in its outer packaging will not result in a conflict with another standard. For instance, under 1926 Subpart F, combustible material may not be stored in a flammable locker.

8. Special Labeling.

   a. Combustible Dust labeling.

      - If the hazardous chemical, in the container, in its shipped form, is a combustible dust (e.g., flour, aluminum powder, carbon black), then it must be labeled in accordance with the standard.

      - Under Appendix C, C.4.31, footnote 2, if a material is a solid or a liquid when shipped and the only HCS 2024 hazard is combustible dust when the material is processed in a downstream workplace, then the manufacturer or importer may comply with the labeling rules of (f)(4). See further discussion of (f)(4) below under labeling of solid materials.

   b. Consumer Product Safety Commission (CPSC) labeling:

      - Hazardous chemicals that are "consumer products" under the Consumer Product Safety Act or a "hazardous substance" under the Federal Hazardous Substances Act and subject to the labeling requirements of those laws are exempt from HCS labeling under paragraph (b)(5)(v).

      - CPSC labels often do not contain all the hazard information relevant to worker exposure, therefore a product containing both the CPSC label information and the HCS 2024 hazard information must be labeled so as to avoid contradicting or casting doubt on the hazard(s) of the chemical to workers who may use it. HCS label information may also be present as long as the HCS information does not cast doubt or cause confusion.

      - See X.C.7. of this Instruction for a definition of Consumer Products.

   c. Food and Drug Administration (FDA) labeling:

CSHOs finding unlabeled designated medical gas cylinders should refer this issue to the FDA.

d. Kits.

- Some items are sold as individual components within a kit (e.g., a fiberglass repair kit contains multiple items: fiberglass resin and liquid hardener).

- Each individual container of hazardous chemicals in a kit must have its own SDS and each chemical must be labeled on the container according to the requirements of (f)(1).

e. Solid Materials.

- For solid metal, solid wood, and plastic items that are not exempted as articles, whole grain, and in the circumstances noted in the second part of footnote 2 to Appendix C, C.4.31, the requirements of the HCS apply.

- For each shipment of these materials there is a limited labeling exemption under (f)(4). A label can be provided prior to or with the first shipment. The label does not need to be transmitted for subsequent shipments. If the information on the label changes, the first shipment following the change must include an updated label.

- Materials which may create a combustible dust when processed may use the (f)(4) limited labeling exemption. See March 4, 2014 letter of interpretation to the American Petroleum Institute (API).

f. Portable Containers

Portable containers do not need to be labeled if the hazardous chemicals were transferred from a labeled container, and which are intended only for the immediate use of the employee who performs the transfer.

9. Inspection Guidelines for Labeling.

a. CSHOs must determine that containers are labeled with the appropriate information, that the labels are legible, and that the labels are prominently displayed.

b. Labels must be in English but may also be printed in other languages.

c. The CSHO must determine whether the product identifier can be cross-referenced with the SDS and to the inventory list of hazardous chemicals.

d. CSHOs must evaluate the effectiveness of workplace (in-house) labeling systems. This includes review of training, SDS procedures, and employee interviews (to determine their knowledge of chemical hazards in the workplace). An effective labeling system is one that ensures that employees are aware of the hazardous effects of the chemicals to which they are potentially exposed.

e. Based on the requirements of (f)(1) and the definition of container, the label must be attached to the immediate container of the hazardous chemical (labeling for small containers and kits are discussed above).

f. CSHOs must evaluate alternative labeling provisions for containers which are difficult to label (e.g., small, odd shape) and the employer can show that it is not feasible to comply with the requirements of (f)(1) using pull-out labels, fold-back labels, or tags. The requirements for labeling small containers (paragraph (f)(12) of the standard) may be found in Section X.F.7. of this Instruction.

g. Guidelines for referrals regarding inadequate labels are dealt with in Appendix G of this Instruction.

10. Citation Guidelines for Labeling.

Citations shall generally be issued as serious unless otherwise noted.

a. Chemical manufacturers, importers, and distributors shall be cited for the specific subsection(s) of paragraph (f)(1) for missing required sections of container labels.

- Downstream users shall not be cited for deficiencies in manufacturers', importers', or distributors' labeling.

- If deficiencies are noted on a manufacturer's or importer's label during an inspection, the CSHO should make a referral to the Area Office that has jurisdiction over the manufacturer's location. See Appendix G of this Instruction for a discussion of referral procedures and a sample letter to be sent to manufacturer(s) or importer(s).

b. If the company name is different on the SDS and the label, the citation shall be issued to the company who most recently put their name on the label or SDS. For example, if the company is repackaging a material and putting their name on the label but not on the SDS, the citation would be against the repackager and not the company on the SDS. In this instance, all citations related to the SDS and label would be issued to the repackager.

c. A citation for labeling under (f)(1)(iv), referencing Appendix C, paragraph C.2.3.4., may be issued to the manufacturer or importer if the same pictogram is repeated multiple times.

d. The employer may be cited for paragraph (f)(6)(ii) if workplace (in-house) containers of chemicals are not labeled or if the container is missing information such as the product identifier or hazard description. If the employer chooses to comply with the workplace labeling requirements by using the information from (f)(1)(i) through (f)(1)(v), but does not include all the information or incorrectly includes the information from the shipped containers, the employer may be issued citations under paragraph (f)(6)(i).

e. If the employer is labeling portable containers under the stationary process container labeling requirements, citations shall be issued under (f)(6)(ii).

f. If stationary process containers cannot be identified by the alternative method or are not labeled; if the alternative method does not convey the information required by (f)(6) to be on the label; and/or the stationary process containers are identified but the written material is not readily accessible to employees, (f)(7) shall be cited.

g. The removal or defacing (e.g., partial covering of the label by paint) of incoming labels (shipped container labels) shall be cited under paragraph (f)(9). However, if the container is immediately marked with the required information, (f)(9) may not be cited.

h. The employer shall be cited for paragraph (f)(10) if the in-house labeling is not legible (e.g., font size too small), written only in a language other than English, or not prominently displayed on the container/readily available in the work area.

i. When a CSHO is inspecting a manufacturer, importer or a distributor who has become the responsible party and discovers the labels were not

updated within six months of becoming aware of new information, a citation shall be issued for (f)(11)(i). A distributor becomes responsible if it has altered the manufacturer's or importer's SDS or label. If the CSHO is inspecting an employer and the workplace labels have not been updated within six months of the employer becoming aware of new information (e.g., new information on the shipped container label), a citation shall be issued for (f)(11)(i). Manufacturers, importers, distributors, or employers may choose not to relabel chemicals that have been released for shipment and are awaiting future distribution. If they do not relabel the containers, they must provide the updated label for each individual container with each shipment. If the updated label was not provided with each shipment, a citation for (f)(11)(i) should normally be issued.

G. Safety Data Sheets (SDSs), Paragraph (g).

1. General Requirements.

a. Chemical manufacturers, importers, and distributors must update SDSs for substances in accordance with the HCS 2024 by May 19, 2026, and November 19, 2027, for mixtures.

b. Where a manufacturer, importer, or distributor has asserted that it was unable to comply with the compliance date due to circumstances beyond their control, the CSHO must determine if the manufacturer, importer, or distributor has exercised reasonable diligence and good faith efforts to comply with the terms of the standard. The CSHO must review its overall efforts and action(s) taken to comply with HCS 2024. Upon request from a CSHO, a manufacturer, importer, or distributor must provide documentation of any and all efforts to:

- Obtain classification information and SDSs from upstream suppliers;
- Find hazard information from alternative sources (e.g., chemical registries); and,
- Classify the data themselves.

c. Manufacturers and importers must update their SDSs to an HCS 2024-compliant SDS within three months from the date it has or receives all of the hazard information for the ingredient(s). The manufacturer or importer must provide the HCS 2024-compliant SDS downstream with the next shipment of the chemical and when requested by a distributor or employer. The chemical manufacturer or importer must not wait to

create all of its SDSs all at once. Where a chemical manufacturer or importer has not developed an HCS 2024-compliant SDS within three months of receiving the necessary hazard information, a citation for a violation of 1910.1200(g)(5) shall be considered. Related violations of 1910.1200(d)(1), (d)(2), and (d)(3)(i) may also be considered.

d. The standard requires chemical manufacturers and importers to develop or obtain an SDS for each hazardous chemical they produce or import that includes the sections and headings, and associated information under each heading in the order listed as found in Appendix D of the standard.

e. The SDS must be provided and maintained in English. However, the SDS may be translated into other languages that workers speak as well to aid in comprehension and training.

f. The SDS may not indicate that OSHA approved the classification, as OSHA does not approve SDSs or classifications.

g. OSHA has never maintained a national repository of SDSs. Each employer is required to maintain SDSs for each hazardous chemical they receive. Manufacturers and importers shall ensure that distributors and employers are provided an appropriate SDS with their initial shipment, and with the first shipment after an SDS is updated.

h. The requirement to provide SDSs does not change due to label exemptions or special labeling circumstances (e.g., solid materials).

i. Manufacturers, importers, and distributors must supply the SDSs at no cost.

j. If inadequate SDSs are found during inspections, referrals to other Area Offices will be carried out as outlined in Appendix G of this Instruction.

k. Updating SDSs.

Chemical manufacturers or importers that become aware of significant new information must update their SDS within three months, (g)(5).

l. Products/chemicals requiring an SDS.

- SDSs must be obtained or developed for each hazardous chemical manufactured or imported.

- This includes developing SDSs for newly synthesized and/or uncharacterized chemicals. All the information that is known for these newly synthesized/uncharacterized chemicals must be provided on the SDS. This SDS must be provided when the chemical is shipped, even if the receiving party is the laboratory that is doing the characterization of the material.

- If a solid material, not in dust form, has the potential to become a combustible dust in normal conditions of use or foreseeable emergencies, this hazard must be listed on the SDS.

- SDS requirements apply to free samples provided by chemical manufacturers and importers since the hazards remain regardless of the cost to the employer.

m. SDSs must be specific to the product (except as outlined below for generic mixtures) and manufacturer.

    - An individual SDS is required for the final product.

        - Multiple SDSs from the individual components of a mixture may NOT be substituted for a single SDS that describes the hazards of the product or material.

        - The SDS must identify the hazards of the final product/material, e.g., the flash point listed must be for the product; it is not acceptable to list the flash points for the individual components.

    - Generic mixture SDSs.

        - A manufacturer, importer, or distributor may create one SDS to cover two or more mixtures that are composed of essentially the same ingredients, have similar hazards, but the specific composition varies from mixture to mixture (e.g., there may be a range but all products are Skin Category 1), (g)(4). A single SDS may also be created when there is a batch-to-batch variability in the production of a mixture.

        - Where a single SDS is used for similar mixtures or in cases of a batch-to-batch variability, concentration ranges of ingredients may be used.

- For example, a group of products in a product line (such as paint) may be comprised of a base material and several additional ingredients (such as pigments) that vary from product to product.

  - If these additional ingredients have similar hazards that fall within the same cut-off values/concentration limits as that of the base material and do not react, one SDS listing the different possible combinations of hazardous ingredients may be used for the entire line even though the quantities and number of pigments may vary from product to product.

  - If the ingredients being added have different hazards (e.g., one pigment is a carcinogen and the rest are not), the manufacturer or importer must use separate SDSs for the products with these additional hazards.

n. Responsibility for the SDS

- Any party who changes the SDS (for example, changing the name or identity of the chemical) becomes responsible for the SDS under (g) regardless of whether it is a chemical manufacturer, importer, distributor or employer.

- OSHA only has jurisdiction over transactions which affect commerce within the United States. When chemicals are imported into the United States, the person (meaning one or more individuals, partnerships, associations, corporations, business trusts, legal representatives, or any organized group of persons) who imported the product automatically becomes a responsible party. The importer must include its name and U.S. address on the SDS and label. Preferably the original foreign manufacturer's name and address are removed to prevent confusion. The importer is responsible for the information and for providing any updates to the labels and SDSs.

- When a foreign chemical manufacturer has a U.S. location and employees in the U.S., nothing precludes the manufacturer from using the U.S. location's address and phone number on the SDS and label as a responsible party. When a foreign chemical manufacturer does not have a U.S.-based location to become a responsible party and there is no other responsible party, the importer is the first point of contact within this country and is therefore a responsible party for complying with the HCS.

- An employer who brings hazardous chemicals into the country for use in their own workplace, becomes an importer and is, therefore, a responsible party. An importer assumes the responsibility to ensure it is compliant with OSHA's HCS, which includes obtaining an SDS and adding their U.S. address and telephone number to the SDS or conducting a hazard classification of the chemical and producing the SDS in addition to ensuring appropriate labeling, and all other applicable provisions of the standard. When the importer is not distributing the chemical for further use downstream, it must comply with the workplace labeling requirements of paragraph (f)(6).

- CSHOs should consult their Regional HCS Coordinator for help determining responsibility for SDSs and labels when it is unclear.

o. Named party on the SDS

- The named party on the SDS must be the same as the named party for the label. If there is a different company name on the SDS versus the label, the company that changed the name is responsible for both.

- If the employer is maintaining one SDS for a particular chemical but uses that same chemical from a different manufacturer or importer without obtaining/maintaining the SDS from the new manufacturer or importer, the employer is not compliant.

- If the SDS received from the manufacturer, importer or distributor has a different responsible party name than that on the product label, the employer must make a documented good faith effort to receive the appropriate SDS or they are not compliant.

- If a CSHO encounters a situation where the manufacturer, importer or distributor is providing SDSs that list a different responsible party than that on the label, referral procedures outlined in Appendix G of this Instruction must be followed.

- The company that has made the alteration (e.g., adding its name to the label but not to the SDS) is the company which violated the standard.

p. SDS Content.

- SDSs must be in the format outlined in (g)(2) of the standard and contain at the minimum the information outlined in Appendix D of the standard.

- All information needs to be filled in. If the company preparing the SDS does not have relevant information for any sub-heading within a section it must be marked "not applicable (N/A)" or "none" to indicate that no information was found, (g)(3).

- The information supplied on the SDS must be accurate. The company preparing the SDS must accurately report their classifications which must be based on valid scientific data.

- The named party is accountable for the content of the SDS. If the named party has information concerning the chemical (e.g., flash point), they are required to disclose that information on the SDS.

- If the company has information that is not required by Appendix D of the standard to be disclosed, but it would provide pertinent communication about the safe use of the product (e.g., a chemical that can dissolve rubber), OSHA recommends this type of information be in Section 16, Other Information, of the SDS.

q. Transmission of SDSs.

- The CSHO must ensure compliance with the SDS transmission provisions of the standard by reviewing the chemical manufacturer's, importer's, or distributor's program for transmitting the SDSs (including updated SDSs) to downstream users.

- The SDS must be transmitted with the first shipment of the chemical to each downstream location that receives the material; shipping the SDS to only one facility when the downstream customer has had the chemical delivered to multiple facilities is not in compliance.

- Area Offices should expect to receive requests from employers to assist them in obtaining SDSs or labels in situations when an inspection has not been conducted. If the Area Director determines that the employer has tried to obtain the information, and has not been able to do so, a letter and/or telephone call from the Area Office to the supplier or manufacturer is the appropriate action in this situation. If a letter and/or telephone call from the Area Office do not

resolve the issue, an inspection may be warranted of the manufacturer or distributor. See Appendix G of the Instruction for referral procedures.

- If the manufacturer, importer, or distributor chooses to transmit SDSs electronically they must:

    - Ensure that the receiving employer has agreed to receive the SDS electronically. This is an "opt-in" system, the employer must agree to the use of electronic distribution; the manufacturer, importer or distributor cannot force an employer to accept electronic distribution of SDSs.

    - Ensure that the employer has all the information necessary to access the SDS (e.g., site address, passwords); the manufacturer must be able to verify that the employer has access and receives the SDS.

    - Ensure that the employer is notified when the SDS is updated; a system needs to be in place to verify that the employer is notified.

    - The manufacturer, distributor, or importer cannot require the employer to purchase new technology in order to access the SDS. Nor can they require the employer to buy the media (e.g., CD, flash drive) containing the SDS. SDSs must be provided at no cost to the employer.

    - The employer may choose to "opt-out" of an electronic distribution system at any time. Subsequently, the manufacturer, importer or distributor must provide by non-electronic means or a hard copy of the SDS with the next shipment after the "opt-out" and whenever the SDS is updated.

    - The use of electronic distribution does not eliminate the manufacturer's, or importer's obligation under (g)(6)(iv) to provide a hardcopy of the SDS upon request by the distributor or employer.

2. Requirements for Manufacturers and Importers.

    a. Manufacturers or importers who choose to purchase SDSs for their products or obtain data from sources such as, but not limited to, internet

providers or information from other SDSs retain responsibility for the downstream flow of information and for assuring SDS accuracy.

b. Manufacturers, importers and distributors are required to provide SDSs to each employer that use a hazardous chemical (retail establishments must provide SDSs to employers with commercial accounts, upon request).

c. Manufacturers and importers are required to provide SDSs to distributors and employers upon request.

d. The standard requires SDSs only for hazardous chemicals. The HCS does not require manufacturers, or importers to supply SDSs for non-hazardous chemicals.

3. Requirements for Distributors.

a. Distributors who in good faith choose to rely upon the SDSs provided to them by the manufacturer or importer assume no responsibility for the content and accuracy of the SDS, unless the distributor changes the SDS.

b. Distributors that only add their name to an SDS, without removing the manufacturer's or importer's name and contact number, and makes no other changes to the information on the SDS, is not responsible for any information on the SDS.

c. Distributors who substitute their names on the SDS in place of the manufacturer's or importer's information become responsible for the accuracy and completeness of the SDS.

d. The company name on the label and on the SDS must be the same. If the distributor removes the manufacturer's name from the label but leaves it on the SDS, they are not in compliance with the standard.

e. When a distributor has not received an SDS, the CSHO will recommend that the distributor contact the chemical manufacturer or importer of the chemical and request an SDS. If the distributor fails to receive the SDS within a reasonable period of time, e.g., five working days, the Area Director shall follow the referral procedures in Appendix G of this Instruction.

4. Requirements for Employers.

a. If an employer has made a good faith effort to contact the manufacturer, importer or distributor because they have not received the SDS and still has not been able to receive an SDS, the Area Office may be contacted to provide assistance. A letter and/or telephone call from the Area Office to the manufacturer, importer or distributor is the appropriate action in this situation. See Appendix G of this Instruction. If the letter and/or telephone call do not resolve the issue, an inspection may be warranted of the manufacturer, importer, or distributor. See Appendix G of this Instruction for referral procedures.

b. Maintenance of SDSs

- Employers assume no responsibility for the content and accuracy of the SDS provided to them by the manufacturer, importer or distributor, unless the employer changes the SDS.

- Employers are required to maintain SDSs for each hazardous chemical they use. The HCS does not specify how the SDS is to be maintained (e.g., paper, electronic), as long as employees have immediate access to the SDS in their work area. (Note: Older versions of SDSs (or MSDSs) may still need to be maintained as an employee exposure record under OSHA's Access to employee exposure and medical records standard, 29 CFR 1910.1020).

- If an SDS is provided for a non-hazardous material, the receiving party is not required under HCS to maintain that SDS.

- Employers must maintain the most recent received version of the SDS. When an HCS 2024-compliant SDS is received, it must replace the HCS 2012-compliant SDS for the corresponding hazardous chemical.

- Different manufacturers, importers and distributors may issue SDSs at different times. An employer that is maintaining an MSDS or HCS 2012-compliant SDS for a product not recently received, even after May 19, 2028, would be considered to be compliant with HCS 2024, unless the manufacturer, importer or distributor has provided an SDS and the employer did not maintain the new SDS.

- Maintenance of SDSs in electronic format.

    - The employer must not require employees to perform an Internet search to view/obtain the SDS. The employer may make SDSs

available to employees on a company website or contract with an off-site/web-based SDS service provider.

- If the employer is maintaining the SDSs on a company web-site or with an off-site/web-based SDS service provider that faxes them, they must ensure that:

  - All employees have adequate computer or facsimile access, with no restrictions;

  - There is a backup procedure or system (e.g., paper, another electronic system) in place in case the computer or fax is not functioning;

  - The employees must be trained on how to access the SDSs (both on the computer and the backup procedure or system), and;

  - There is a procedure or system in place to ensure that employees can receive a hard copy if so desired and in cases of emergency (which must be transmitted to medical personnel). It is not acceptable to only transmit the information verbally.

- Employees must have unrestricted access to SDSs. This means the employer cannot require workers to ask for the SDS (e.g., stored in a locked office).

- There is no requirement to translate SDSs (e.g., into a foreign language, braille). However, it is recommended that the employer ensure that information from the SDS is available to employees in a manner they would understand easily in case of emergency.

- Employers may be cited if CSHO interviews reveal that workers do not have an understanding of the chemical hazards they work with or are in their work area.

- Mobile Worksite Access.

  - SDSs may be stored at a primary workplace instead of a mobile, remote, or temporary worksite (e.g., construction worksite), as long as there are no restrictions to workers' access.

- If the SDSs are stored at the primary workplace, the employer must ensure there is no delay in a worker receiving a requested SDS while at any mobile, remote, or temporary worksite.

- Access may be accomplished by having a representative always available at the primary workplace or through other technological means (e.g., email, smart phone, electronic tablet).

  - The employer must address in their written hazard communication program how SDS information will be conveyed to remote worksites.

- If the manufacturer has gone out of business, the employer's responsibility is to maintain the SDS (or MSDS) for that product and not to create a new SDS.

- The HCS 2024 does not require employers to contact manufacturers, importers or distributors to obtain new SDSs of products for which they currently have SDSs.

- Employers may contact manufacturers, importers or distributors of products they have previously ordered from to request new SDSs, and if they do so, the manufacturer or importer must provide the SDS under section 1910.1200(g)(6)(iv).

5. Requirements of Specific Sections of the SDS.

   Specific issues that have arisen concerning sections of the SDSs are outlined here. Appendix H of this Instruction provides CSHO guidance when reviewing an SDS for completeness.

   a. Section 1 - Identification.

      - The SDS requires the inclusion of *U.S. contact information for the manufacturer* in addition to emergency contact numbers. There is no requirement for the emergency number to be staffed 24 hours per day if the SDS specifies the restrictions on the contact hours. The emergency contact number can be for a company contracted to provide information in the case of an emergency.

- There must be someone available at the emergency phone number who is able to provide more information concerning the product.

b. Section 2 – Hazard(s) identification.

- The classification must include the hazard class and the category (e.g., Flammable Liquid, Category 1). See Section X.G.1.r for required SDS content when there is no relevant information available.

- This includes any change in the chemical's physical form per paragraph (d)(1)(i).

- Chemical reaction products associated with known or reasonably anticipated uses or applications (see paragraph (d)(1)(ii)) must be identified.

- The information required by paragraph (d)(1)(ii) shall be included in Section 2 of the SDS but need not appear on the label. If a component may be released to create airborne concentrations above an OSHA PEL or an ACGIH TLV®, the chemical is considered a health hazard and must be included in the classification.

- Hazard not otherwise classified (HNOC)

    - HNOC must be listed in section 2 of the SDS. As HNOCs are identified through the 1910.1200(d) hazard classification process, it is permissible to include information on HNOCs under subheading (a).

    - The exclamation mark pictogram is permitted (but not required) for HNOCs as long as the words "Hazard Not Otherwise Classified" or the letters "HNOC" appear below the pictogram.

- Precautionary statements are not required for combustible dust hazards and, therefore, none are required in section 2 of the SDS if combustible dust is the only hazard listed.

- Pictograms/symbols

    - Appendix D of the HCS, section 2, states, "Hazard symbols may be provided as graphical reproductions in black and white or the name of the symbol, e.g., flame, skull and crossbones." The

hazard symbol is the symbol inside the frame of the pictogram. Therefore, just the symbol can be used or the name of the symbol can be used.

- If the pictogram is used, it may be printed in black and white.

- If additional information is added to the required hazard statements or precautionary statements on the label, it is consistent to include that language on the SDS.

- Responsible parties may add their own precautionary statements to section 2 of the SDS so long as they are relevant and do not contradict or cast doubt on the validity of the other information in the SDS.

- Responsible parties may include rating systems (e.g., HMIS, NFPA) in section 2 of the SDS as long as they do not contradict or cast doubt on the HCS 2012 classification.

c. Section 3 – Composition/information on ingredients.

Section 3 must include the CAS number or other unique identifiers. When CAS number is not available or claimed as a trade secret, the preparer must indicate the source of unique identifier. The "source" would depend on what kind of alternative unique identifier is chosen. Regardless, the combination of the unique identifier and the source information must provide the SDS recipient sufficient information so that they can learn the identity of the ingredient in question in situations where the HCS requires access to that information. For example, if the manufacturer's internal product number is used as a unique identifier, the SDS preparer must indicate that the unique identifier provided in Section 3 is the manufacturer's internal product number by placing the source information adjacent to the unique identifier in Section 3. For example, the SDS could say "Company XYZ Product Number: 12345."

d. Section 8 – Exposure controls/personal protection.

- The requirement to include PELs and TLVs® in section 8 of the SDS applies to any constituent or ingredient (including additives and impurities) that is present in the mixture or substance above its cut-off value, or if it is below the cut-off value but still contributes to the hazard classification of the mixture.

- The list of constituents in sections 3 and 8 must be the same.

- If a constituent does not have a PEL or TLV®, its exposure limit must be listed as "not applicable (N/A)" or "none." If the manufacturer, importer, or distributor chooses to list another recommended occupational exposure limit, for example, NIOSH Recommended Exposure Limit (REL), the correct limit must be used or it must say "not applicable (N/A)" or "none."

- It is permissible to state, "The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits."

e. Section 9 – Physical and chemical properties.

- All the items listed in Section 9 of Appendix D must be present on the SDS. If an item(s) is not applicable then it must be marked with "not applicable (N/A)," or "none."

- If the item is listed in another section (e.g., flash point also listed in section 5) it must still be listed in section 9.

- Other physical and chemical properties may also be listed in addition to listed items.

f. Sections 12-15 – Ecological Information; Disposal considerations; and Transport information.

OSHA is not requiring these sections to be filled out; however, the section headings must be present.

g. Section 16 – Other information, including date of preparation or last revision.

This section is officially titled, "Other information, including date of preparation or last revision." It is acceptable to shorten the title to "Other information" as long as the date of preparation or last revision is listed.

6. Inspection Procedures.

a. When inspecting manufacturers, importers or employers, CSHOs must evaluate the compliance status of this provision by examining a sample of

SDSs to determine that the SDSs have been obtained or developed in accordance with HCS 2024.

b. For manufacturers and importers, the following items must be considered when reviewing SDSs:

- Providing SDSs of the individual components of a mixture is not in compliance with the standard. Manufacturers or importers must provide a single SDS for a mixture.

- Does each SDS contain information which adequately addresses at least the elements required by the standard at (g)(2)(i)-(xvi)? Are the sections of the SDS corresponding with paragraphs (g)(2)(i) through (g)(2)(xi) and (g)(2)(xvi) of the standard accurately completed?

- If no relevant information is available, the manufacturer, importer or employer must state that "no applicable information was found."

- The section numbers and headings required by paragraphs (g)(2)(xii) – (g)(2)(xv) must be present. However, OSHA is not enforcing the content of these SDS sections.

- Appendix H of this Instruction contains an outline of the required SDS sections and provides additional guidance about the information that needs to be included in these sections.

- In the event that there are any questions concerning the accuracy or completeness of the product's chemical ingredients listed in SDS section 3, "Composition/information on ingredients," the CSHO may contact the OTC for assistance in determining the proper way to collect a bulk sample of the product in question for chemical analysis.

c. For employers, the following items must be considered when reviewing SDSs:

- Do employers have an SDS for each hazardous chemical in their workplace?

  CSHOs should review a representative number of SDSs against the company's inventory list.

- Is the SDS current? – Employers must maintain the most current version of the SDS provided by the manufacturer, importer or distributor. For purposes of HCS 2024, it is not compliant to only maintain a version previously received if the employer has ordered the chemical after the date the manufacturer has updated the SDS. If the employer has not ordered the product after June 1, 2015 (for HCS 2012) or after January 19, 2028 (for HCS 2024), and is maintaining an HCS 1994-compliant MSDS or HCS 2012-compliant SDS that was current at the time that the last shipment of the product was received, it is in compliance with the requirements of the standard. The HCS 2024 does not require employers to contact manufacturers, importers or distributors to obtain new SDSs of products for which they currently have SDSs.

  (Note: Older versions of SDSs (or MSDSs) may still need to be maintained as an employee exposure record under OSHA's *Access to employee exposure and medical records* standard, 29 CFR 1910.1020).

- The CSHO shall ensure compliance with the SDS transmission provisions of the standard by reviewing the chemical manufacturer's, importer's, or distributor's program for transmitting the SDSs (including updated SDSs) to downstream customers.

7. Citation Guidelines.

   a. Citations shall generally be issued as serious, unless otherwise stated.

   b. Citations to manufacturers or importers for incomplete or inaccurate SDSs shall include an abatement requirement for the transmittal of corrected SDSs to all customers with the next shipment of the chemical. Citations shall not be issued to the employer for errors or deficiencies on the SDS when they are not responsible for the contents of the SDS.

   c. CSHOs shall cite (g)(1) whenever an inspection reveals that an employer does not have an SDS, unless the employer can establish that a good faith effort has been made to obtain the SDS (e.g., documented phone calls, email, letters) from the manufacturer, importer or distributor.

   d. If the complete manufacturer, importer or distributor contact information is located directly above section 1 of the SDS, it is a de minimis violation and a citation should not be issued.

e. If a manufacturer or importer provides an SDS that does not contain the headings of sections 12-15, citations shall be issued under (g)(2)(xii) through (g)(2)(xv). NOTE: The headings are required to be present, but OSHA is not requiring information to be in these sections as this information is not within OSHA's jurisdiction. Citations in this situation shall generally be issued as other-than serious; if appropriate they should be grouped.

f. If the manufacturer or importer has not provided the SDS at the time of initial shipment, a citation shall be issued under (g)(6)(i).

g. If the manufacturer or importer did not provide the SDS upon request, a citation shall be issued under (g)(6)(iv).

h. If the distributor did not provide the SDS with the initial shipment, a citation shall be issued under (g)(7)(i).

i. If the retail distributor did not provide the SDS upon request, a citation shall be issued under (g)(7)(iii).

j. If the wholesale distributor did not provide the SDS upon request, a citation shall be issued under (g)(7)(vi).

k. If an employer possesses an SDS but it is not readily accessible to employees while in their work area, a citation shall be issued under (g)(8).

   Violations of (g)(8) shall also be cited when an employer using electronic access as an integral part of the hazard communication program does not have an adequate backup system to address emergency situations.

l. On multi-employer worksites, citations for violations of (g)(8) of the standard shall be issued to the employer responsible for making the SDS(s) readily accessible, as discussed below.

   - For example, if an employer on a multi-employer worksite brings hazardous chemicals onto that site and fails to inform other employers about the presence of those chemicals and/or the availability of the SDS(s), that employer shall be cited for violation of (g)(8) grouped with (e)(2)(i).

   - If the employer uses a general contractor or other employer as an intermediary for storage of the SDS(s), and that intermediate employer has agreed to hold and provide ready access to the SDS(s),

then the intermediate employer becomes the controlling employer, and is responsible for ensuring the availability of the SDS(s).

- If the SDS(s) are not available because the subcontractor or immediate employer failed to make them readily accessible, then the subcontractor shall be cited for violation of (g)(8).

H. Employee Information and Training, Paragraph (h).

1. Training Requirements.

a. The standard requires the employer train employees on hazardous chemicals in their work area. Employers must update their HCS training programs as necessary to be HCS 2024-compliant for substances by November 20, 2026, and May 19, 2028, for mixtures.

b. Training is required to be provided at no cost to the employees. Employees must be paid for the time they spend in training.

c. The employer is responsible for ensuring that employees are adequately trained, regardless of the method (e.g., contractor-provided training) relied upon to comply with the training requirements.

- The training provisions of the HCS are not satisfied solely by giving employees safety data sheets to read. An employer's training program is to be a forum for explaining to employees not only the hazards of the chemicals in their work area, but also how to use the information generated in the hazard communication program. This can be accomplished in many ways (audiovisuals, classroom instruction, interactive video), and should include an opportunity for employees to ask questions to ensure that they understand the information presented to them.

- Furthermore, the training must be understandable. Training must be conducted in a language and at a literacy level employees understand. If an employer has employees who speak different languages or are at different literacy levels, the employer may need to create different materials for different groups of employees based on their language and literacy levels, so each employee understands the materials. If an employer has an employee(s) that cannot read, the employer will need to talk to

the employee(s) about the hazardous chemicals they work with, in a language they understand.

d. Training is required at the time an employee is assigned to work with any hazardous chemical and whenever a new hazard is introduced into the employee's work area. The requirement for an employer to provide updated training is based on the hazard, not the chemical. However, an employer may choose to train based on the chemicals.

   - For example, if an employee is working with one flammable solvent and a second flammable solvent is introduced, the training does not need to be updated. However, if the employee is working with a flammable solvent and a corrosive is introduced, the training needs to be updated.

   - In multi-employer worksites the employer is responsible for providing updated training when their employees are exposed to new hazards, even if these hazards are created by other employers.

e. Training for each employee needs to cover the details of the hazard communication program including:

   - Labeling requirements.

     - Training on labeling includes information about shipped container labels.

     - The workplace labeling system used by the employer. For example, if the workplace labeling system includes HMIS or NFPA rating systems, workers must be trained to understand what these systems mean, how to utilize the information, etc.

     - If the employer has hazardous chemicals labeled under HCS 1994 in the workplace, the employer must provide training on the different labeling systems to ensure that employees understand that the lack of pictograms, hazard statements, etc., do not mean that the hazards do not exist.

     - The employer must ensure that employees understand that the labeling system for shipped containers has changed since the purchase of these items. The employer must also ensure that employees are aware of where they can get all the

information on the hazards of these chemicals. Whether a citation is warranted must be evaluated on a case-by-case basis.

- Safety Data Sheets requirements:
    - How to obtain and use the hazard information on an SDS (including the format).
    - If the employer is maintaining MSDSs for products received prior to June 1, 2015, the employer must provide training covering the differences between MSDSs and SDSs and how to utilize the MSDS.

f. Information and training (general) requirements:

- What operations have hazardous chemicals present; how employees are to protect themselves from hazardous chemicals.
- Location and availability of the written HCS program including the required list(s) of hazardous chemicals and SDSs
- How the employer monitors (e.g., monitoring devices, visual, odor) for hazardous chemicals.
- The physical and health hazards (including hazards not otherwise classified) of the chemicals in the work area.
- Measures employees can take to protect themselves from the hazardous chemicals including any specific procedures (e.g., work practices, emergency procedures, PPE).

g. Training elements.

A self-paced, interactive computer-based training can serve as a valuable training tool in the context of an over-all hazard communication training program. However, use of computer-based training by itself would not be sufficient to meet the intent of the standard's various training requirements. Employees must have the opportunity to ask questions and receive responses in a timely manner.

h. Temporary Employees.

- Staffing agencies and host employers share control over temporary employees and are therefore jointly responsible for ensuring that they are effectively informed and trained regarding exposure to hazardous chemicals. When employees from a temporary agency are working at a site where hazardous chemicals are being used, the responsibility for training is shared by the staffing agency and the host employer. In order to ensure that employers have complied with all requirements of the HCS, contracts between staffing agencies and host employers should be examined to determine if they set out the training responsibilities of both parties.

- Staffing agencies must, at a minimum, provide generic training to their employees on the requirements of the HCS applicable to different occupational settings and have a duty to inquire and verify that the host, in turn, has adequately fulfilled its shared training responsibilities for assigned employees.

- The host employer (the company using temporary workers) holds the primary responsibility for training since it uses or produces chemicals, creates, and controls the hazards, and is therefore best suited to inform employees of the chemical hazards specific to the workplace environment through site-specific training. This duty includes identifying and communicating worksite-specific hazards and providing appropriate protective equipment to temporary workers. The HCS training provided to temp workers should be identical or equivalent to that given to the host's own employees performing the same or similar work. See OSHA Temporary Worker Initiative Bulletin No. 5, Hazard Communication.

2. Inspection Guidelines for Training.

   a. Employee interviews.

      - Training programs must be evaluated through program review and interviews with management and employees. The CSHO must interview employees to determine if they have an adequate understanding of workplace chemical hazards.

      - It cannot be expected that employees will recall all information provided in the training and be able to repeat it.

- Employees must be aware of the hazards to which they are exposed to, know how to obtain and use information on labels and SDSs, and know and follow work practices, including use of any protective measures referenced on SDSs and labels.

- If the CSHO detects a trend in employee responses that indicates training is not being conducted, or is conducted in a cursory fashion that does not meet the intent of the standard, a closer review of the training program and its implementation is necessary.

b. Paragraph (h) requires that information and training be provided to employees regarding the hazards of all chemicals in their work areas, including by-products and hazardous chemicals introduced by another employer, provided that they are known to be present in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency.

c. The following are some of the issues a CSHO should focus on:

- Is a training program in place?

- Have workers been trained in a language and at a literacy level they understand?

- Have workers been trained prior to initial assignment?

- Have workers been trained when a new hazard is introduced?

- Do workers know how to access SDSs? (This includes sufficient computer skills to access SDSs stored on a computer.)

- Do workers understand the workplace (in-house) labeling system?

d. During the interviews, the CSHO must ensure that an employer who relies on alternative labeling under (f)(6)(ii) has provided a level of employee awareness through training which equals or exceeds that which would have been achieved had the employer used labels containing all the information from the shipped container.

The CSHO shall evaluate the effectiveness of any alternative labeling method by determining whether employees can correlate the visual warning on in-plant containers with the applicable chemical and its

appropriate hazard warnings. Also, a determination should be made whether training been provided on emergency procedures.

e. Paragraph (h)(3)(iii) requires training of employees on (among other things) the measures employees can take to protect themselves from hazards, including emergencies.

f. See Section XI.B for a discussion of the interaction of 1910.1200 and 1910.120, Hazardous Waste Operations and Emergency Response.

g. CSHOs should determine if any workers are employed by outside contractors (such as temporary employment agencies). To establish if an employer-employee relationship exists, the CSHO should determine the following:

- Who controls the manner and means by which work is accomplished?
- Who supervises the employee on a day-to-day basis and evaluates the work quality?
- What is the nature and location of the work?
- Who determines the worker's schedule? (Time of arrival/hours/days worked?)
- Who provides required instruments, tools, and equipment?
- What is the history and duration of the relationship between the parties?
- To what extent can the client/host employer choose a particular worker?
- Who has the right to assign new projects to the worker?
- What is the extent of the party's control over when and how long the employee works?
- Who provides payment and method of payment?
- Who provides non-salary benefits, if any?

- Who determines whether a worker gets a raise/bonus?

3. Citation Guidelines for Training.

   a. Citations for training violations shall generally be issued as serious unless otherwise noted.

   b. If no form of employee training has been provided or the training in general is inadequate, including that the training wasn't provided in a language and at a literacy level employees understand, citations should normally be issued under (h)(1) and state why the training provided was inadequate or not effective.

   c. If the employer did not provide the required information concerning the training program, the standard, and the operations where hazardous chemicals are present, a citation for the appropriate subsection of paragraphs (h)(2)(i) through (h)(2)(iii) should normally be issued. The citations for the subsections of (h)(2) should be grouped.

   d. If the employer did not provide training that covered how to detect hazardous chemicals, physical, health and other hazards of the chemicals covered by the HCS, how employees should protect themselves, and the details of the hazard communication program, a citation for the appropriate subsection of paragraphs (h)(3)(i) through (h)(3)(iv) should normally be issued. The citations for the subsections of (h)(3) should be grouped.

I. <u>Trade Secrets, Paragraph (i).</u>

1. Background.

   a. The chemical manufacturer or importer may withhold the specific chemical identity and/or the exact percentage (concentration) or concentration range of the substance in a mixture as a trade secret.

   b. If the chemical manufacturer or importer withholds the identity or exact composition of any constituent, the SDS must indicate in Section 3 that the constituent(s) and/or exact concentration(s) are being withheld as trade secrets. Otherwise the SDS is out of compliance.

   c. When CAS number is claimed as a trade secret, the preparer must indicate the source of unique identifier. The "source" would depend on what kind of alternative unique identifier is chosen. Regardless, the

combination of the unique identifier and the source information must provide the SDS recipient sufficient information that they can learn the identity of the ingredient in question in situations where the HCS requires access to that information. For example, if the manufacturer's internal product number is used as a unique identifier, the SDS preparer must indicate that the unique identifier provided in Section 3 is the manufacturer's internal product number by placing the source information adjacent to the unique identifier in Section 3. For example, the SDS could say "Company XYZ Product Number: 12345." See guidance for emergency and non-emergency situations below.

d. If the concentration or concentration range is being claimed as a trade secret, the manufacturer or importer must provide the ingredient's concentration as one of the prescribed ranges listed in paragraphs (i)(1)(iv)(A) through (M) of the HCS 2024.

e. The prescribed concentration range used must be the narrowest range possible. If the exact concentration range falls 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.

f. In a scenario where the concentration or the concentration range falls below 0.1% the concentration or concentration range must be disclosed on the SDS if it contributes to the product's classification as a health hazard, however, the HCS does not provide a prescribed concentration range applicable to concentrations below 0.1%. This means that concentrations or concentration ranges below 0.1% may not be claimed as a trade secret for an ingredient that contributes to the product's classification as a health hazard. However, the specific chemical identity, including the chemical name and other specific identification of the chemical can still be claimed as a trade secret in this case. If a trade secret is claimed, then a statement that the specific chemical identity has been withheld as a trade secret is required.

g. Manufacturers may provide a range narrower than those prescribed in (i)(1)(v).

h. Despite the claim that a hazardous chemical, or a constituent thereof, is a trade secret, the PEL, TLV, or other designated exposure limit must be included on the SDS.

i. Even when a chemical's identity, exact concentration or concentration range is rightfully withheld as a trade secret, its release may be required by the trade secret access provisions in paragraph (i).

j. State laws do not preempt the trade secret disclosure requirements of the HCS.

k. OSHA requires the responsible party for the SDS to use the words "trade secret" when withholding constituent(s) as trade secrets. The use of other language is not in compliance with (i)(1)(iii).

2. Evaluating Trade Secret Claims.

a. If a question concerning the validity of the trade secret occurs, the Area Office should discuss the issue with the Regional Hazard Communication Coordinator.

b. The Regional Hazard Communication Coordinator shall contact the National Office, if necessary.

3. Non-Emergency Situations.

a. During non-emergency situations, health professionals (*e.g.*, PLHCP, industrial hygienist, toxicologist, or epidemiologist) are entitled to trade secret information when providing medical or other occupational health services to exposed employees. Employees and their designated representatives are also entitled to trade secret information.

b. If these individuals are denied access to trade secret information, the matter must be referred to the appropriate Area Office for enforcement proceedings.

c. As stipulated in the standard, the Area Office should receive from the referring health professional, employee, or designated representative a copy of the written request for the trade secret information, as well as a copy of the written denial provided by the holder of the trade secret. These two written documents will be reviewed by the Area Director to determine the validity of the request and the trade secret claim. The

Regional Solicitor should be consulted to provide assistance in this regard.

d. If the manufacturer does not respond to the referring health professional, employee, or designated representative in writing in a timely fashion, the requestor should document this and provide this information when referring the situation to the Area Office.

e. If the Area Director does not believe that there is enough information upon which to base a decision, he/she may contact either the trade secret requester or the trade secret holder for further information. Such requests will be documented in the case file.

4. Emergency Situations.

a. The HCS permits a treating PLHCP to designate that a medical emergency exists, requiring the immediate disclosure of trade secrets.

b. Due to the potential risk to life and/or health, the Area Director shall ensure that these referrals are processed as soon as received. The Area Director or his/her designee will contact the manufacturer of the chemical by telephone.

c. The manufacturer will be informed of the standard's requirements and requested to immediately provide the needed information directly to the treating PLHCP. The designation of an incident as a medical emergency is left to the discretion of the treating PLHCP; the manufacturer may not challenge the medical provider’s decision in that regard.

d. 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 the HCS 2024, as soon as circumstances permit.

5. Inspection Guidelines.

a. CSHOs may request disclosure of trade secret identities and exact concentrations under paragraph (i)(12) of the HCS. The manufacturer, importer or employer withholding the information must disclose the information to the CSHO, as required by (i)(12).

b. OSHA shall take all steps feasible to protect trade secret identities, including secure filing and return of information or the destruction of trade secret information when its use is completed.

6. Citation Guidelines.

Citations for trade secret violations should normally be issued as serious citations unless otherwise noted.

a. In response to non-emergencies, where OSHA believes that the chemical manufacturer, importer, or employer cannot support the trade secret claim, the withholding of a specific chemical identity or exact percentage concentration shall be cited as a violation of paragraph (g)(2)(i) or (g)(2)(iii), respectively.

Where OSHA does not question the claim that a specific chemical identity or exact concentration or concentration range is a trade secret, but the employer has failed to comply with paragraph (i)(1)(i) through (vi), such failure should normally be cited. For example, the employer claims a trade secret exists but failed to indicate on the SDS that the specific chemical was being withheld for that reason, as required under paragraph (i)(1)(iii).

b. For medical emergencies, failure to disclose the information shall result in the issuance of a willful citation to the manufacturer, or importer, if the elements of a willful citation can be established. See the FOM Chapter 4, section V.

- In many cases the medical facility that is seeking the information will be located in a different jurisdiction than the chemical manufacturer or importer. In this case the local Area Office contacted by the medical facility will refer the issue and provide all necessary information to the Area Office that has jurisdiction over the manufacturer or importer.

- The Area Office with jurisdiction over the manufacturer/importer will coordinate obtaining an administrative subpoena ordering the immediate disclosure of the needed information. Federal Court orders shall be sought immediately if the administrative subpoena is not effective in obtaining the information.

J. Dates.

1. Transition Period, July 19, 2024, to Relevant Compliance Date.

    a. Employers are required to comply with either HCS 2012 or HCS 2024 or both during the transition (or implementation) period.

    b. The manufacturer or importer may not partially implement the revised standard for a label or SDS for an individual product (e.g., not include all the required information on the revised label or SDS). The labels and SDSs must fully comply with either HCS 2012 or HCS 2024. Violations shall be issued under the applicable standard, HCS 2012 or 2024, according to compliance date.

    c. During the transition period it is acceptable to have HCS 2012 labels and HCS 2024 SDSs or vice versa.

2. Citation Guidance.

    a. If a CSHO finds a violation of either HCS 2012 or 2024, citations shall be issued according to the compliance date for the subparagraph in violation. See Appendix E of this instruction. Prior to an applicable HCS 2024 compliance date, the HCS 2012 shall be cited. Once the compliance date for an HCS 2024 paragraph or subparagraph has passed, only the HCS 2024 shall be cited (e.g., prior to May 19, 2026, a manufacturer in violation of (f)(1) for small container labeling will be cited under the HCS 2012, but after May 19, 2026, subparagraph (f)(12) of the HCS 2024 will be cited where an employer has demonstrated that it is not feasible to use pull-out labels, fold-back labels, or tags containing the full label information, but fails to comply with the small container labeling requirements in (f)(12)(ii) or (iii)). It is possible for an employer to be cited under both the HCS 2012 and 2024, for a different violation of the standard, during the same inspection. Consult the Regional or National Office Hazard Communication Coordinator for help determining which standard to cite.

    b. Paragraph (j) is not a citable paragraph.

3. On or After May 19, 2026.

    a. Manufacturers, importers, and distributors evaluating substances must have updated HCS 2024-compliant labels and SDSs.

    b. When a manufacturer, importer, or distributor is relying on hazardous chemical information from an upstream manufacturer or importer

supplier to complete their own SDS development for their downstream customers, CSHOs shall evaluate, on a case-by-case basis, the due diligence and good faith efforts to obtain the SDS information for the ingredients. See Section X.J.7. for further guidance.

c. A CSHO will determine on a case-by-case basis, whether a distributor exercised reasonable diligence and good faith to comply with the compliance dates. In making such determination, a CSHO shall consider whether the distributor is able to document its communication with the manufacturer or importer about the circumstances for noncompliance with HCS 2024. See Section X.J.7. for further guidance.

4. On or After November 20, 2026.

   a. For substances, all employers must update any alternative workplace labeling for changes related to HCS 2024, their HCS program required by (h)(1) and provide any additional employee training in accordance with (h)(3) for newly identified physical, health, or other hazards.

   b. Paragraph (h)(1) requires employees to be trained on new chemical hazards introduced into an employee's work area. Paragraph (h)(3) includes required training on labels received by the employer on shipped containers and on the employer's workplace labeling system. This extra time allows the employer to review all the new information received as a result of the revisions and provide new training, if necessary.

5. On or After November 19, 2027.

   a. Manufacturers, importers, and distributors evaluating mixtures must have updated HCS 2024-compliant labels and SDSs.

   b. When a manufacturer or importer is relying on hazardous chemical information from an upstream manufacturer or importer supplier to complete their own SDS development for their downstream customers, CSHOs shall evaluate, on a case-by-case basis, the due diligence and good faith efforts to obtain the SDS information for the ingredients. See Section X.J.7 for further guidance.

   c. A CSHO will determine on a case-by-case basis, whether a distributor exercised reasonable diligence and good faith to comply with the compliance dates. In making such determination, a CSHO shall consider whether the distributor is able to document its communication with the

manufacturer or importer about the circumstances for the noncompliance with HCS 2024. See Section X.J.7. for further guidance.

6. On or After May 19, 2028.

   a. For mixtures, all employers must update any alternative workplace labeling for changes related to HCS 2024, their HCS program required by (h)(1) and provide any additional employee training in accordance with (h)(3) for newly identified physical, health, or other hazards.

   b. Paragraph (h)(1) requires employees to be trained on new chemical hazards introduced into an employee's work area. Paragraph (h)(3) includes required training on labels received by the employer on shipped containers and on the employer's workplace labeling system. This extra time allows the employer to review all the new information it receives as a result of the revisions and provide new training if necessary.

7. What are Reasonable Diligence and Good Faith Efforts?

   a. To determine if a manufacturer, importer, or distributor was reasonably diligent and made good faith efforts to obtain and integrate information to comply with the HCS 2024, CSHOs must review overall efforts and action(s) taken to comply with HCS 2024 compliance dates. CSHOs should request they provide documentation of any and all efforts to:

      - Obtain classification information and SDSs from upstream suppliers;
      - Find hazard information from alternative sources (e.g., chemical registries); and,
      - Classify the data themselves.

   b. Establishing reasonable diligence and good faith requires that manufacturers or importers demonstrate attempt(s) to obtain the necessary classification or SDSs through both oral and written communications directly with the upstream supplier. For each hazardous chemical shipped, the CSHO shall consider whether the manufacturer or importer:

      - Developed and documented the process used to gather the necessary classification information from its upstream suppliers and the current status of such efforts;

      - Developed and documented efforts to find hazard information from alternative sources (e.g., chemical registries);

- Provided a written account of its continued communications with upstream suppliers, including dated copies of all relevant written communication;

- Provided a written account of continued communications with its distributors, including dated copies of all relevant written communication with its distributors informing them why it has been unable to comply with HCS 2024; and,

- Developed the course of action it will follow to make the necessary changes to SDSs and labels once the information becomes available.

c. Although CSHOs must evaluate all of the above factors, any combination of these efforts may be considered to be reasonably diligent and made in good faith. CSHOs shall also consider whether the manufacturer or importer attempted to obtain the hazard information in a timely manner in determining whether reasonable diligence and good faith efforts to comply are present. Additionally, manufacturers or importers should provide a *clear* timeline when it expects to comply with HCS 2024 to meet this test.

8. See Appendix E of this Instruction for a quick reference table on the compliance dates, explained in detail above.

XI. HCS Interface with Other OSHA Standards.

A. Interactions.

1. In some cases, an employer's duties under other OSHA standards dovetail with requirements of the HCS, resulting in simplified compliance (e.g., 29 CFR 1910.1026, Chromium VI).

2. In some cases, substance-specific standards have more requirements than the HCS (e.g., specific label requirements under 29 CFR 1910.1001, Asbestos). In those cases, the CSHO needs to ensure that the employer is complying with the more stringent requirements.

3. Appendix I of this Instruction includes a list of the OSHA standards that have been affected by the update to the HCS 2012. These updates are still in effect following the publication of the HCS 2024.

B. Hazardous Waste Operations and Emergency Response (HAZWOPER), 29 CFR 1910.120.

1. Hazardous waste, as defined under the Solid Waste Disposal Act, 21 U.S.C. 6901 et seq, when subject to regulations issued by the Environmental Protection Agency (EPA) under that Act, is not covered by the HCS, as per (b)(6)(1). If the hazardous waste is not regulated by the EPA, then the requirements of the HCS apply.

2. Hazardous substances, as defined under CERCLA, which are the focus of remedial or removal action being conducted under CERLCA in accordance with the EPA regulations, are not covered by the HCS, as per (b)(6)(ii).

3. Chemicals (other than hazardous waste and hazardous substances, as discussed above) brought onto hazardous waste sites are covered by the HCS.

4. HAZWOPER does not cover response to incidental spills that do not have the potential for becoming an emergency. Training for responding to such incidental spills would be under the HCS and would include, at a minimum, leak and spill cleanup procedures and the use of appropriate personal protective equipment (PPE).

5. HAZWOPER has training requirements for emergency procedures, as does the HCS. The scope and extent of employee training regarding emergency procedures will depend upon the employer's emergency response plan. If the employer merely intends to evacuate the work area, the training in emergency procedures could be limited to, for example, information on the emergency alarm system in use at the worksite, evacuation routes, and reporting areas.

6. Employees that are required to respond to spills that have the potential for becoming an emergency are covered by the provisions of 1910.120(q). (See definition of emergency response in 1910.120(a)(3).) Therefore, in workplaces where there is a potential for emergencies, the employer's HCS training program would have to address the HAZWOPER emergency response plan and/or emergency action plan. Training under the HCS can be adapted to encompass all of the required training competencies in 29 CFR 1910.120(q)(6)(i), the first responder awareness level, and a single training could be fashioned to satisfy the requirements of both standards.

C. Access to Employee Exposure and Medical Records, 29 CFR 1910.1020.

1. The Access to Employee Exposure and Medical Records standard, 29 CFR 1910.1020, and the HCS overlap with regard to SDSs. MSDSs (the older form of SDSs) are specifically identified as exposure records under 29 CFR 1910.1020(c)(5)(iii). The "Access standard" discusses the requirement to maintain exposure records for 30 years, 29 CFR 1910.1020(d)(1)(ii); however, there is an alternative to keeping the MSDSs at 1910.1020(d)(1)(ii)(B), which reads as follows:

   > "Material safety data sheets and paragraph (c)(5)(iv) records concerning the identity of a substance or agent need not be retained for any specified period as long as some record of the identity (chemical name, if known) of the substance or agent, where it was used, and when it was used is retained for at least thirty (30) years."

   Although MSDSs have been replaced by SDSs in HCS 2012, the applicability of this provision in the Access standard is not changed. Therefore, any reference to MSDSs is interpreted to also apply to SDSs, including HCS 2024-compliant SDSs.

2. Paragraph (e)(4) of the HCS requires employers to make the written hazard communication program available upon request to employees, their representatives, OSHA or NIOSH, in accordance with the requirements at 29 CFR 1910.1020(e). Section (e) of 29 CFR 1910.1020, requires the employer to provide a copy of the requested record (in this case, a copy of the written hazard communication program) "in a reasonable time...but in no event later than fifteen (15) days...." This means although the hazard communication program must be available at all times for employee access, the employer has up to 15 days to copy the program and provide it to the employee or employee representative who requests a copy.

D. <u>Occupational Exposure to Hazardous Chemicals in Laboratories, 29 CFR 1910.1450.</u>

1. When evaluating a laboratory, the type of laboratory (e.g., research, quality control) needs to be determined. The definitions of a “laboratory” are different in the HCS and the “Laboratory” standard, 29 CFR 1910.1450.

2. Laboratory Standard (29 CFR 1910.1450) Coverage.

   a. The Laboratory standard covers only laboratories meeting the criteria of "laboratory use" and "laboratory scale" and excludes procedures that are part of a production process. See §1910.1450(b), Definitions.

b. In most cases, research laboratories are covered under the Laboratory standard. However, if the research laboratory is also shipping chemicals, it must provide labels and safety data sheets in accordance with the HCS.

c. In most cases, quality control and production laboratories are not covered under 29 CFR 1910.1450 but are considered laboratories under the HCS and will be covered by paragraph (b)(3) of the HCS.

d. The only updates to the Laboratory standard due to HCS 2012 are to the definitions section. Some definitions have been changed to align with the HCS 2012 definitions, e.g., health hazard definition.

3. The HCS covers manufacturers of chemical specialty products.

a. Some manufacturers of chemical specialty products have incorrectly interpreted the laboratory provisions at 1910.1200(b)(3) as exempting them from coverage. OSHA considers these operations to be manufacturing processes, and, therefore, they must comply with all the requirements of the HCS.

b. A pilot plant operation is considered to be a manufacturing operation and is covered under the HCS.

c. Establishments such as dental, photo finishing, and optical laboratories are not considered laboratory operations for the purposes of the Laboratory standard since they are engaged in the production of a finished product.

E. Other Health Standards.

1. Employers must comply with the hazard communication requirements of substance-specific standards.

2. Labels.

Most substance-specific standards have specified requirements for labeling, which may require specific language be included on the labels. For example, the Formaldehyde standard, 29 CFR 1910.1048(m)(2), requires the following specific language on the label (in addition to the HCS-required language) when the product is capable of producing employee exposures capable of releasing formaldehyde at levels of 0.1 ppm to 0.5 ppm:

a. Identify that the product contains formaldehyde;

b. List the name and address of the responsible party, and;

c. State that physical and health hazard information is readily available from the employer and from safety data sheets.

3. See the Federal Register notice for HCS 2012 and Appendix K of this Instruction for specific changes to other substance-specific standards.

F. Use of the HCS to Support a Violation of the General Duty Clause.

1. General.

a. In the preamble, 89 FR 44144 (May 20, 2024), OSHA explained this HCS revision "will enhance the effectiveness of the HCS by ensuring employees are appropriately apprised of the chemical hazards to which they may be exposed, thus reducing the incidence of chemical-related occupational illnesses and injuries."

b. The information on the SDS is particularly valuable for chemicals with no OSHA PEL because it may be used by employers to help comply with their general duty under § 5(a)(1) of the OSH Act to protect workers from serious, recognized hazards. This includes protecting workers from overexposures to hazardous chemicals with no OSHA PEL.

c. However, not all chemicals for which employers receive an SDS will necessarily present a hazard in every workplace. Employers should consider the information in the SDS along with their knowledge of actual conditions in their workplaces to determine whether they must take additional steps to protect employees.

d. Other standards that must be considered prior to using the General Duty Clause are outlined in Appendix J of this Instruction and the FOM.

e. During inspections, CSHOs should refer to the employer's SDSs to begin investigating whether serious chemical exposure hazards exist and whether the employer has discharged its duty under the general duty clause, if there is no PEL for the chemical. The four required elements to a Section 5(a)(1) violation are:

- A hazard exists in the workplace;

- Hazard information must be listed in sections 2, 8, 10, and 11 of the SDS. The same hazard information was also required by previous versions of the HCS, but its location on the MSDS was not standardized.

- Section 10 must identify the chemical's stability and reactivity properties.

- Section 11 must describe the chemical's toxicological information.

- The employer or the employer's industry recognizes the hazard;

  - Employers are required under 1910.1200(g)(1) to have an SDS in the workplace for each hazardous chemical they use, and to use the information in those sheets when they train their employees about the hazards of the chemicals to which they are exposed under 1910.1200(h)(3)(iv).

  - If an employer has taken these required steps, and if the SDS accurately describes the chemical's hazards, the employer will have actual recognition of the hazard. CSHOs should document who should have received or received the SDS.

  - An SDS may also help show that the employer's industry recognizes the hazard, particularly if the chemical in question is widely used in the industry.

- The hazard is likely to cause death or serious bodily injury;

  - The SDS description of the nature and seriousness of the hazard(s) presented to workers may be relevant to determining whether the hazard could cause death or serious physical harm.

  - Section 11 of the SDS must describe the toxicological effects of the chemical, including likely routes of exposure and symptoms of overexposure related to the chemical's toxicological characteristics.

  - As noted above, employers need to consider this evidence in conjunction with other available information, including information about how workers are actually exposed to the chemicals, to determine the extent of protection they must provide.

- Feasible means exist to eliminate or materially reduce the hazard. Section 8 of the SDS must set forth appropriate measures to protect employees from overexposures, including engineering controls, and personal protective clothing and equipment. CSHOs should document the feasibility of abatement for the specific workplace.

2. In summary, where there is potential hazardous exposure to a chemical with no PEL, CSHOs should consider issuing a Section 5(a)(1) citation in accordance with the above guidance, the FOM, and other OSHA directives, where applicable, by taking into account information in the chemical's SDS.

Appendix A

Table of Contents for Appendices A and B of the Hazard Communication Standard

This list is provided for easy reference to the chapters of Appendices A and B of the Hazard Communication standard (HCS). This Appendix provides CSHOs with an easy way to quickly find the appropriate chapters when reviewing the classification of chemicals. Please review each chapter of the Appendices to the HCS as needed. Note: This list does not contain all subheadings included in Appendices A and B.

Appendix B

Hazard Classification Evaluation Procedures

The hazard classification procedures required by the standard are specification-oriented. The HCS has provided procedures on how to classify chemicals in paragraph (d), and Appendix A and B of the standard. The term hazard classification is used to indicate not only the types of hazards presented by the chemical, but also the severity of the hazard. The hazard classification criteria are designed so the intrinsic hazardous properties of chemicals are considered for the known or intended use(s) of the products. Evaluation of the hazard classification incorporates three steps:

1. Identification of relevant data regarding the hazards of a chemical;

2. Subsequent review of those data to ascertain the hazards associated with the chemical;

3. Determination of whether the chemical should be classified as hazardous and the degree of hazard.

Steps CSHOs Should Take When Evaluating Product SDSs

1. The first step for CSHOs when evaluating an SDS is to determine whether the chemical should be considered hazardous. The CSHO can determine this by reviewing the following sources:

    a. If the chemical or one or more of its ingredients are any of the following lists, then further investigation is warranted to determine whether it should be classified:

        - Any substance for which OSHA has a permissible exposure limit (PEL) in 1910.1000 or a comprehensive substance-specific standard in Subpart Z. If OSHA has included cancer as a health hazard to be considered by classifiers in a substance specific hazard, the substance must be classified as a carcinogen. If such a substance is an ingredient in a mixture, the mixture must be classified as a carcinogen if it is present at a concentration of 0.1% or more, or at a lower concentration if it would present a health risk.

        - Any substance for which the American Conference of Governmental Industrial Hygienists (ACGIH®) has a Threshold Limit Value (TLV®) in the latest edition of their annual list and Documentation for the TLVs®.

- Any substance which the National Toxicology Program (NTP) or the International Agency for Research on Cancer (IARC) has found to be a suspect or confirmed carcinogen or which OSHA regulates as a carcinogen.

b. CSHOs may consult available sources in evaluating the chemical to see what has been published regarding the chemical. There are a number of databases online that can be consulted, such as the Environmental Protection Agency's (EPA) Integrated Risk Information System (IRIS) the Organisation for Economic Co-operation and Development (OECD) eChemPortal or the European Chemical Agency's (ECHA) chemical database. Another helpful source could be Patty's Industrial Hygiene and Toxicology.

Other sources that may be useful in determining whether a chemical is hazardous:

- Centers for Disease Control and Prevention (CDC) Agency for Toxic Substances and Disease Registry (ATSDR), Toxicological Profiles.

- NIOSH Chemical Safety Resources. Including the NIOSH Registry of Toxic Effects of Chemical Substances (RTECS). The RTECS should never be considered a definitive source for establishing a hazard since it consists of data that has not been evaluated. The RTECS is, however, a useful screening resource.

- NTP Summary of the Annual Report on Carcinogens, or most recent report.

- IARC Monographs.

2. Finally, for those chemicals where information is not readily available or where such available information is not complete, perform searches of bibliographic databases. In general, the National Library of Medicine (NLM) services should be used. These include the Toxicology Data Bank (TDB), TOXLINE, and MEDLARS. The information generated by these databases should be evaluated using the criteria in Appendix A of the standard. To evaluate whether a particular study would qualify as an acceptable study, it must be conducted according to established scientific principles (e.g., in animal studies, the number of subjects is adequate to do statistical analyses of the results; a control group is used, and the study must show statistically significant results indicating an adverse health effect). This evaluation obviously requires professional judgment. Any questions should be referred to the Regional Hazard Communication Coordinator, who may forward them, if necessary, to the Health Response Team (HRT), a division of the OSHA Technical Center (OTC), under OSHA's Directorate of Technical Support and Emergency Management (DTSEM). A bulk sample of the chemical may be needed by the OTC (HRT) to assist in their review.

3. If an employer or manufacturer used their own test data as the basis for the hazard classification, the CSHO should collect the test data used to classify the hazard and then request DTSEM to review the information. If the employer denies the CSHO access to the

test and no other published data on the chemical can be found, the Regional Office shall be contacted for assistance in obtaining an administrative subpoena. DTSEM should be contacted if assistance is required in order to obtain unpublished chemical hazard information available from other Federal agencies such as the EPA.

4. Published studies and test data should be evaluated using the HCS criteria in Appendix A for health hazards and in Appendix B for physical hazards in the standard. If needed, the DSG or DTSEM offices could assist in the review of the studies and test data.

5. In the event that there are any questions concerning the adequacy of the manufacturer's hazard classification, the CSHO shall collect the information from the studies used to classify the chemical(s), and any justification the manufacturer or importer provided to support the classification. For example, this situation might arise when the CSHO has discovered scientific data indicating a hazard, but the chemical manufacturer's hazard classification has not classified the chemical as hazardous or two different manufacturers have classified the same chemical differently. In this case, the Area Director should then contact the Regional Hazard Communication Coordinator, who then may refer those findings to HRT for review, as necessary. HRT scientists will conduct a review of the hazard classification for conformance with 29 CFR 1910.1200(d) and Appendices A and B. A bulk sample of the chemical may be needed by the HRT to assist in their review.

Examples of when a CSHO might refer a product SDS to HRT for review:

In general, if the CSHO has found studies or other data to indicate that the product presents a health or physical hazard, but the manufacturer has not adequately addressed or has not provided a rationale on why they have not classified the product as hazardous, the CSHO should refer the SDS to HRT for review.

1. Carcinogens:

   a. If the chemical is listed by IARC or NTP as a carcinogen and the chemical manufacturer or importer has not provided the determinations by IARC or NTP on the SDS; or

   b. The CSHO has determined that there is at least one positive study for carcinogenicity but the manufacturer has not classified the chemical as a carcinogen or indicated the positive study on the SDS.

   Appendix C of this Instruction provides more information concerning the evaluation of carcinogen classifications and a comparison of the HCS carcinogen classifications versus determinations by IARC and NTP. It also provides, in Table C.2, guidance for label and SDS notations for carcinogens.

2. Germ Cell Mutagens/Reproductive Toxins:

   If the CSHO's research finds one positive study and the result of the classification process by the chemical manufacturer or importer is non-classification. The HCS states that one positive study performed according to good scientific principles and with statistically and biologically significant results may justify classification as a germ cell mutagen or reproductive toxicant.

Guidance for HRT Scientists' Review:

1. Review the data and classification findings by the chemical manufacturer or importer.

2. Evaluate the data for conformance with classification procedures set forth in 29 CFR 1910.1200(d) and Appendix A and Appendix B.

3. Determine if the chemical manufacturer or importer has followed the appropriate classification procedures:

   a. Has the manufacturer or importer adequately addressed appropriate data (e.g., did not ignore data that disagreed with their conclusion)?

   b. Have they performed an appropriate weight of evidence analysis according to Appendix A.0 and the specific guidance in Appendix A for each hazard (in general, human evidence normally would carry more weight than animal studies or structural activity)?

   c. Have they applied the criteria and bridging principles (if applicable) appropriately for each individual hazard classes?

4. Provide HRT's evaluation to the Area Office where they will determine whether a citation is warranted. For example, if HRT's evaluation finds the hazard evaluation to be incomplete or incorrect, a citation may be warranted.

5. If necessary, the Regional Office may refer the hazard classification to DEP which will coordinate with DTSEM and DSG to review the data and classification findings.

Partial list of Health Hazard Cut-Off limits

Hazard class	Label Cut-Offs	SDS Cut-Offs
Respiratory/Skin sensitization (Category 1 or 1A)*	≥ 0.1%	≥ 0.1%
Germ cell mutagenicity (Category 1)	≥ 0.1%	≥ 0.1%
Germ cell mutagenicity (Category 2)	≥ 1.0%	≥ 1.0%

Carcinogenicity**	≥ 0.1%	≥ 0.1%
Reproductive toxicity	≥ 0.1%	≥ 0.1%
Specific target organ toxicity (single exposure)	≥ 1.0%	≥ 1.0%
Specific target organ toxicity (repeated exposure)	≥ 1.0%	≥ 1.0%
Specific target organ toxicity (single exposure) Category 3	>20%	>20%

* See Table A.4.5 of the HCS 2024 standard for cut-off values for Category 1B ingredients.

** Note: If a Category 2 carcinogen ingredient is present in the mixture at a concentration between 0.1% and 1%, information is required on the SDS for a product. However, a label warning is optional. If a Category 2 carcinogen ingredient is present in the mixture at a concentration of ≥1%, both an SDS and a label is required and the information must be included on each.

Appendix C

Evaluation of Carcinogenicity

Carcinogenicity refers to the induction of cancer or an increase in the incidence of cancer occurring after exposure to a substance or mixture.

1. A chemical must be classified as a carcinogen if the chemical is regulated as a carcinogen by 29 CFR part 1910, Subpart Z, Toxic and Hazardous Substances.

2. When classifying carcinogens, chemical manufacturers and importers must do one of the following:

    a. Conduct their own weight-of-evidence hazard evaluation, or

    b. Use the International Agency for Research on Cancer (IARC) or the National Toxicology Program (NTP) as sources to establish whether a chemical is a carcinogen.

Weight-of-evidence evaluation

Chemical manufacturers and importers are to conduct a hazard classification of the chemicals they produce or import. This includes classifying carcinogens based on the strength and weight of evidence in accordance with 29 CFR 1910.1200(d) and Appendix A, chapter A.6. After determining the classification of the chemical, the appropriate hazard communication elements must be provided on the label and SDS.

Hazard categories for carcinogenicity include:

1. Category 1: Known or presumed human carcinogens.

    a. Category 1A: Known to have carcinogenic potential for humans.

    b. Category 1B: Presumed to have carcinogenic potential for humans.

2. Category 2: Suspected human carcinogens.

Use of IARC or NTP

The standard provides chemical manufacturers and importers the option of relying on the evaluations of the IARC Monographs on the Evaluation of Carcinogenic Risks to Humans (latest edition) or the NTP Report on Carcinogens (RoC) (latest edition) when classifying carcinogens

rather than conducting their own hazard classification. To help with converting IARC and NTP classifications to HCS 2024 classifications for carcinogenicity, Table C.1 relates the HCS 2024 hazard categories for carcinogenicity to the classifications provided by IARC and NTP. Note: The HCS 2012 hazard categories for carcinogenicity did not change in the HCS 2024 revision to the standard.

Table C.1 - Approximate Equivalents Among Carcinogen Classification Schemes
(Adapted from Appendix F to 1910.1200)

<table>
<tr><th>HCS 2024</th><th>IARC</th><th>NTP RoC</th></tr>
<tr><td>Category 1A -
Known to have carcinogenic potential for humans</td><td>Group 1 -
Carcinogenic to humans</td><td>Known to be human carcinogen</td></tr>
<tr><td>Category 1B -
Presumed to have carcinogenic potential for humans</td><td>Group 2A -
Probably carcinogenic to humans</td><td rowspan="2">Reasonably anticipated to be a human carcinogen (see Note 1 below)</td></tr>
<tr><td>Category 2 -
Suspected human carcinogens</td><td>Group 2B -
Possibly carcinogenic to humans*</td></tr>
</table>

***** *A classifier not relying on Table C.1 when performing their hazard classification may find that some IARC 2B agents, based on sufficient evidence of carcinogenicity in experimental animals but inadequate evidence in humans, essentially correspond to HCS 1B.*

Note 1 (includes all the points outlined below):

NTPs Reasonably Anticipated to be Human Carcinogens aligns with both HCS Category 1B and Category 2, and IARC Group 2A and Group 2B. To help determine where these classifications correspond, the following guidance is provided.

1. *If there is limited evidence of carcinogenicity from studies in humans, an NTP Reasonably Anticipated to be a Human Carcinogen would correspond to IARC 2A/HCS 1B.*

2. *If there is sufficient evidence of carcinogenicity from studies in experimental animals, an NTP Reasonably Anticipated to be a Human Carcinogen would correspond to IARC 2A/ HCS 1B.*

3. *In cases where there is less than sufficient evidence of carcinogenicity in humans or laboratory animals, follow the guidance outlined below:*

a. *If the agent, substance, or mixture belongs to a well-defined, structurally-related class of substances whose members are listed in a previous RoC as either "Known" "Reasonably Anticipated" to be a human carcinogen, it would align at minimum with HCS Category 2, or*
b. *If there is convincing relevant information that the agent acts through mechanisms indicating it would likely cause cancer in humans, it would align at minimum with HCS Category 2.*

Other requirements for classification of carcinogens

1. One Positive Study

   If the weight of evidence for the carcinogenicity of a substance does not meet the criteria in Appendix A, chapter A.6 of the standard, any positive study conducted in accordance with established scientific principles that reports statistically significant findings regarding the carcinogenic potential of the substance must be noted on the safety data sheet.

2. Category 2 Carcinogens

   If a Category 2 carcinogen ingredient is present in a mixture at a concentration between 0.1% and 1%, that information is required on the SDS. If a Category 2 carcinogen ingredient is present in a mixture at a concentration of ≥ 1%, the information must be included on both the SDS and the label.

3. IARC and NTP Evaluations

   Whether the chemical manufacturer or importer chooses to use IARC or NTP for classification of carcinogens or conduct their own evaluation, the classification results of IARC and NTP must be listed on the SDS in Section 11.

NTP

Those chemicals identified as being "known to be a human carcinogen" and those substances that may "reasonably anticipated to be a human carcinogen" by NTP must have that carcinogen determination information listed on the SDS. Appearing in NTP's biannual Report on Carcinogens constitutes a positive finding of being a known or reasonably anticipated carcinogen.

IARC

IARC evaluates chemicals, manufacturing processes, and occupational exposures as to their carcinogenic potential. The IARC criteria for judging the adequacy of available data and for

evaluating carcinogenic risk to humans were established in 1971 (Volumes 1-16) and revised in 2006 (Volumes 17 and following).

IARC Monographs contain evaluations on specific chemicals or processes. At the conclusion of each evaluation, IARC provides a summary evaluation. Periodically, IARC publishes supplements in which chemicals that have already been evaluated in previous monographs are reevaluated. In cases where a chemical has been reevaluated, the most recent IARC evaluation shall be relied upon.

IARC provides a summary in Supplement 7 of the chemicals which have been evaluated in Volumes 1-42. Table I of Supplement 7 provides a summary evaluation of all chemicals for which human and animal data were considered and a summary classification of a chemical's carcinogenic risk:

Group 1 -	The agent is carcinogenic to humans.
Group 2A -	The agent is probably carcinogenic to humans.
Group 2B -	The agent is possibly carcinogenic to humans.
Group 3 -	The agent is not classifiable as to its carcinogenicity to humans.
Group 4 -	The agent is probably not carcinogenic to humans.

All IARC listed chemicals in Groups 1, 2A, and 2B must be noted on the SDS.

Individual monographs have been published subsequent to Supplement 7. For purposes of compliance with the SDS requirements, the IARC monograph's summary evaluation for the chemical can generally be relied upon. However, in some cases it may be necessary to review the evaluations as a group of compounds may be listed in the summary as carcinogenic. Upon closer examination of the appropriate monograph it may be revealed that IARC had data to support the carcinogenicity of only certain compounds. The compounds where IARC has the data are the only ones covered by the HCS.

IARC also evaluates specific industrial processes or occupations for evidence of increased carcinogenicity. Findings that an occupation is at increased risk of carcinogenicity, without identification of specific causative agents, do not affect SDS requirements.

What CSHOs should look for when evaluating the SDS

When performing an inspection, the CSHO must determine the type of company they are evaluating (downstream user, manufacturer, distributor or importer). If the company is a downstream user or distributor and the CSHO finds an inadequate SDS, the CSHO will initiate the referral procedures in Appendix G of this Instruction. If the company is the manufacturer or importer, the CSHO shall follow the instructions detailed below.

1. When a chemical has been determined to be a carcinogen by NTP or IARC:

   If a chemical appears in the NTP's Report on Carcinogens or is classified by IARC in Group 1, 2A, or 2B, then that information must be presented in Section 11 of the SDS. If the notation does not appear on the SDS, then a citation may be issued where appropriate.[1]

2. If the designation of a carcinogen by NTP or IARC appears on the SDS but the chemical is not classified as a carcinogen by the manufacturer or importer:

   If neither the label nor Section 2 of the SDS indicate the chemical is a carcinogen, but Section 11 of the SDS notes positive findings of carcinogenicity by NTP or IARC, it indicates the hazard evaluation performed by the manufacturer or importer conflicts with the evaluation of NTP and/or IARC.

   In these cases, the CSHO should request that manufacturer or importer provide any data and justification it has for the classification.

   The Area Director (AD) shall refer this information to the Regional Hazard Communication Coordinator who shall refer it to OSHA's Directorate of Technical Support and Emergency Management (DTSEM), Health Response Team (HRT). HRT scientists will conduct a review of the carcinogen evaluation for conformance with 29 CFR 1910.1200(d) and Appendix A, chapter A.6. A bulk sample of the chemical may be needed by the HRT to assist in their review.

   If HRT scientists find that the manufacturer has followed appropriate classification procedures as discussed in Appendix B of this Instruction, then no further action will be taken. If there are deficiencies in the classification procedures (e.g., relevant data not adequately addressed, weight of evidence not performed in accordance with Appendix A.0 and A.6 of the HCS standard, criteria not applied appropriately), a citation may be issued. Table C-2 provides a general guide regarding the labeling and SDS requirements under the HCS.

Table C-2: Guidance for Label and SDS Notations for Carcinogens

Source	Label	SDS
Regulated by OSHA as a carcinogen	X	X
If a manufacturer has NOT performed its own weight of evidence evaluation		
Classification of carcinogen based on positive evaluations from IARC/NTP	X	X
If a manufacturer has performed an appropriate weight of evidence evaluation		

[1] Chemical manufacturers and importers have three months to update the SDS after becoming newly aware of information on a hazard. If a chemical has been listed by IARC or NTP within the past three months, then a citation is not appropriate.

Weight of evidence for carcinogenicity meets the criteria listed in A.6	X	X
If manufacturer finds weight of evidence does not meet Appendix A.6 of the HCS standard		
Listed on NTP Report on Carcinogens (see Note)	Not required	X
Listed in IARC Monographs		
IARC – Group 1 (see Note)	Not required	X
IARC – Group 2A (see Note)	Not required	X
IARC – Group 2B (see Note)	Not required	X
IARC – Group 3	Not required	Not required
IARC – Group 4	Not required	Not required
Other Considerations		
One positive study (see Note)	Not required	X
Category 2 Carcinogen ingredients ≥ 1% in a mixture	X	X
Category 2 Carcinogen ingredients ≥ 0.1% and < 1% in a mixture	Optional	X

Note: If the weight of evidence supports non-classification.

Carcinogenicity of lubricating oils

On December 20, 1985, OSHA published an interpretive notice in the Federal Register regarding the carcinogenicity of lubricating oils (Vol. 50 FR 51852). The notice was published in response to a number of inquiries which were received regarding the applicability of the HCS requirements to naphthenic lubricating oils which are refined using a hydrotreatment process. These types of oils may be found in a number of industrial operations, including ink manufacturing and the production of synthetic rubber.

Positive findings of carcinogenicity by the International Agency for Research on Cancer (IARC) must be reported under the HCS. The IARC Monograph 33 concludes that there is sufficient evidence to indicate that mildly hydrotreated and mildly solvent refined oils are carcinogenic. Therefore, under the requirements of the HCS, producers of such materials must report such findings on the SDS for the substance and include appropriate hazard warnings on labels.

IARC also stated that there is inadequate evidence to conclude that severely hydrotreated oils are carcinogenic, and that there is no evidence to indicate that severely solvent-refined oils are carcinogenic. In the absence of any valid, positive evidence from sources other than IARC regarding the carcinogenicity of severely hydrotreated or severely solvent-refined oils, no reference to carcinogenicity need be included on the SDS and label for such materials. IARC has also concluded that when an oil is refined using sequential processing of mild hydrotreatment and mild solvent refining, there is no evidence of carcinogenicity.

The questions posed to OSHA concerned the process parameters used for mild hydrotreatment. OSHA examined the studies upon which IARC based its positive findings and concluded that any oil will be considered to be mildly hydrotreated if the hydrotreatment process was conducted using pressure of 800 pounds per square inch or less, and temperatures of 800 degrees Fahrenheit or less, independent of other process parameters. If the oil is produced within these parameters, it must be considered to be potentially carcinogenic under the requirements of the HCS.

Appendix D

Petroleum Streams

A petroleum stream includes crude oil and anything derived from crude oil that is:

- a well-defined chemical compound defined by a Chemical Abstracts Service Registry Number, such as butane or propane, aside from impurities and stabilizers; or

- a Substance of Unknown or Variable composition, Complex reaction products or Biological materials (UVCBs) defined by a Chemical Abstracts Service Registry Number.

Petroleum Stream Classification

The obligation to classify the health hazards of petroleum streams under the Hazard Communication standard may be satisfied by following the below guidance, in conjunction with the general guidance found in A.0.1-A.0.3, in the application of the classification criteria in Appendix A of the standard.

1. For hazard classes other than carcinogenicity, germ cell mutagenicity, and reproductive toxicity ("CMR"), a petroleum stream shall be classified as follows:

    a. Where test data are available for the petroleum stream, the classification of the stream will always be based on those data.

    b. Where test data are not available for the stream itself, the classification may be based on a toxicologically appropriate read across from test results of a substantially similar stream. A substantially similar stream is one that has a similar starting material, production process, and range of physico-chemical properties (e.g., boiling point and carbon number) and similar constituent compositions.

    c. If test data are not available either for the stream itself or a substantially similar stream, then the method(s) described in each chapter of Appendix A for estimating the hazards based on the information known will be applied to classify the stream (i.e., application of cut-off values/concentration limits).

2. For the CMR hazard classes:

    a. When reliable and good quality data are available to classify a petroleum stream—based on testing of the stream or the toxicologically appropriate read-across to a substantially similar stream—a weight-of-evidence analysis supported by that data may be relied upon for classification regardless of whether a CMR constituent is present in the stream.

A substantially similar stream is one that has a similar starting material, production process, and range of physicochemical properties (e.g., boiling point and carbon number) and similar constituent compositions.

b. To be reliable and good quality test data, the data must be from one or more tests that reflect appropriate study design and performance. The study or studies must appropriately take into account dose and other factors such as duration, observations, and analysis (e.g., statistical analysis, test sensitivity) so as to conclusively exclude the possibility that the lack of effect(s) is due to a poor study design, e.g., insufficient dose or number of subjects. A study (or studies) is conclusive in this sense if, when viewed in conjunction with all relevant information about the chemical, its results are consistent with the relevant information and allow a strong inference that the lack of effects is not due to a poor study design.

   Where reliable and good quality data are not available on the stream or a substantially similar stream, then the method(s) described in each chapter of Appendix A for estimating the hazards based on the information known will be applied to classify the stream (i.e., application of cut-off values/concentration limits).

Safety Data Sheet (SDS) Disclosure

Many petroleum streams are of unknown or variable concentration, and cannot be represented by unique structures, molecular formulas, or fixed concentration percentages. In addition, petroleum industry test data are largely based on the testing of streams rather than the hundreds or thousands of individual constituents of those streams. In light of these facts, application of the disclosure requirements in Section 3 of table D.1 to petroleum streams may be infeasible and/or undermine the usefulness of the SDS. Thus, SDSs for petroleum streams that are in accordance with the following guidance will be considered to be in compliance with the standard for enforcement purposes.

1. When dealing with petroleum streams, it may be more important for the user to know the concentrations of particular groups of constituents that are toxicologically similar. For example, in the classification of a petroleum stream, it may be more relevant to know the total concentration of a class of constituents such as polycyclic aromatic hydrocarbons (PAH) to understand the health hazards of the stream, rather than knowing the concentration of each particular PAH. Further, information about the presence and concentration of particular constituents of the group might not be available, or even if it were, inclusion of everyone could lead to the listing of hundreds of constituents. This is likely to undermine the effectiveness of the disclosure requirements in Section 3. Thus, where the classifier can show that it is toxicologically appropriate to treat a particular set of constituents as a group, and all of the toxicologically useful information about the constituents in that group is conveyed by treating them as a group, the SDS need only include the name and concentration of that group in Section 3 if present above the cut-

off/concentration limit (or if the group presents a health risk below the cut-off/concentration limit). The foregoing example of PAHs is designed to assist in better understanding the concept of this paragraph. It is not intended to limit the application of this approach to any particular type or group of constituents.

2. Other constituents, such as benzene or n-hexane, that are known to be present in the stream, and that present classified health hazards, must be listed individually in Section 3 along with their concentrations if present above the cut-off/concentration limit (or if the constituent presents a health risk below the cut-off/concentration limit).

3. Where there is "reliable and good quality" data supporting a weight-of-evidence determination that a constituent in a petroleum stream poses no health risk (as per A.0.4.3.3) in a downstream use of the stream, it need not be disclosed on the SDS.

4. Where the classifier does not know the exact concentration of a constituent or group of constituents included in Section 3 of the SDS, it may use a range of concentrations instead. Concentration ranges, if used, must be based on the information available to the classifier, such as analysis results, product specifications, or nature of the process, and the high end of the range reported may not affect the reported hazard classification.

Appendix E

HCS 2024 Compliance Dates

Compliance Date	**Requirement(s)**	**Who**
May 19, 2026	Update labels and SDSs for substances	Chemical manufacturers, importers, distributors and other employers
November 20, 2026	For substances, update workplace labels, hazard communication program and training as necessary	Employers
November 19, 2027	Update labels and SDSs for mixtures	Chemical manufacturers, importers, distributors and other employers
May 19, 2028	For mixtures, update workplace labels, hazard communication program and training as necessary	Employers
Transition Period July 19, 2024 to the compliance dates noted above	May comply with either HCS 2024 or HCS 2012, or both	Chemical manufacturers, importers, distributors, and other employers

Appendix F

Pictograms and Hazards

Health Hazard	Flame	Exclamation Mark
		
· Carcinogenicity · Germ Cell Mutagenicity · Reproductive Toxicity · Respiratory Sensitizer · Specific Target Organ Toxicity - Single Exposure (Categories 1 & 2) - Repeated Exposure (Categories 1 & 2) · Aspiration Hazard	· Flammables - Gases (including pyrophoric gases) - Liquids (Categories 1-3) - Solids · Pyrophoric solids and liquids · Self-Heating Substances and Mixtures Which, in Contact with Water, Emit Flammable Gas · Self-Reactives (Types B - F) · Organic Peroxides (Types B - F) · Desensitized Explosives · Aerosols (Categories 1 & 2) - Chemical Under Pressure (Categories 1 & 2)	· Irritant (skin and eye) · Skin Sensitizer · Acute Toxicity (harmful) – Oral (Category 4) Dermal (Category 4) Inhalation (Category 4) · HNOC (Non-Mandatory) Specific Target Organ Toxicity - Single Exposure (Category 3: respiratory tract irritant or narcotic effects) · Hazardous to Ozone Layer (Non-Mandatory)*
Gas Cylinder	**Corrosion**	**Exploding Bomb**
		
· Gases Under Pressure · Chemicals Under Pressure (Categories 1 - 3)	· Skin Corrosion · Eye Damage · Corrosive to Metals · Corrosive to the Respiratory Tract	· Explosives - Unstable explosive - Division 1.1- Division 1.4) · Self-Reactives (Types A & B) · Organic Peroxides (Types A & B)

Flame over Circle	Environment (Non-Mandatory)	Skull and Crossbones
		
· Oxidizing Gases, Liquids and Solids	· Aquatic Toxicity*	· Acute Toxicity – Oral (Categories 1-3) Dermal (Categories 1-3) Inhalation (Categories 1-3)

Note: Certain categories of self-reactive chemicals and organic peroxides require that the label include two pictograms for the same hazard—both the flame and exploding bomb pictograms.

*This hazard is included in the GHS and it is not prohibited to include it on labels under the HCS.

Appendix G

Referral Procedures and
Sample Letter, Safety Data Sheet/Label Query

The following procedures apply in situations where the manufacturer's, importer's, or distributor's safety data sheet (SDS) or label is inadequate or deficient, inappropriate language (e.g., "OSHA approved") is used on the label or SDS, or trade secret information is not disclosed. These procedures also apply when the manufacturer, importer or distributor refuses to supply an SDS to a downstream user.

1. If an employer does not have an SDS but has made a good faith effort to contact the manufacturer, importer or distributor because they have not received the SDS, the Area Office may be contacted to provide assistance. See X.G.4. of this Instruction.

2. Employers assume no responsibility for the content and accuracy of the SDS provided to them by the manufacturer, importer or distributor, unless the employer changes the SDS. See X.G.4.a. of this Instruction.

3. Compliance safety and health officers (CSHOs) will collect copies of any SDS with inaccurate or deficient information for referral to the appropriate Area Office or State Plan that has jurisdiction over the manufacturer, importer or distributor.

4. Referral procedures

    a. The originating Area Office (the one with the inadequate SDS or label) shall provide documentation of the issues (e.g., a list of errors) and a copy of the SDS and/or label by fax or email to the Area Office with jurisdiction over the manufacturer, importer or distributor. The originating Area Office must phone the Area Office with jurisdiction to ensure that the documents are received, understood, and that the Area Office with jurisdiction knows who to contact in the originating Area Office.

    b. In the event that the CSHO needs SDS information quickly as part of a current inspection, he/she may contact the manufacturer, importer or distributor directly prior to making the referral to the Area Office in whose jurisdiction the manufacturer is located.

    c. The Area Office with jurisdiction receiving the referral shall contact the manufacturer, importer or distributor using the contact letter provided in this appendix.

        i. If the manufacturer, importer or distributor does not respond or provides an inadequate response, the appropriate Area Office shall open an inspection.

ii. The Area Office within whose jurisdiction the manufacturer, importer or distributor is located will ensure that results from the referral are provided to the Area Office or State Plan where the referral originated.

State Plan program offices shall follow the referral procedures as required by the respective State Plan.

Sample Letter

Date
Company Name
Street Address
City, State, ZIP Code

Dear (Name or Position of Responsible Party):

Representatives of the Occupational Safety and Health Administration (OSHA)/or State Plan designated agency recently visited/or corresponded with (company name), which purchases the following chemical(s) from your company:

(List chemicals, products)

OPTION 1:
At the time of the visit, (company name) did not have safety data sheets (SDSs)/labels for the above-listed products, despite a prior request to your company.

OPTION 2:
At the time of the visit, safety data sheets (SDSs)/labels supplied by your company were found to be deficient in the following areas:
(Describe the specific deficiencies.)

You are required under OSHA's Hazard Communication standard (29 CFR 1910.1200) to classify the hazards of the materials, label containers, and provide the SDSs for all hazardous chemicals which you produce or import. A copy of the standard is available at www.osha.gov.

Please immediately send properly completed safety data sheets/labels for the chemicals listed above to your customer and a copy to OSHA. If the SDSs were deficient, you are required to send revised copies to all of your customers with the first shipment after an SDS/label is revised. If this information is not received within 20 working days, an inspection of your establishment may be conducted.

Thank you for your assistance. If you have any questions regarding this matter, please feel free to contact me at _____.

Sincerely,

Area Director

Appendix H

Guide for Reviewing Safety Data Sheet (SDS) Compliance

NOTE: This guide has been developed for use as an optional aid during inspections. The information contained in this Appendix mirrors the information required in Appendix D of the standard, a mandatory appendix.

If a CSHO is reviewing an SDS for compliance, the following list of required elements may be helpful:

1. Section 1, Identification
   a. Product identifier that is on the label.
   b. Other means of identification.
   c. Recommended use and restrictions of use.
   d. Contact information for the responsible party (name, U.S. address, U.S. phone number).
   e. Emergency number – A number that reaches a knowledgeable person on the other end. There is no requirement for the emergency number to be staffed 24 hours per day if the SDS specifies the restrictions on the contact hours. The emergency contact number can be for a company contracted to provide information in the case of an emergency. The knowledgeable person must be able to answer questions and be understandable (e.g., speak English).

      Note: If the company name, address and phone number are located at the top of the page instead of in Section 1, this is a *de minimis* violation and a citation shall not be issued.

2. Section 2, Hazard(s) identification
   a. Hazard Classification(s) – The Hazard Classification includes the hazard class and the category, e.g., Flammable Liquid, Category 1, unless that information is unknown for the chemical. This includes hazards classified under paragraph (d)(1)(i).
   b. Signal word(s), hazard statement(s), symbols (pictograms without the border) or a description of the symbol, precautionary statement(s) (not including hazards not otherwise classified and hazards identified and classified under paragraph (d)(1)(ii)).
   c. Hazards classified under paragraph (d)(1)(ii).
   d. Description of any hazards not otherwise classified (HNOC) that have been identified during the classification process.
   e. Unknown acute toxicity percentage if the ingredient(s) with unknown acute toxicity is present at a concentration ≥ 1% and the mixture is not classified based on testing of the mixture as a whole.

3. Section 3, Composition/information on ingredients

a. For substances:
    a. Chemical name.
    b. Common name and synonyms.
    c. Chemical Abstract Service (CAS) Registry number and other unique identifiers.
    d. If the chemical is a substance, impurities, and stabilizing additives (constituents) which are themselves classified and which contribute to the classification of the substance.
b. For mixtures, in addition to the information required for substances, the SDS must include the chemical name, CAS number or other unique identifier, and concentration (exact percentage) or concentration ranges of all ingredients which are classified as health hazards in accordance with paragraph (d) and
    1) are present above their cut-off/concentration limits; or
    2) present a health risk below the cut-off/concentration limits.
    i. Note: When CAS number is not available or claimed as a trade secret, the preparer must indicate the source of the unique identifier. Concentration ranges may only be used where a trade secret is claimed in accordance with paragraph (i), for batchto-batch variability, and for a group of substantially similar mixtures.
    ii. Where a trade secret is claimed in accordance with paragraph (i) of §1910.1200, a statement that the specific chemical identity, and/or concentration (exact or range) of the composition has been withheld as a trade secret is required. When the concentration or concentration range is withheld as a trade secret, the prescribed concentration ranges used in §1910.1200(i)(1)(iv) – (vi) must be used.

4. Section 4, First-aid measures
    a. Necessary first aid measures by route of exposure.
    b. The most important symptoms and when they occur (acute/delayed).
    c. Whether medical attention is needed immediately and any special treatment, if necessary.

5. Section 5, Fire-fighting measures
    a. Suitable (and unsuitable) extinguishing media.
    b. Any specific hazards caused by combustion of the material.
    c. Special PPE and precautions for fire-fighters.

6. Section 6, Accidental release measures
    a. Precautions, PPE, and emergency procedures required.
    b. Methods/materials for containment and cleanup.

7. Section 7, Handling and storage
    a. Precautions for safe handling.
    b. Safe storage conditions, including incompatibilities.

8. Section 8, Exposure controls/personal protection

a. For all ingredients or constituents in Section 3, OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV)®, other exposure limit(s) or range(s) used or recommended by the SDS preparer (including ceiling and other short-term limits).
b. Appropriate engineering controls.
c. Protective measures (e.g., PPE).

9. Section 9, Physical and chemical properties
   a. Physical state
   b. Color
   c. Odor (includes odor threshold)
   d. Melting point/freezing point
   e. Boiling point (or initial boiling point or boiling range)
   f. Flammability
   g. Lower and upper explosion limit/flammability limit
   h. Flash point
   i. Auto-ignition temperature
   j. Decomposition temperature
   k. pH
   l. Kinematic viscosity
   m. Solubility
   n. Partition coefficient n-octanol/water (log value)
   o. Vapor pressure (includes evaporation rate)
   p. Density and/or relative density
   q. Relative vapor density
   r. Particle characteristics

10. Section 10, Stability and reactivity
    a. Reactivity
    b. Chemical Stability
    c. Possibility of hazardous reactions including those associated with foreseeable emergencies
    d. Conditions to avoid (e.g., static discharge, shock, vibration)
    e. Incompatible materials
    f. Hazardous decomposition products

11. Section 11, Toxicological information
    a. Routes of exposure.
    b. Symptoms related to the physical, chemical and toxicological characteristics.
    c. Immediate, delayed, and chronic effects from short- and long-term exposure.
    d. Numerical estimates of toxicity (such as acute toxicity estimates).
    e. Interactive effects (information on interactions should be included if relevant and readily available)

f. Whether a chemical is listed by NTP, IARC or OSHA as a carcinogen.
g. When specific chemical data or information is not available, the preparer must indicate if alternative information is used and the method used to derive the information (e.g., where the preparer is using information from a class of chemicals rather than the exact chemical in question and using SAR to derive the toxicological information).

12. Section 12, Ecological information (Non-mandatory). The lack of information in these sections is not citable; however, this heading is required and its absence would be a *de minimis* violation, see note 1 to 1910.1200(g)(2).

13. Section 13, Disposal considerations (Non-mandatory). The lack of information here is not citable, however this heading is required and its absence would be a de minimis violation, see note 1 to paragraph 1910.1200(g)(2).

14. Section 14, Transport information (Non-mandatory). The lack of information here is not citable, however this heading is required and its absence would be a de minimis violation, see note 1 to paragraph 1910.1200(g)(2).

15. Section 15, Regulatory information (Non-mandatory). The lack of information here is not citable, however this heading is required and its absence would be a de minimis violation, see note 1 to paragraph 1910.1200(g)(2).

16. Section 16, Other information, including date of preparation or last revision.
    a. Date of preparation or last revision – This does not mean date of printing. The use of the statement "valid on the date of printing only" is inconsistent with the requirements of the HCS as the SDS is intended to be a reference document that reflects the most accurate and current information about a specific hazardous chemical that is available at the time the SDS is developed.
    b. If new information has become available, the SDSs must be updated within three months, see 1910.1200(g)(5).

If there is no relevant information for a section or subsection (e.g., flash point), the SDS must state that no applicable information is available (NA or none).

Appendix I

Other OSHA Standards Amended by HCS 2012

These amendments remain relevant following publication of the HCS 2024. However, it should be noted that the HCS 2024 did not further modify any of these other standards affected by HCS 2012.

Standard Number	Standard Name
1910.106	Flammable liquids
1910.107	Spray finishing using flammable and combustible materials
1910.119	Process safety management of highly hazardous chemicals
1910.120	Hazardous waste operations and emergency response
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 liquids or liquids with flashpoints greater than 199.4°F (93°C).
1910.252	Welding, cutting, and brazing
1910.1001	Asbestos
1910.1003	13 Carcinogens
1910.1017	Vinyl chloride
1910.1018	Inorganic arsenic
1910.1025	Lead
1910.1026	Chromium (VI)
1910.1027	Cadmium
1910.1028	Benzene
1910.1029	Coke oven emissions
1910.1043	Cotton dust
1910.1044	1,2-dibromo-3-chloropropane
1910.1045	Acrylonitrile
1910.1047	Ethylene oxide
1910.1048	Formaldehyde
1910.1050	Methylenedianiline
1910.1051	1,3-Butadiene
1910.1052	Methylene chloride
1910.1450	Occupational exposure to hazardous chemicals in laboratories
1915.1001	Asbestos
1915.1026	Chromium (VI)
1926.60	Methylenedianiline
1926.62	Lead
1926.64	Process safety management of highly hazardous chemicals
1926.65	Hazardous waste operations and emergency response
1926.152	Flammable liquids

1926.155	Definitions applicable to this subpart
1926.1101	Asbestos
1926.1126	Chromium (VI)
1926.1127	Cadmium

Appendix J

Other Standards to Consider When Citing Chemical Exposures with No PEL

Specific Standards. When employees have been overexposed to hazardous chemicals with no OSHA PEL, Area Offices should also consider issuing citations under the following standards, and grouping them with the 5(a)(1) violation. Applicable directives are referenced below. Standards potentially citable are presented as being either generally applicable or operation specific. Please also refer to parallel standards and directives for other industries (e.g., construction, maritime, and agriculture) where they apply.

Standards Generally Applicable:

- 29 CFR 1910 Subpart I, *Personal Protective Equipment*.

  - 1910.132 *General Requirements*. Employers must conduct a hazard assessment to determine whether hazards that require the use of personal protective equipment are present, or likely to be present [paragraph (d)(1)], and to determine what personal protective equipment is required to prevent worker exposure to the hazards [paragraph (d)(1)(i)]. This standard can also be cited if the employer has not documented a required hazard evaluation [paragraph (d)(2)]. *See also* CPL 02-01-050, *Enforcement Guidance for PPE*, February 10, 2011.

  - 1910.133, *Eye and Face Protection*. This standard can be cited when the employer failed to ensure that employees use appropriate eye or face protection when exposed to chemical hazards to the eyes or face [paragraph (a)(1)].

  - 1910.134, *Respiratory Protection*. This standard may be cited when the employer has failed to evaluate respiratory hazards [paragraph (d)(1)(iii)], or has not provided respirators when workers are exposed to hazardous levels of chemicals, including those without PELs [paragraph (a)(2)]. See also CPL 02-00-158*, Inspection Procedures for the Respiratory Protection Standard*, June 26, 2014.

Standards Applicable to Specific Operations:

- 29 CFR 1910.120, *Hazardous Waste Operations and Emergency Response*. This standard can be cited when the employer fails to conduct an initial site characterization [paragraph (c)(2)], fails to provide appropriate PPE [paragraph (c)(5)(i)], or fails to monitor operations conducted at hazardous waste sites or during emergency responses to hazardous substance releases [paragraph (h)(1)(i)]. See also CPL 02-02-071, *Technical Enforcement and Assistance Guidelines for Hazardous Waste Site and RCRA Corrective Action Clean-up Operations HAZWOPER,* November 5, 2003; and CPL 02-02-073,

Inspection Procedures for 1910.120, Paragraph (q): Emergency Response to Hazardous Substance Release, August 27, 2007.

- 29 CFR 1910.146, *Permit-Required Confined Space*. Among other provisions, the employer can be cited for failure to test or monitor the permit space as necessary to determine if acceptable entry conditions exist prior to entry [paragraph (d)(5)(i)], and if those acceptable conditions are being maintained during the course of entry operations [paragraph (d)(5)(ii)]. See also CPL 02-00-100, *Application of the Permit-Required Confined Spaces Standard,* May 5, 1995.

- 29 CFR 1926.1200, *Confined Spaces in Construction*. Among other provisions, the employer can be cited for failure to inform exposed employees of the presence of permit spaces [paragraph 1203(b)(1)], failure to test or monitor a permit space continuously or as necessary to determine if acceptable entry conditions exist prior to entry [paragraph 1204(e)(1)], and failure to test or monitor a permit space to determine if those acceptable conditions are being maintained during the course of entry operations [paragraph 1204(e)(2)]. An employer may also be cited for failure to make an SDS available to a medical facility treating a worker exposed to a substance for which an SDS is available.

Appendix K

Other Directives Changed due to HCS 2012*

The following table lists OSHA directives predating HCS 2012 or this Instruction, which contain specific text(s) referencing HCS 1994 or cancelled CPL 02-02-038. Revisions to these directives were generally minor in scope, e.g., to replace MSDS with SDS, but some of these directives' revisions were more significant in scope to address updated HCS-specific procedures (e.g., hazard communication training, format of SDSs, labeling of carcinogens, signs for regulated areas). *This Appendix was maintained for informational purposes following the publishing of the HCS 2024. Directives that are no longer effective have been removed.

Directive Short Title	Directive Full Title	Directive Number	Directive Date	Scope[1] of Revisions by HCS 2012
Asbestos	Inspection Procedures for Occupational Exposure to Asbestos Final Rule 29 CFR 1910.1001	CPL 02-02-063	01/09/1996	Minor
Butadiene	1,3-Butadiene	CPL 02-02-066	10/30/1997	Minor
Catastrophes	Response to Significant Events of Potentially Catastrophic Consequences	CPL 02-00-094	07/22/1991	Minor
Confined Space	Application of the Permit-Required Confined Spaces (PRCS) Standards	CPL 02-00-100	05/05/1995	Minor
Formaldehyde	Changes to CPL 2-2.52 [HCHO], change 1, 10/7/1991	CPL 02-02-052 (CH-1)	10/07/1991	Minor
Formaldehyde	Enforcement Procedure for Occupational Exposure to Formaldehyde	CPL 02-02-052	11/20/1990	Major
HAZ WASTE	Tech Enforcement and Assistance Guidelines for Haz Waste Site and RCRA HAZWOPER 1910.120 (b)-(o)	CPL 02-02-071	11/05/2003	Major
HAZWOPER	Inspection Procedures for 29 CFR 1910.120 and 1926.65, Paragraph (q)	CPL 02-02-073	08/27/2007	Minor

Directive Short Title	Directive Full Title	Directive Number	Directive Date	Scope[1] of Revisions by HCS 2012
Hex Chrome	Inspection Procedures for the Chromium (VI) Standards	CPL 02-02-074	01/24/2008	Major
Lead - Construction	29 CFR 1926.62, Lead Exposure in Construction; Interim Final Rule-Inspection and Compliance Procedures	CPL 02-02-058	12/13/1993	Major
Methylene Chloride	Inspection Procedures for Occupational Exposure to Methylene Chloride Final	CPL 02-02-070	12/14/2001	Major
NEP - Hex Chrome	National Emphasis Program - Hexavalent Chromium	CPL 02-02-076	02/23/2010	Minor
NEP - Lead	National Emphasis Program-Lead	CPL 03-00-009	08/14/2008	Minor
Pyrotechnics	Compliance Policy for Pyrotechnics	CPL 02-01-053	10/27/2011	Minor
Tool Shed	Longshoring and Marine Terminals "Tool Shed" Directive	CPL 02-00-154	07/31/2012	Minor
Written Programs	Citation Policy for Paperwork and Written Program Requirement Violations	CPL 02-00-111	11/27/1995	Minor

[1] Revisions made to these other OSHA directives were handled as either:

- Minor in scope - Very minor edits to incorporate HCS 2012 terms, such as: “material safety data sheet” to “safety data sheet,” “MSDS” to “MSDS/SDS,” “hazard determination” to “hazard classification,” and/or update reference(s) to the HCS Directive with this 2015 revision.
- Major in scope - One or more revised paragraphs to incorporate HCS 2012 procedures, such as: labeling for carcinogens or wastes, format of SDS, hazard communication training, meaning of health hazard, and/or changed text of warning signs (lead, asbestos, etc.).