May 19, 2021

Maureen Ruskin
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Occupational Safety & Health Administration
U.S. Department of Labor
200 Constitution Avenue, NW
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Sent via email to: ruskin.maureen@dol.gov and submitted to Regulations.Gov Docket OSHA-2019-0001

Re: ACC comments on Proposed Amendments to the Hazard Communication Standard

Dear Ms. Ruskin:

On behalf of the American Chemistry Council (ACC)[1] and our member companies, we greatly appreciate the opportunity to provide comments on the Occupational Safety and Health Administration's (OSHA) Notice of Proposed Rulemaking (NPRM) to update the existing Hazard Communication Standard (HCS) to conform with the United Nations' Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Version 7. Clear and efficient implementation of GHS and ensuring working protection continues to be critically important to ACC. We look forward to engaging with OSHA and other stakeholders throughout the rulemaking process.

ACC members have closely reviewed the materials provided by OSHA during this rulemaking process and are submitting substantive, technical comments included as **Attachment 1: American Chemistry Council Detailed Comments on OSHA's HCS NPRM**. We have also highlighted our two priority concerns directly below, and will expand upon them in this introduction:

1. The draft expanded scope of §1910.1200(d)(1) should not include downstream hazards; and
2. OSHA should align the HCS to the UN GHS Purple Book and the Canadian standard to the maximum extent possible, while retaining flexibility.

Proposed Amendments to §1910.1200(d)(1)

As we understand the proposed revision of §1910.1200(d)(1), it would require the upstream manufacturer or importer of a chemical to classify that chemical to reflect all hazards of the product as shipped, including changes in physical form, downstream chemical reactions, the products of those downstream chemical reactions, and foreseeable emergencies involving any or all of the above.

[1] ACC represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care®, common sense advocacy designed to address major public policy issues, and health and environmental research and product testing. The business of chemistry is a $565 billion enterprise and a key element of the U.S. economy. It is one of the nation's largest exporters, accounting for ten cents out of every dollar in U.S. exports.

The Agency has asserted that this proposed revision of §1910.1200(d)(1) is merely a clarification of what is already required by §1910.1200. ACC respectfully disagrees. Based on a careful review of the history of the development and implementation of the HCS, we believe it is clear that the proposal to revise §1910.1200(d)(1), as described above, is a substantive change that would greatly expand the scope and compliance requirements of the hazard classification requirements. At most, as demonstrated below, the currently interpreted version of 1910.1200(d)(1) requires the chemical manufacturer or importer to classify its chemical to reflect: the hazards of the chemical as shipped (which would include any hazards posed by any instability of the product); and hazards resulting from changes in the physical form of the chemical. Currently, the HCS already provides for additional hazards[2] to be identified and communicated in the SDS Section 10, thereby making it unnecessary to include them by requiring the expansion of the scope of the classifications in Section 2 of the SDS.

OSHA's proposal appears to be based on two fundamentally flawed premises. The first erroneous premise is that it would be appropriate to conflate two distinct aspects of the HCS -- the scope of the HCS with respect to an employer's workplace and the scope of the hazard classification (known as the "hazard determination" prior to HCS 2012). The second erroneous premise is that OSHA actually and lawfully took that step at some unspecified point in a rulemaking that adopted or amended the HCS.

The scope of the HCS with respect to an employer's workplace extends to "any chemical which is known to be present in the workplace in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency." 1910.1200(b)(2). Foreseeability is viewed from the perspective of what the diligent downstream employer can reasonably anticipate might occur in its facility; it has no application to an upstream supplier. In contrast, the hazard classification obligation is imposed on chemical manufacturers and importers, and applies to the "chemicals produced in their workplaces or imported by them." 1910.1200(d)(1).

A simple example helps to clarify the critical distinction between the scope of the HCS and the scope of the hazard classification. Assume Chemical A, produced by Upstream Manufacturer A, and Chemical B, supplied by Upstream Manufacturer B, are supplied to Downstream Purchaser (often unknown to Upstream Manufacturers A and B). Assume Downstream Purchaser reacts Chemical A with Chemical B (often after adding each to a mixture of chemicals), in its workplace, to create Chemical C and Byproduct X, which may yield Decomposition Product Y. The reaction that produced Chemical C and Byproduct X took place in the workplace of Downstream Purchaser, not the workplace of Upstream Manufacturers A or B. Therefore, per 1910.1200(c), Downstream Purchaser is the chemical manufacturer of Chemical C and Byproduct X (and potentially Decomposition Product Y), and Downstream Purchaser (rather than Upstream Manufacturers A and B) is the party responsible for classifying and producing an SDS for Chemical C and Byproduct X. 1910.1200(b)(1) and 1910.1200(d)(1).[3]

Under the current HCS, Upstream Manufacturers A and B are required to supply SDSs for Chemicals A and B, respectively, that classify those chemicals **based on their inherent hazards**, not the hazards of

[2] Hazards associated with conditions associated with normal use and foreseeable emergency are covered in Section 10, e.g., reactivity, chemical stability, hazardous reactions, conditions to avoid, incompatible materials, and hazardous decomposition products.

[3] OSHA acknowledges this in its HCS compliance directive, stating:

> If a downstream employer meeting the definition of a manufacturer alters a product (e.g., chemically react) …, then the downstream user becomes the responsible party for the product and needs to consider all the known or intended uses of the product.

the reaction of Chemicals A and B or the products of that reaction. This reflects OSHA's longstanding position that the hazard determination/classification is to be based on the inherent hazards of the chemical being classified,[4] not the varying hazards of every downstream chemical reaction in which a chemical may be involved or the varying hazards of every reaction product of any of those downstream reactions. The aggregate combination of the SDSs created by all upstream suppliers to Downstream Purchaser and the chemical reactions performed by Downstream Purchaser would, consistent with 1910.1200(b)(2), address the hazards of "any chemical which is known to be present in the workplace in such a manner that employees may be exposed under normal conditions of use or in a foreseeable emergency." Under OSHA's proposal, Upstream Manufacturers A and B, as well as any other manufacturer or importer of a chemical contained in or involved in the reaction of Chemicals A and B would be required to classify their chemicals to reflect the hazards of that reaction and the products of that reaction. To expand upon the simplified example with real-world conditions, Chemicals A and B (or, if either is a mixture, all, or a portion of the ingredients in Chemicals A and B) could be used by numerous other downstream purchasers in numerous other reactions.

Not only is OSHA's approach incompatible with the current language of the HCS, it is not supported in the text or regulatory history of the HCS. The original version of the HCS was adopted on November 25, 1983, and was last amended in March of 2012. OSHA has not identified a single rulemaking document (Final Rule, NPRM, Preliminary or Final Technical/Economic Feasibility Analysis, RegFlex Analysis or Paperwork Reduction Act Analysis), issued prior to February 16, 2021, stating or indicating that the hazard determination/classification performed under Section 1910.1200(d)(1) must reflect the hazards of downstream chemical reactions and their products. Nor has OSHA identified a single guidance document issued contemporaneously with the 1983 HCS or within the subsequent two decades supporting that position. The purpose of the proposed rule, finalized as HCS 2012, was to achieve global harmonization by making the requirements of the HCS consistent with the provisions of the GHS.[5] The extension of the hazard classification to downstream chemicals is inherently incompatible with global harmonization, as no other jurisdiction has this requirement.

For several reasons, OSHA guidance for "byproducts," stating that "a manufacturer's or importer's hazard determination or hazard classification must anticipate the full range of downstream uses of their products and account for any hazardous byproducts which may be formed," does not provide legal support for OSHA's position. First, that phrase was proposed (in 2004) for inclusion and removed (around 2006) by OSHA from what became OSHA's official *Guidance for Hazard Determination*[6]. In 2016, following the adoption of HCS 2012, OSHA issued an updated guidance document, *Hazard Classification*

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[4] 1910.1200, A.4.2.2.4.2 and A.6.1. In the preamble to HCS 2012, OSHA stated:

> [C]hemical manufacturers and importers tend to have greater knowledge and scientific expertise with respect to the **composition of the chemicals they make or import** than do downstream employers. See 48 FR at 53322 (Nov. 25, 1983). Therefore, manufacturers and importers are usually in the best position to assess the **inherent hazards** associated with them. [77 Fed. Reg. 17601, col. 3.]
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> **Both the HCS and the GHS are based on identifying and communicating the inherent hazards of chemicals.** [77 Fed. Reg. 17693, col. 3.]

[5] Data and Analysis in Support of an Economic Analysis of Proposed Changes to the OSHA Hazard Communication Standard, Revised Final Report, September 30, 2009. P. 3.

[6] https://www.osha.gov/hazcom/ghd053107

Guidance.[7] The 2016 document also does not contain any language, explicit or otherwise, indicating that the HCS requires classification to reflect the hazards of downstream chemical reactions or the products of those reactions. Second, OSHA has overlooked other important guidance indicating that the quoted language has a significantly narrower meaning. Third, its scope is explicitly limited to byproducts, not the expansive scope of all products of downstream chemical reactions. Fourth, the OSHA guidance is not part of the HCS; it was not developed in a rulemaking or even issued contemporaneously with any rulemaking, but rather 3 ½ years later.

Finally, OSHA attempted to support its position with previous guidance addressing three unique products for which it has asserted that the HCS requires the chemical manufacturer to classify its product based on the hazards of a downstream chemical reaction: (1) "epoxy syringes"; (2) mixing ready-mix cement or concrete; and (3) fuels (gasoline and diesel fuel). Regardless of what tort law might require in any particular state, we respectfully submit the current HCS cannot be interpreted to support OSHA's position. All involve unique situations in which the manufacturer has designed the entire downstream reaction, or, from a simplistic view, there is only one way to use the product.

Minimizing Dis-harmonization within the Globally Harmonized System

Within the Preamble of the NPRM and other materials provided by the Agency, OSHA has stated that the proposed changes to the HCS will improve and enhance worker protection by "facilitating international trade through increased alignment". ACC notes that there are multiple instances throughout the proposed rule where OSHA has proposed a change to the HCS that is in direct conflict with the UN GHS. We have an overarching concern regarding these instances (which we have catalogued via our responses in Attachment 1), as they appear to directly conflict with the specified purpose of implementing UN GHS at the national level. Additionally, they appear to be misaligned with the Agency's previous statements: in both the 2009 NPRM and the 2012 Final Rule, OSHA stated that one of its primary principles was to ensure that the proposed changes were aligned with GHS, and stressed the importance of consistent implementation around the world.[8]

When implementation of the UN GHS by specific countries deviates from the UN version of GHS, the perceived benefits of harmonization substantially decrease for all stakeholders. While we fully understand the complicated task of reconciling HCS with UN GHS, we strongly urge OSHA to pull directly from the UN GHS wherever possible, while retaining flexibility for existing provisions that provide similar levels of protection. For nearly all stakeholders, the benefits of global harmonization accrue progressively. Harmonization has maximum added value if adopted in all major regulatory schemes for

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[7] *Hazard Communication, Hazard Classification Guidance for Manufacturers, Importers, and Employers*, OSHA 3844-02 2016. https://www.osha.gov/sites/default/files/publications/OSHA3844.pdf

[8] 77 FR 17697 co. 3 and 74 FR 50385 co 1 OSHA stated

> However, the primary principles followed by OSHA in developing this proposal were to ensure that the modifications maintain or enhance the protections of the current standard, and that the modifications are consistent with the negotiated provisions of the GHS.
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> One of the issues of concern regarding implementation by some other countries has been deviation from the GHS itself. **Because GHS is intended to be globally implemented, efforts by countries to deviate in a collective manner from the GHS, rather than maintain consistency, defeats the purpose and consequently, lessens the benefits of the GHS**. OSHA will continue to seek opportunities to ensure coordination of implementation and promote harmonization, both internationally and bilaterally.

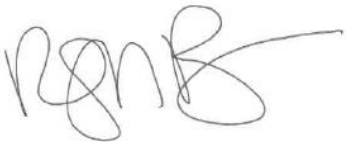
chemical classification. Consistent implementation among the major trading partners of the world is crucial to realize the benefits of the GHS system. For this reason, the alignment, insofar as possible, of all national and regional GHS systems is critical to maintaining the core value of the UN GHS system.

In the spirit of alignment and the US-Canada Regulatory Cooperation Council (RCC) commitments, ACC urges OSHA to open a dialogue on the proposed changes and misaligned elements with its Health Canada. Canada is an extremely important market for the US chemical industry – it is one of our most vital trading partners, as US companies export over $21.7 billion chemicals to Canada every year. We cannot overstate the importance of cooperation between the US and Canada with respect to updating of HCS and WHMIS; this cooperation is crucial to minimizing trade barriers and aiding in compliance on both sides of the border.

Conclusion

ACC appreciates the opportunity to provide input to this important process and is looking forward to continued dialogue with the Agency throughout this rulemaking process. Please do not hesitate to contact me at raleigh_davis@americanchemistry.com with any comments, or if you require additional information.

Sincerely,



Raleigh Davis
Director, Global Affairs
American Chemistry Council

cc: Janet Carter

Attachment 1: American Chemistry Council Detailed Comments on OSHA's HCS NPRM

Citation/Reference	Background/Question Posed by OSHA and ACC Edits to Proposed Text	ACC Responses to Questions and Rationale
Appendix A.2 Skin Corrosion/Irritation	GHS Rev 8 expanded the use of non-animal test methods in Chapter 3.2 (skin corrosion/irritation). These changes include recognition of specific in vitro test methods. Should OSHA adopt Chapter 3.2 from the GHS Rev. 8 with all of the revisions to the classification scheme? Please explain your opinion and provide any relevant data or other information.	ACC thanks OSHA for taking into consideration the additional flexibility that the inclusion of Chapter 3.2 (specifically Table 3.2.1) provides. As an organization, we promote of the use of non-animal test methods for classification purposes for the reasons that OSHA cites in the text. ACC is generally supportive of this change, but would like to see additional clarification from the Agency regarding the specific regulatory text proposed. It is critical to retain flexibility in classification, and avoid an overly prescriptive inclusion of Table 3.2.1. If OSHA is able to arrive at regulatory text that accomplishes this objective, ACC would accept it. We suggest that OSHA consider adding the appropriate tables from UN GHS (Table 3.2.6 and 3.2.7) to either the standard or an updated Guidance Document.
Appendix B Table XIV – Rev. 8 classification Criteria for Aerosol	GHS Rev. 8 lists classification criteria for aerosols as text in a table. Should OSHA adopt the classification criteria for the aerosols hazard class as presented in the GHS Revision 8 table? While the criteria themselves would not change as compared to OSHA's existing standard, adopting the precise language in the GHS text may minimize confusion.	As this change aligns the HCS more closely with the UN GHS, ACC is supportive of OSHA adopting this Table into HCS. ACC suggests maximizing harmonization to the greatest extent possible between HCS and GHS to ease the regulatory burden on our members.
Appendix B	In Rev. 8, GHS adopted a new hazard category within the aerosols class: chemicals under pressure. These products function similarly to aerosol dispensers (UN 1950), but are packed in pressure receptacles. OSHA recognizes that adopting this hazard classification would bring some chemicals under the purview of the HCS that currently are not covered (e.g., certain aerosols in refillable containers).	We are generally supportive of this change, and also request clarification from the Agency regarding the specific regulatory text proposed. A number of our member companies have products that fit into this hazard class and welcome a standardized way to classify and warn for this potential hazard.

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	Should OSHA consider adopting the new hazard category of chemicals under pressure in the aerosol chapter?	
§ 1910.1200 Appendix C C.2.4.10 Table XV	GHS Rev. 8 includes additional revisions to precautionary statements, most notably an overhaul of the medical response precautionary statements. OSHA seeks comments on the potential benefits or drawbacks associated with adopting these revised medical response statements, or other precautionary statements that are part of the GHS Rev 8. OSHA's existing enforcement policy, as described in the OSHA hazard communication directive, addresses situations in which employers may use precautionary statements from a more recent version of the GHS; does the policy described in the directive provide sufficient flexibility?	ACC urges OSHA to keep this statement as it is proposed in Version 7 and not adopt the proposed revised language in Version 8. The Version 8 language does not provide additional flexibility and is overly prescriptive. Additionally, the changes in medical statements would not provide any additional protection, nor would they "save manufacturers time or money compared to the existing statements". Requiring all manufacturers and importers to utilize these statements would impose significant burden on our member companies, as they would have to revise significant portions of the labels with little to no meaningful additional clarification provided to users.
§ 1910.1200 (d)(1) Hazard Classification	*Proposed Regulatory Text*: (d)(1); The hazard classification shall include any hazards associated with a change in the chemical's physical form or resulting from a reaction with other chemicals under normal conditions of use *ACC Edits* ACC members would prefer the removal of this section, given that we feel it's' built on a tenuous evidence. However, if OSHA proceeds with this, we recommend the following language, modeled from the Canadian Hazardous Products Regulation:	ACC has significant concerns regarding this proposed text as written, including but not limited to the feasibility of this provision. We understand that with this specific edit, OSHA is attempting to codify interpretation letters[9][10] that address the extent to which manufacturers are to address future hazards of their chemicals. While this might make sense for certain chemicals or products that are sold as part of a kit (or with specific instructions for processing or use), This provision as currently drafted does not make sense in the context of a raw materials supplier. In fact, with respect to a raw material supplier, it is overly burdensome and unnecessarily far-reaching. The language as drafted appears to apply to any possible reaction that could occur under normal conditions of use, including

[9] https://www.osha.gov/laws-regs/standardinterpretations/2016-05-20

[10] https://www.osha.gov/laws-regs/standardinterpretations/2017-05-09

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	d)(1); In the case of a hazardous product for which instructions for use, provided at the time of the sale or importation, require its combination with one or more products, mixtures, materials or substances resulting in the creation of one or more new materials or substances that present one or more new or more severe hazards not already identified on the safety data sheet of the hazardous product, the safety data sheet must also provide the following information elements, in respect of each new material or substance and clearly indicate that they pertain to that new material or substance: (a) the nature of the new or more severe hazard; and (b) the content of the applicable specific information elements set out in Appendix D to §1910.1200 - SAFETY DATA SHEETS (Sections 4-11)	other chemicals with which the product may be intentionally or inadvertently combined or exposed. The request is so broad that it would be extremely difficult, if not impossible, to implement. Expanding this hazard language to encompass any possible reaction would overwhelm and distract readers of the SDS from hazards on which they should focus. Furthermore, manufacturers and importers do not necessarily know how their customers use their products. For example, a chemical product could be incorporated as is in a formulation (i.e., no intentional reactions) or used as an intentional reactant with one or more other reactants to make one or more new chemicals. This information is typically held as confidential by downstream users in the supply chain. Additionally, this further expands the divide in manufacturer/importer responsibility between classified chemicals and chemicals that are not hazardous and therefore not classified under GHS or require an SDS, but that may also be associated with downstream hazards. It further raises potential liability concerns in the supply chain with respect to reliance on a supplier's SDS. The computer systems (SAP, WERCs, etc.) that are used by most large companies to classify products are automated to run on rules based on existing formulations. They cannot take into account possible downstream reactions. This would result in all classifications needing to be manually created which could lead to significant errors and cause mass confusion to users, and make the common software programs that are widely used (SAP, WERCs, etc.) no longer useful. This would be a significant burden to industry. ACC strongly opposes the draft language as written. OSHA should remove this section. If instead, OSHA chooses to address the current unwieldy scope of this provision, we urge them to utilize

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		our suggested clarifications. We have provided draft language modeled after a similar Canadian provision that OSHA should utilize to refine the draft language to fit the current realities of modern supply chains, promote harmonization between the US and Canada, and provide substantive and realistic protection for workers.
§ 1910.1200 (f)(5)(ii) Transportation	(ii) The label for bulk shipments of hazardous chemicals may be on the immediate container or may be transmitted with the shipping papers, bills of lading, or other technological or electronic means so that it is immediately available to workers in printed form on the receiving end of shipment. OSHA requests comments on the usefulness and effectiveness of allowing these alternate approaches for labeling bulk shipments. OSHA requests comments on whether it is appropriate to add proposed paragraph (f)(5)(ii) to the HCS and whether the addition of that paragraph would provide clarity regarding labeling of bulk chemical shipments.	ACC is supportive of these alternative approaches, and commends the Agency for its coordination with the Department of Transportation (DOT). However, ACC is concerned with this provision as currently drafted as Canada exempts bulk shipments from labeling requirements. OSHA has proposed that labels may be on the bulk container or can be transmitted with shipping papers, BOLs, or other electronic means, which could pose a potential issue when moving bulk containers between the US and Canada. In the spirit of harmonization, ACC urges OSHA to make this provision non-mandatory.
§ 1910.1200 (f)(11) Release for Shipment	OSHA is requesting comments on whether the proposed definition is appropriate for application to the HCS. OSHA is also interested in understanding whether the slight differences between OSHA's and EPA's definitions will pose any compliance issues for entities dealing with both OSHA and EPA labeling requirements. OSHA requests comments on whether it is appropriate to use "released for shipment" as the cutoff point for relabeling requirements, as opposed to, for example, the time of shipment. Would the proposed provision reduce worker protections, considering OSHA is also proposing to require that the updated label be sent with	ACC notes that this proposed change has a much wider impact than OSHA has anticipated in the proposed rule. We urge OSHA to leave this as an option for manufacturers and importers, and request that OSHA allow for flexibility with the date structure (i.e., allow the use of a date code). The term "released for shipment" itself can be confusing, because it gives the impression that the package has met business or logistics criteria to be moved, i.e., it is destined to be shipped shortly. It is clearer to describe "packaged for shipment" or "labeled for shipment", as those more closely align with the action that OSHA states in the preamble.

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	the shipment? Would the proposed change result in any cost savings? OSHA invites comments on the proposed revisions to this paragraph. In particular, OSHA requests comments on whether the proposed changes would adequately address issues associated with relabeling in cases of long distribution cycles, whether the proposed changes would provide sufficient flexibility, and whether the proposed revisions would alleviate safety concerns that would otherwise be associated with the relabeling of packaged stock.	Within the context of "dating" materials, the manufacturing date is important to understand product expiration and product safety. Regarding the "released for shipment" date, ACC members interpret OSHA's intent is to reduce costs to industry by implementing this modification to paragraph (f)(11), such that chemicals released for shipment and awaiting further distribution do not need to be relabeled to incorporate new significant information about hazards. A subset of manufacturers and industries utilize a "released for shipment" date in addition to a "Manufactured" date for their own respective reasons (some of which were outlined by the Agency in the Preamble). For others, however, there is no additional benefit for requiring this additional information, besides possibly allowing for reduction in relabeling requirements. Most products have a manufactured date, and certain products have an expiration date as well. Adding a "released for shipment" date does not appear to add value, except for a small subset of manufacturers, and for the majority this will likely spur confusion on what the specific dates mean. Since SDSs, labels, and Bill of Lading need to match for shipments to customers it is unclear how this will reduce the costs to industry for relabeling. Additionally, often raw material suppliers sell to companies that repackage their products into cans and containers. There is no additional workers protection when repackagers are required to relabel cans or containers, especially when nothing else (besides the "released for shipment" date) has changed. Inclusion of this additional requirement would impose an appreciable cost to industry and represent a logistic hurdle. The costs could include redesigning label templates to incorporate this reporting element, developing a supply chain process to incorporate "released for shipment" date on the label, and

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		relabeling containers prior to shipment (labels are printed during product manufacture and packaging with manufacture date) if they are not distributed immediately. In addition, preprinted labels and packaging preprinted with full label information will not be able to meet this requirement. The costs of replacing and distribution of preprinted labels once a "released for shipment" date has been determined and time required to conduct such activities are considerable. Safety stock and inventory of chemicals is maintained and according to the proposed regulation these would need to be relabeled prior to the "first shipment release" after they have already been labeled from production. In addition, having two dates on a label (manufacture date and shipment release date) will cause confusion for downstream processors and users. Due to these reasons, "released for shipment" should be an optional label element for manufacturers if they choose to do so.
(f)(12) Small Container Labeling	Proposed paragraph (f)(12), which addresses the labeling of small containers, would limit labeling requirements for chemical manufacturers, importers, or distributors where they can demonstrate that it is not feasible to use pull-out labels, fold-back labels, or tags to provide the full label information as required by paragraph (f)(1). As proposed in paragraph (f)(12)(ii), manufacturers, importers, and distributors would be able to use an abbreviated label (requiring only the product identifier, pictogram(s), signal word, chemical manufacturer's name and phone number, and a statement that the full label information is provided on the immediate outer package) on containers with a volume capacity of 100 ml or less—referred to as "small containers" in this PEA. As proposed in paragraph (f)(12)(iii), manufacturers, importers, and distributors would need to put only the product identifier on containers with a volume capacity of 3 ml or less—	ACC is generally supportive of the two Small Container Labeling measures, and commends the Agency on the flexibility of these proposed measures. ACC notes that Canada has a similar provision; however, without the phrase "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"; instead allowing the provisions to apply to any container that is smaller than 100 mL. ACC urges OSHA to adopt language similar to the Canadian HPR, and allow use of a truncated label to any container that is smaller than 100 mL, without having to showcase that a pull out, fold back, or tag label cannot be used. Use of a pull out, fold back, or tag label on containers smaller than 100 mL is an expensive and time-consuming process from a printer that is not easily accessible in most industrial settings. For example,

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	referred to as "very small containers" in this PEA—if they can demonstrate that any label would interfere with the normal use of the container OSHA requests comments on the feasibility of, and any cost savings associated with, these proposed provisions for the labeling of small containers (both 100 ml and less and 3 ml and less). The agency also requests information on whether the proposed labeling requirements would be adequate to provide for safe handling and storage of chemicals in small containers. In addition, OSHA is interested in receiving comments on two specific alternatives to proposed paragraph (f)(12). First, instead of adopting proposed paragraph (f)(12), should OSHA simply allow for case-by-case exemptions if full labeling is not feasible? Second, should the agency require a showing that a full label would interfere with the normal use of the container before permitting the use of abbreviated labels on containers with a capacity of 100 ml and less (similar to the condition OSHA is proposing in paragraph (f)(12)(iii) for containers with a capacity of 3 ml and less)? Please provide reasons for your answers.	many ACC member companies using these types of labels have to purchase them from a third party, because they generally cannot be generated in "real time" at a plant from a central database. ACC member companies have experienced 6-12 month lead times with any sort of changes with these types of labels, and thus it is much harder to react quickly to any required label changes. Additionally, actively requiring manufacturers or importers to demonstrate that they are unable to use a pull-out or association label does not appear to provide any additional level of worker protection. Instead of having to prove feasibility, and in the interest of Harmonization with Canada, ACC recommends that OSHA provide a blanket exception. *ACC Edits*: (f)(12) Small container labelling. (i) This paragraph (f)(12) applies to any container <100 mL.
§ 1910.1200 (g)(10)	Because SDSs now have a standardized format and are specific to individual hazardous chemicals, they are not permitted to be designed to cover groups of hazards, as currently provided in paragraph (g)(10). Therefore, OSHA is proposing a change to paragraph (g)(10) that would allow SDSs to be stored, rather than designed, in a way to cover groups of hazardous chemicals in a work area. OSHA believes that this change would allow employers flexibility in how they keep SDSs in the	This provision is not clear to ACC members, as currently drafted. ACC requests clarification from OSHA on what the intent is of this change. For example, it is to allow for electronic storage? Or, is this merely allowing SDSs to be grouped together?

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	workplace while also ensuring that the mandatory 16-section SDS is maintained. The agency is requesting comments regarding whether this proposed revision would require stakeholders to make any significant changes to their current practices. Proposed Regulatory Texts: (10) Safety data sheets may be kept in any form, including as operating procedures, and may be stored in such a way to cover groups of hazardous chemicals in a work area where it may be more appropriate to address the hazards of a process rather than individual hazardous chemicals. However, the employer shall ensure that in all cases the required information is provided for each hazardous chemical, and is readily accessible during each work shift to employees when they are in their work area(s).	
§ 1910.1200 (i) Trade Secrets	OSHA currently does not permit manufacturers to claim concentration ranges as trade secrets, and is requesting comments on its proposal to do so. Specifically, the agency is interested in any experience stakeholders have had with developing SDSs using the prescribed concentration ranges and any concerns stakeholders have about using concentration ranges on the SDS. The agency is also requesting comments addressing the adequacy of hazard information provided by these ranges. Do these ranges provide sufficient information for downstream manufacturers to conduct hazard classifications? Are the ranges prescribed too wide to provide sufficient information to protect workers (i.e., should they be narrowed)? Notably, proposed paragraph (i)(1)(v) provides that the prescribed concentration range used must be the narrowest range	ACC appreciates the intent of the proposal in this section, and applauds the agency for taking steps to align more closely with Canada's WHMIS. However, as this Section is currently drafted, it is unclear and overly confusing what information OSHA is proposing for manufacturers that would like to utilize these trade secret provisions. ACC generally supports the draft ranges as currently proposed, but recommends that the use of these trade secret ranges be voluntary. Requiring all manufacturers who would like to claim trade secret to utilize these ranges would be overly burdensome, especially since within the US, chemical manufacturers have been self-executing HCS trade secret claims for decades (and ACC continues to advocate in favor of this approach).

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	possible. the exact concentration range falls between 0.1% and 30% (proposed paragraphs (i)(1)(iv)(A) through (G)) and does not fit entirely into one of the prescribed concentration ranges, a single range created by the combination of two applicable consecutive ranges could 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. OSHA invites comments on whether it should allow combinations among all ranges (i.e., all of the ranges (up to 100% concentration) listed in proposed paragraphs (i)(1)(iv)(A) through (M)) or whether the rule applicable to combining ranges should be even more restrictive (e.g., only for the ranges (up to 10% concentration) listed in proposed paragraphs (i)(1)(iv)(A) through (E)). OSHA is also interested in receiving comments on whether there are any economic implications associated with including the prescribed concentration ranges.	There is a concern that by requiring specific ranges, one could possible determine the concentration of a substance within a mixture (for example, if the classification limit is close to one of the concentration cutoffs) and thus negate the point of trade secret. The use of the prescribed ranges would also create cross classification thresholds for specific endpoints (e.g., 16-19% of substance A classified as STOT SE 3 would not result in an overall mixture being classifieds as STOT SE 3. However, if we are required to use the prescribed ranges in order to claim a trade secret, then the prescribed range is 10-30%, which crosses the 20% classification threshold for STOT SE 3). There is also the concern that using prescribed concentration ranges can result in unintended over-classification, particularly when the SDS interfaces with other regulations, such as the marine pollutant percentage cutoffs of transportation regulations. Additionally, for US companies that sell worldwide and have only limited or no sales to Canada, requiring this provision would create an additional, extensive burden on these companies. Many companies use software to author SDS, and programming changes by region can be very expensive, time consuming and burdensome. The manual changing of the ranges and having to manage a separate composition range entry for the US would be a significant and burdensome undertaking for those that do not already do this, with limited additional worker protection.
§ 1910.1200 (j) Dates	OSHA is proposing a 1 year compliance substance for substance and 2 years for mixtures. OSHA is requesting comments regarding the adequacy and appropriateness of the proposed compliance dates and on the feasibility of implementing a tiered compliance approach for substances and mixtures	ACC members disagree strongly with the current proposed compliance timelines, and believe that they are much too short given the extent of the proposed rulemaking. ACC agrees with the tiered compliance approach for substances and mixtures. ACC proposes instead a 2 year compliance date for substances, and 3 years for mixtures. ACC also recommends that OSHA coordinate with Health Canada, to ensure that both amended regulations come into force at the same time.

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		There are a significant number of changes proposed in this draft rule, all of which directly translate into complete overhauls of both labels and SDSs by a large number of our members to remain in compliance. Additionally, a number of our members utilize some form of software to keep track of their labels and SDSs. The software update typically takes a minimum of 12 weeks (and up to 6 months) to complete before new packaging is available for use. Only after software updates and completion of SDS reauthoring can third party services begin the packaging redesign (both for those that print in-house and those that utilize pre-printed labels). For those that utilize a software, but print in-house, testing on the local database is required post-update to ensure that the changes will not "break" any of the critical functions in the authoring and label printing process. From members' recent experience, it is likely to take a minimum of one month to put the software update through the testing and approval process, and schedule a time to interrupt the live labeling process so that the update can be installed. For those that utilize preprinted labels, the added time will also allow for members to use up the remainder of any materials that they already have on hand as they shift to the new labels. The addition of the new requirement in section 9 "particle characteristics" (if left mandatory), will require the update of every SDS for some companies to include this new required piece of information. The size of this undertaking cannot be understated, and cannot be completed in such a short time frame. There are many revisions to the required P-phrases in this NPRM. While ACC has recommended that companies can utilize a version of the proposed P-phrases that provides an equal or equivalent level of protection, the changes (as drafted) would require companies to either update current phrases, or create new phrases

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		in companies' existing software systems. For a number of systems that our members utilize, every SDS and label affected by even one P phrase change would need to be re-issued. And for each SDS, there could be 3-10 labels to accommodate package size. So the number of re-issued labels would be 3-10 times greater the number of SDSs for each company. Finally, companies which formulate products need to rely on the classification of the raw materials from the supplier. Therefore, downstream companies are not able to complete the SDS/ label updates until they receive the updated supplier information, which will take them time to complete.
Acute Toxicity Corrosive A.1.2.	OSHA also proposes a new paragraph A.1.2.4, which is intended to correspond to Chapter 3.1, (paragraph 3.1.2.6.5) in the GHS Rev. 7 (UN GHS, 2017, Document ID 0060). This proposed paragraph would provide that in addition to classification for inhalation toxicity, if data are available that indicate that the mechanism of toxicity was corrosivity of the substance or mixture, the classifier must consider whether the chemical is corrosive to the respiratory tract. This proposed paragraph would clarify that the hazard corrosive to the respiratory tract is covered under the HCS. OSHA did not explicitly include the corrosive to the respiratory tract hazard in the HCS in 2012, but explained in OSHA 3844: Hazard Communication: Hazard Classification Guidance for Manufacturers, Importers and Employers (OSHA, 2016, Document 0008) that this hazard should be considered during classification OSHA is including these clarifications in proposed	The introduction of a new Acute Toxicity and Specific target organ toxicity (single exposure) (STOT SE) classification for corrosion to the respiratory tract will cause a number of significant classification differences between jurisdictions and confusion among manufacturers and importers. The EU, for example, includes supplementary EUH phrases, but does not require the use of an entirely separate classification. The introduction of this paragraph would be problematic and would go against the intent of GHS harmonization, especially as this can be accurately represented within Section 11 of the SDS. Additionally, additional clarification is needed pertaining to the proposed regulatory text (A.1.2.4.1 and A.1.2.4.2). In many cases, suppliers may choose to warn for corrosion to the respiratory tract simply based on a substance being corrosive to eyes and skin. Without knowledge as to whether this effect leads to lethality, it is not clear how suppliers should classify. We recognize that the NPRM changes the word "may" in the classification guidance to "must". It's unclear, though, what OSHA's intent is here in referring

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	A.1.2.4.1 and A.1.2.4.2, but is modifying the "may" language from the guidance to "must" language to ensure that corrosive to the respiratory tract is appropriately considered during the classification process *Proposed Regulatory Text*: Acute Toxicity Corrosive A.1.2.4 In addition to classification for inhalation toxicity, if data are available that indicates that the mechanism of toxicity was corrosivity of the substance or mixture, the classifier must consider if the chemical is corrosive to the respiratory tract. Corrosion of the respiratory tract is defined as destruction of the respiratory tract tissue after a single, limited period of exposure analogous to skin corrosion; this includes destruction of the mucosa. The corrosivity evaluation could be based on expert judgment using such evidence as: human and animal experience, existing (in vitro) data, pH values, information from similar substances or any other pertinent data. A.1.2.4.1 If the classifier determines the chemical is corrosive to the respiratory tract and data are available that indicate that the effect leads to lethality, then the chemical must be labelled with the hazard statement "corrosive to the respiratory tract." A.1.2.4.2 If the classifier determines the chemical is corrosive to the respiratory tract and the effect does not lead to lethality, then the chemical must be addressed in the Specific Target Organ Toxicity hazard classes (see A.8 and A.9).	to the regulatory text for STOT-SE and STOT-RE classifications. Specifically, what is meant by "addressed?" The proposed language would point those classifying to the target organ effects hazard endpoints, but ACC does not believe that the current STOT classifications cover this (respiratory corrosion is an acute effect, so STOT RE is not appropriate. In addition, STOT SE 1 or 2 are also not appropriate given this is not a systemic effect, and STOT SE 3 only refers to respiratory irritation).
Appendix B	− B.2 FLAMMABLE GASES − B.3 FLAMMABLE AEROSOLS − CHAPTER B.17 DESENSITIZED EXPLOSIVES	As an organization, ACC continues to express support for key changes that would align HCS more with UN GHS. Some of our members already utilize these classification changes in other

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Classification changes/updates	OSHA is requesting comments on whether these changes provide improved safety through more targeted hazard statements, precautionary statements and pictograms	jurisdictions, and welcome the added protection and clarification that these changes would bring.
Appendix C Label Elements HNOC	Figure C.1 – Hazard Symbols and Classes/HNOC C.2.3.3 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 OSHA is requesting comments on these proposed changes, and is particularly interested in comments on whether the agency should require the exclamation mark pictogram to be used for HNOCs.	OSHA should not require the exclamation mark pictogram to be used in HNOCs, as it is not specified in UN GHS, but ACC member would support voluntary compliance with this measure. As we have stated previously, we urge OSHA to harmonize to UN GHS to the fullest extent possible, as it not only aids in compliance, but also minimizes the burden on our members. ACC once again commends OSHA for attempting to align provisions of the HCS with Canada's WHMIS, but would like to reiterate that this provision should be voluntary for those who chose to utilize it.
Appendix C Precautionary Statements C.2.4.7	C.2.4.7 Precautionary statements may incorporate minor textual variations from the text prescribed in this Appendix 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 used consistently on the label and in the safety data sheet.	ACC is generally very supportive of this provision, for it allows manufacturers to retain flexibility for any of the "minor textual" changes that are currently proposed in Appendix C. However, we do have one concern pertaining to the requirement that any variations must be used consistently on the label and SDS, and request that the last sentence be removed. Most companies use a SDS software which comes with the GHS precautionary phrases from the regulation already pre-loaded and ready for use. To have to modify the phrases in the SDS software to exactly match the text on the label (and translate it to multiple languages) would require a lot of time and money when, by definition, the changes must be "minor textual" variations.

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		If the P-statements provided in Section 2 of the SDS and on the label are the same in content (how to safely store, use, dispose and first aid) there should not be the requirement for an exact match between the texts. This would be a significant burden for industry, and would cost our members a significant amount of time and money for no additional protection of worker safety.
Precautionary Statements C.4 Disposal	*Proposed Regulatory Text:* Dispose of contents/container to... ... in accordance with local/regional/national/international regulations (to be specified). Chemical manufacturer, importer, or distributor to specify whether disposal requirements apply to contents, container or both.	ACC disagrees with the mandatory addition to the Disposal P-statement and strongly urges OSHA to retain flexibility and not make the adoption of this phrase mandatory if companies utilize a similar phrase that provides adequate protection for workers. For a number of our members, the Disposal P-statements tend to be more general in nature. There is no added benefit to whomever is handling the chemical by specifying if the phrase applies to the contents and/or container. For example, one member currently uses this phrase: **Dispose of contents/container in accordance with local/national regulations** on their labels. The Disposal p-statement applies to both the contents and the container, which is made clear within the statement. If companies are required to modify the Disposal P-statement to specify whether it applies to contents, containers, or both, it would be a significant and costly effort for negligible benefit, as a number of companies are using general disposal instructions on a majority of their labels.
Precautionary Statements C.4 Medical Statements	*Proposed Regulatory Text*: …Get medical advice/attention Chemical manufacturer, importer, or distributor to select medical advice or attention as appropriate	ACC disagrees with the mandatory addition of the Medical P statement and strongly urges OSHA to retain flexibility and not make the adoption of this phrase mandatory. There is absolutely no added benefit to whomever is handling the chemical by specifying this specific Medical Statement. If companies are required to modify the medical attention P-statement to specify the selection of medical advice and attention

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		as appropriate, it would be a significant and costly effort for negligible benefit. For example, a number of ACC members use the phrase as is: "…Get medical advice/attention." In promoting flexibility, ACC would prefer if the statement allows for manufacturers to choose "advice" or "attention", but also retain the ability to continue to the use phrase "advice/attention" if they chose to do so.
Appendix D Electronic Labeling	OSHA invites comments on the use of electronic labeling for chemical packaging. If a future revision to the HCS permitted some form of electronic labeling, what technological, economic, and security challenges would affected employers face? The agency also requests comments on the types of electronic chemical labeling already in existence or under development. For employers already implementing electronic labeling programs in the United States or in other countries, please provide information on the types of electronic coding systems utilized in the program and the costs incurred and benefits achieved from the program. What back-up measures are in place to ensure immediate access to the hazard information? OSHA is interested in information about workers' experiences with the use of electronic labels. OSHA also requests comments on foreseeable challenges that OSHA should consider (e.g., worker accessibility to electronic label information).	ACC and our members are generally supportive of the use of electronic labeling for chemical packaging. We wholeheartedly support the distribution of SDSs via an electronic means. However, there are a number of substantive questions about how this specific proposal would look realistically within our current HCS. First, and foremost, it is not clear what is meant by an "electronic label". Would electronic labeling be additive to or a replacement of parts of the standard text labeling? Would it be a label that only contains a QR code or potentially an RFID chip which would link you to the label information as well as the SDS information? Or, would the label still have the required GHS elements, and the link only be for the SDS? Secondly, special consideration needs to be given to the use of electronic devices (readers/scanners) in electrically classified areas. Use of un-rated devices in these areas could present a fire/explosion hazard. Additionally, ACC members would like additional clarification on how these changes would be coordinated with maintaining the pertinent data online for products. Consideration would also need to be given to requirements for maintaining the data accessible as technology changes, and products whose owners change due to mergers and acquisitions.

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		All in all, ACC would urge OSHA to open a dialogue on the process and details of how this could possibly work. We also ask for clarification on the timing that OSHA is envisioning for his. OSHA should create a separate work stream or working group for this topic, rather than attempt to address it in this rulemaking.
Appendix D SDS Section 1	OSHA is proposing to include adding U.S. to the address and telephone number on the SDS. Name, U.S. address, and U.S. telephone number of the chemical manufacturer, importer, or other responsible party;	ACC would like clarification on this provision. It is not currently clear how this would impact foreign suppliers, or what the options would be for a foreign supplier shipping product into the US to comply with this provision. ACC recommends that OSHA make this requirement non-mandatory, due to length and complexity of the chemicals supply chain.
Appendix D SDS Section 2	SDS Section 2 OSHA is proposing changes to section 2 of the SDS to emphasize that hazards identified under normal conditions of use that result from a chemical reaction must appear on the SDS, even though these hazards do not need to be listed on the label - any hazards associated with a change in the chemical's physical form under normal conditions of use; (c) Hazards identified under normal conditions of use that result from a chemical reaction (changing the chemical structure of the original substance or mixture);	Please see above (§ 1910.1200 (d)(1) Hazard Classification) for ACC's members response to this proposed change. As we have stated extensively in the previous statements regarding this section, As it is currently written, it is extremely broad and unclear, and does not align itself with the current scope of the HCS proposed. The concern that we want to raise here is with the practicality of the inclusion of this section (as written) into the SDS. For example, The proposed change to (d)(1) uses the words "hazard classification shall include…" but interestingly, Appendix D, which specifies the SDS requirements says, in paragraph (c), only "Hazards identified under normal conditions of use…." It does not use the word classification. It is not clear as the regulation is currently drafted if manufacturers and importers need to classify for reaction hazards, or merely mention them in Section 2. Specifically when addressing this proposed change on Section 2 of the SDS, if members have to classify for both "hazards as sold" and "hazards as reacted downstream" in Section 2, then it is extremely unclear how the user would be able to differentiate between the 2

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		(or more) classifications on the SDS, to know which hazard applied to their material. If manufacturers are required to classify for every potential combination of a product reacting with another chemical downstream, Section 2 of the SDS would become bloated and overloaded, thus making it hard to determine the actual hazards of the product that is in question. It is unclear how this provision would add additional protection, if said user is not able to tell which of the classifications listed apply to the material in their hands. In other words, if a downstream worker has the unreacted product, how would they know which classifications were applicable to the unreacted product in their hand (as opposed to classifications relevant only to the product reacted with some other chemical)? How do they know how to protect themselves?
Appendix D SDS Section 3 CAS Number	When the concentration or concentration range is withheld as a trade secret, the chemical composition must be provided in accordance with the prescribed concentration ranges in § 1910.1200(i)(1)(iv).	ACC again commends OSHA for proposing provisions to comply with Canada, but want to reiterate (as we stated previously) that retention of flexibility is imperative for this specific provision. ACC once again urges OSHA to make this provision non-mandatory, and allow companies to utilize it if they choose to do so. Making this mandatory would be a significant time and resource burden on the industry for negligible return in safety, and could potentially cause significant confusion.
Appendix D SDS Section 3	With some conditions, the HCS currently requires section 3 of the SDS to include the chemical name and concentration (exact percentage) or concentration ranges of all ingredients which are classified as "health hazards" in accordance with paragraph (d) of §1910.1200. OSHA is not proposing to change this requirement, but is interested in comments on whether it should be expanded to include all classified chemicals (i.e., also physical hazards and HNOCSs). Such a	As this provision is not within the UN GHS, ACC members are not supportive of mandating this within the HCS. If OSHA decides to add this provision to the HCS, ACC members would urge the Agency to keep it "non-mandatory", and allow for those to include this information on the SDS if they chose to do so. This expansion does not increases the knowledge of potential hazards in any meaningful way, nor does it provide downstream

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	requirement would be similar to the EU REACH regulations, which require SDS preparers to list the classification of each hazardous ingredient. Would expanding the requirements for section 3 in this way ensure that both users and manufacturers fully understand any potential hazard when handling the chemical? Would such a change result in the provision of additional information that would allow downstream manufacturers to more accurately classify their products where the mixture in question is one of their ingredients?	users with any additional information that is necessary for protecting worker safety, outside of already existing classifications. Physical hazard classifications are made on the product level, not the component level. Listing components with physical hazards in Section 3, by and large, have no bearing on the physical hazard of the product. For example, if a manufacturer could have low levels of 3 flammable different solvents in an aqueous solution without the product meeting the classification criteria for "flammable". By requiring the use of this provision, OSHA would confuse users, by mandating the listing of additional hazards that do not exist. Making this provision mandatory would overload users with information, and obfuscate important information that downstream users would need to protect themselves.
Appendix D SDS Section 7	For flammable liquids, the chemical manufacturer, importer, or distributor must clearly note on the SDS (in sections 7 and 9) if a calculation other than initial boiling point was used for storage purposes.	ACC requests that OSHA removed this requirement from the SDS. We also would like to request clarification from the Agency as to why this specific provision was included in to the HCS update. Upon our review, we do not see any specific mention of this within the UN GHS Version 7 or 8. This provision does not appear to provide any sort of additional protection for workers or users of the chemical, and thus we fail to see the rationale behind requiring this statement on the SDS.
Appendix D SDS Section 9	For flammable liquids, the chemical manufacturer, importer, or distributor must clearly note on the SDS (in sections 7 and 9) if a calculation other than initial boiling point was used for storage purposes OSHA is requesting comments on whether a footnote like the one proposed for B.6.3 should also be inserted in appendix D, section 9	As with the previous section, ACC would again recommend that OSHA not include this provision as a requirement for Section 9. Once again, it does not appear that the addition of this note would provide any additional worker protection, and thus our members do not see the benefit.

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Appendix D SDS Section 8	(a) For all ingredients or constituents listed in Section 3, the OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit or range used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available. ACC Edits: (a) For all ingredients or constituents listed in Section 3, the OSHA permissible exposure limit (PEL), ~~American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV),~~ and any other exposure limit or range used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available. Any non-OSHA exposure limit listed should be clearly indicated as non-mandatory (b) Appropriate engineering controls. (c) Individual protection measures, such as personal protective equipment.	ACC requests that OSHA remove the *requirement* to list OELs developed by voluntary standards organizations such as ACGIH TLVs on SDSs. Instead, OSHA should only require the listing of OELs that have been developed through a Federal rule-making process on a As it currently stands, the Hazard Communication Standard requires[11] that Threshold Limit Values (TLV) developed by the American Conference of Governmental Industrial Hygienists (ACGIH) be listed on Safety Data Sheets (SDS) alongside the OSHA Permissible Exposure Limit (PEL) despite the fact that ACGIH advises against using TLVs as standards.[12] ACGIH recognizes that TLVs are an expression of scientific opinion, are not consensus standards, and because they are based solely on health factors as interpreted by a limited number of health scientists, it may not be economically or technically feasible to meet established TLVs. ACC believes that Occupational Exposure Limits (OELs) like TLVs developed by voluntary standards organizations such as ACGIH should not be applied or treated as a legal standard or regulatory limit without due consideration of their limitations and the intended use. ACC understands that where an existing OSHA PEL is determined to be out-of-date or not applicable, the regulatory authority should consider a reference to an effective alternative OEL, which may be a TLV, Workplace Environment Exposure Limit (WEEL), or other scientifically defensible, health-based OEL.[13] However, by mandating the inclusion of ACGIH TLVs on SDSs, OSHA creates the erroneous impression that an ACGIH TLV carries the same regulatory weight as an OSHA PEL and is subject to the same stringent standard development processes as a PEL. OELs

[11] OSHA's Hazard Communication standard (1910.1200 Appendix D) requires safety data sheets to list the relevant OSHA PEL, the ACGIH TLV and any other exposure limit recommended or used by the chemical manufacturer, importer, or employer preparing the safety data sheet.
[12] ACGIH Statement of Position Regarding the TLVs and BEIs. Available at https://www.acgih.org/science/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement/
[13] For more information on ACC's Considerations For The Development And Use Of Occupational Exposure Limits please see Attachment 2.

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		developed by voluntary organizations are often done without meaningful stakeholder engagement and in a process that lacks transparency, thus ACC believes that if OSHA elects to reference an effective alternative OEL, OSHA should do so through the official rule-making process thereby affording the affected community an opportunity to meaningfully engage in the process. Furthermore, the ACGIH TLVs are not publicly available and must be purchased, and so OSHA's requirement to list ACGIH OELs, thereby requiring that these standards be purchased over those developed by other voluntary standards organizations, can inadvertently result in market manipulation and anti-competitive behavior. ACC believes that OSHA should include in the Hazard Communication Standard, language that clearly distinguishes between OELs established by federal regulation, and voluntary or recommended OELs and should further clarify that voluntary OELs developed by voluntary organizations do not establish a legal standard and should not be used as a basis for regulation. Further, ACC urges that OSHA only enforce OELs that have been developed through a Federal rulemaking process. ACC requests that OSHA remove the *requirement* to list OELs developed by voluntary standards organizations such as ACGIH TLVs on SDSs. Instead, OSHA should only require the listing of OELs that have been developed through a Federal rulemaking process on an SDS and the listing of other recommended OELs should be *voluntary* and left to the discretion of the company. Additionally, OSHA should require that where organizations opt to list recommended OELs that they clearly distinguish between OELs established by federal regulation and those developed by voluntary organizations on their SDSs
Appendix D SDS Section 10	Section 10 c) Possibility of hazardous reactions, including those associated with foreseeable emergencies	ACC understands the sentiment of this proposed change, but it is unclear as currently drafted. Similarly to our concerns with d(1), the statement as written is extremely broad and open ended, especially when you address it within the context of, for example, a

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	ACC Edits c) Possibility of significant hazardous reactions for any directed uses instructions, including those associated with foreseeable emergencies	solvent, that is part of hundreds, if not thousands of reactions (some of which could be considered hazardous) for downstream users. Similarly to d(1), ACC recommends that OSHA add the qualifier of "for directed uses", to address concerns for products that have specific purposes and known reactions. ACC recognizes that OSHA has a codified definition for "foreseeable emergencies", but we would like to request additional clarification on the phrase. Does OSHA intend to amend the definition or offer substantive guidance on what is considered a "foreseeable emergency?"[14]
Appendix D SDS Section 11	(e) Interactive effects; information on interactions should be included if relevant and readily available; (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)	ACC requests clarification from the Agency as to what is meant by "interactive effects". It is not clear from the draft rule, or our reading of the UN GHS what this specific provision entails. Additionally, ACC requests clarification as to why the method used to derive toxicological information is necessary? In general, ACC is supportive of the inclusion of QSAR and read across within these provisions, which are powerful and valuable tools in evaluating toxicological information. However, it is not clear what OSHA's intent is by specifying if alternative information was used. ACC does not have a specific recommendation for this section at this time, but looks forward to the Agency's response.
Combustible Dust - Definitions -Labeling	This bracketed language is designed to indicate that this language should be added when the material can create a combustible dust hazard during the processing or handling of the chemical	ACC supports the proposed definition of combustible dust, as it is aligned with the UN GHS. We recommend that the Agency place measurable parameters around the definition, or specify that it is ideally meant for organic and metal dusts.

[14] https://www.osha.gov/OshDoc/Directive_pdf/CPL_02-02-079.pdf

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		ACC has concerns about the following statement: "...a chemical that poses a combustible dust hazard when processed (but not in the form in which it is shipped), **the combustible dust hazard must be included in section 2(a)".** ACC believes that providing the warning that a material has the possibility to form a combustible dust would more than adequately protect downstream users. As manufacturers and importers do not know the full extent of how downstream users might process their chemical, we believe that offering a hazard statement would allow for them to make any appropriate future determinations if small particles are generated by further processing, handling or by other means.
Timelines	OSHA requests public comment on whether the agency should adopt a schedule for updates to the HCS standard (e.g., every four years or every two revisions of the GHS) or wait until there are significant changes to the GHS before initiating rulemaking. More frequently updating the HCS to align with the GHS may provide greater protection for workers and reduce uncertainty for manufacturers, distributors, and employers. Specifically, would longer time periods between updates and realignment with the GHS and other standards be more or less burdensome for employers, especially those that operate internationally? Would regular, shorter time periods provide more stability? How would longer or shorter periods between realignment affect worker protection?	Rather than focusing on a specific schedule, ACC members recommend that OSHA work with Canada and other key trading partners to coordinate updates to the same version. This is a vital step, and meets one of OSHA's key goals for this rulemaking. While a regular update schedule would be beneficial to industry, we are more focused on maintaining the "harmonization" portion of the UN GHS, especially for companies that operate internationally. That being said, a 5 year update schedule would strike a good balance between maximizing worker protection and making the updates less burdensome.
Guidance Documents	OSHA will continue to develop guidance documents to assist employers and employees with their understanding of the HCS and is seeking comments in this NPRM on types of guidance documents that the public may find useful to understand the updated HCS. Any guidance provided will accord with the Department's regulation at 29 CFR part 89, with a	ACC strongly encourages OSHA to release necessary Guidance Documents before the effective and compliance date, so that manufacturers and importers can remain in compliance. Ideally, any pertinent guidance would be released in conjunction with the final rule, to minimize issues in the transition between HCS 2012 and the proposed update.

Citation/Reference	Background/Question Posed by OSHA and ACC Edits to Proposed Text	ACC Responses to Questions and Rationale
	primary aim of providing helpful, plain language explanations.	
Phase-In Periods	Given the phase-in period for the proposed changes to the standard, OSHA expects that chemical manufacturers and importers would be able to phase in revisions to their labels and SDSs in accordance with the normal cycle of change, and therefore would not need to replace existing labels or SDSs. OSHA requests comments on this preliminary assumption. OSHA expects that the phase-in period for the proposed changes to the standard would allow chemical manufacturers and importers to take advantage of the normal cycle of change to phase in the revisions to their labels and SDSs, and therefore that it would not be necessary to replace existing labels or SDSs. OSHA requests comments on this preliminary assumption.	ACC strongly disagrees with OSHA's assumption that chemical manufacturers and importers would be able to phase in revision to their labels and SDSs in accordance with the normal cycle of change. For most of our members, most of their SDS do not change or require regular updates besides basic compliance checks. The HCS updates proposed in this rule are quite significant and have provisions that affect ALL SDSs that our members have. For some companies, this can be upwards of hundreds of thousands of products. As we have stated previously, the current proposed phase in period is much too short for an undertaking of this magnitude. A significant portion of members also use software to manage their SDSs and labels, which will also need to updated, and will take upwards of 6 months (given previous timelines of changes). Additionally, there will need to be updates that travel through the supply chain (both from 3rd party suppliers and feed stocks). None of these considerations are currently included within the "regular schedule". For these reasons, we have requested a 2 year compliance date for substances, and a 3 year compliance date for mixtures.

Attachment 2: AMERICAN CHEMISTRY COUNCIL CONSIDERATIONS FOR THE DEVELOPMENT AND USE OF OCCUPATIONAL EXPOSURE LIMITS (OELs)

ACC supports the use of OELs as a fundamental component of strategies to protect workplace health. The following considerations should be reflected in the development and use of workplace exposure limits.

ACC and its members are committed to a safe and healthy workplace. We support the appropriate development and use of Occupational Exposure Limits (OELs) as an important component of worker and process safety, and the following outlines the conditions ideal for the development and application of OELs. ACC and its members are committed to working with governments and voluntary standards organizations to continuously improve the OEL development process and encourage the use of meaningful, relevant OELs.

1. ACC and its members support the development of health-based OELs.
    - OELs should be used only for the intended purpose (e.g., voluntary, non-mandatory OELs should not be used as legal standards).
    - Although health-based OELs do not consider technical and economic feasibility, users should be aware that some OELs can be set at levels so low that there is no appropriate method to measure conformance. While this may help drive innovation, particularly in the development of appropriate measurement technology, the need for innovation alone should not be used as a rationale to develop an OEL.
    - Companies consider many factors in selecting OELs, including technical and economic feasibility, based on the unique characteristics of individual workplaces.

2. The OEL development process should be scientifically defensible, well-documented, transparent, and open to stakeholder engagement.
    - All stakeholders should have the opportunity to participate in a transparent OEL development process.
    - An adequate amount of time to provide comment and relevant scientific information and technical input (including information on technical or economic feasibility) should be provided in the development of an OEL. This is especially important when an OEL is being considered as the basis for a legal standard or other regulatory limit.
    - OEL developers should respond to stakeholder comments and identify the basis for accepting or rejecting specific input.
    - OEL developers should consider the availability of analytical methods to measure exposure.
    - OELs may be appropriate for certain substances with unique or significant health/physical hazards and characteristics, but other approaches to occupational risk assessment, such as hazard banding, may also be acceptable.

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3. OELs should reflect the best available science, and OEL development processes should use a weight-of-the-scientific evidence (WoE) approach to evaluation/interpretation.
    - Clear standards for the quality, reliability, and relevance of scientific information should be adopted by OEL developers. One example may be the use of the Klimisch scoring system.
    - Hazard, exposure, and risk information, as well as information on use patterns, should be evaluated in the process of OEL development.
    - The conclusions reached in the OEL development process should be documented and made available to stakeholders.
    - The point of departure (PoD), as well as any limitations and uncertainties identified in developing an OEL, should be made available.

4. OELs developed by voluntary standards organizations should not be applied or treated as a legal standard or regulatory limit without due consideration of their limitations and the intended use described by the entity developing the values.
    - Where an existing OSHA PEL is determined to be out-of-date or not applicable, the regulatory authority should consider a reference to an effective alternative OEL, which may be a TLV, Workplace Environment Exposure Limit (WEEL), or other scientifically defensible, health-based OEL. However, regulatory authorities that do reference voluntary OELs should make clear that voluntary OELs do not establish a legal standard.

5. When health hazard data are either unavailable or insufficiently robust to derive a health-based OEL, alternatives that account for the unique circumstances of each workplace should be considered.
    - One alternative to OELs, such as the use of hazard banding approaches (which often include target exposure ranges), may be appropriate to consider when an OEL is not applicable or available.
    - The “hierarchy” of OELs may be useful as companies consider various workplace exposure limits.