A Review of OSHA’s Revised Hazard Communication Standard (HCS) —
Aligning to the Globally Harmonized System of Classification and Labeling of
Chemicals (GHS)

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Thank you to everyone who attended ASSE’s Webinar on the revised HCS and GHS, with Jennifer Silk and Glenn Trout.

We had many more questions during the presentation than we could answer in the time allotted. However, we wanted everyone to receive responses to their inquiries, so we have compiled all of the questions from the Webinar and have provided expanded written responses to each.

Please note: The following is provided as a resource only. The opinions and ideas expressed below may not be substituted for the compliance criteria set out by OSHA in the final rule of the HCS revision as published in the Federal Register. Furthermore, specific compliance questions regarding OSHA’s standards should be directed to your local OSHA office to ensure safety and compliance.

The questions have been organized primarily by subject (with some overlap). The subjects are:

- Labels
- Safety Data Sheets
- Training
- General Compliance
- MSDSonline Specific

Most information contained in the answers has been pulled from one of four primary sources:

1. Final Rule as published in the Federal Register
2. HCS Regulatory Text as provided on OSHA’s Website
3. HCS Appendices as provided on OSHA’s Website
4. OSHA’s HazCom 2012 Frequently Asked Questions (FAQ)
INDEX OF QUESTIONS BY SUBJECT

(Click on the question to see the answer.)

Labels

1. I’m still confused about workplace labels -- do ALL labels need the exact same information as what is on the shipped containers (even name, address, phone number)?
2. Please clarify: Are new labeling requirements only applicable to shipping containers? Meaning secondary containers are exempt from the NEW labeling requirements??
3. Q: Do secondary containers require full labeling? Currently they may state only the chemical contained in the bottle.
4. Will the new GHS symbols be consistent with current DOT hazardous markings? Or will DOT change?
5. Do chemicals used/stored in the workplace prior to HazCom 2012 require labels to be updated to comply with HazCom 2012?
6. What are the labeling requirements for secondary labeling for importers of hazardous chemicals?
7. How do they recommend labeling small re-use containers with all the new information that is required?
8. Are placards going to change?
9. Will there be changes to the signs required outside of buildings, storerooms, etc., where chemicals are stored?
10. What about labels on shipments of Haz waste? Does it affect hazardous waste labeling?
11. If an end user uses "luggage tags" for labeling piping and other drop locations for chemicals, will they be required to update labeling, pictograms, etc?

NFPA/HMIS

1. Will the NFPA and/or HMIS diamonds still be applicable? Or, will the trend to just go to the pictograms?
2. I have heard that the numbering scheme is reversed internationally from what we use in the U.S. I have not seen any mention of this in the latest articles that I have been reading. Is this still a concern? We use 4 for most hazardous and the International scene uses 1...?

Safety Data Sheets

1. On the new SDS, are the appendices included within the text format?
2. Please elaborate on safety data sheet quick card. The note at bottom states "Since other Agencies regulate this information, OSHA will NOT be enforcing Sections 12-15."
3. **Can a chemical supplier leave sections 12-15 off of the SDS and still be considered compliant with HazCom 2012?**

4. **You mentioned that Appendix D requires ACGIH TLV’s on SDS’s. Does this mean that where different, OSHA will be issuing citations to the lower TLV’s as opposed to PEL’s?**

5. **How will the new standard affect electronic storage of SDSs? Will it still be allowed as long as the employee has access?**

6. **Will we have to keep two books (MSDS & SDS) until full implementation?**

7. **I believe I heard Jennifer indicate that hazard categories (ie numbers) were not required on MSDSs. Doesn’t d(2) state classification includes the category where appropriate. MSDSs are to be in accordance with (d). Also the GHS SDS examples given on the OSHA website include hazard categories, numbers. Are numbers/hazard categories to be put on SDSs?**

8. **If manufacturers must classify materials, yet are not required to put these classifications on SDSs, how do we the end user find out what the classifications are so that we may put them on our HMIS or NFPA labels?**

9. **Do all chemicals used/stored in the workplace prior to HazCom 2012 require replacement of MSDSs to SDSs to comply with HCS2012?**

10. **Does the producer or manufacturer have to produce SDSs for all chemicals and send SDSs to previous purchasers?**

11. **Does the producer/manufacturer just need to convert MSDS to SDS and send the SDS with purchases occurring after required implementation date?**

12. **Has OSHA said anything about keeping SDSs electronically vs. on paper?**

13. **Does an SDS need to be on site for ALL chemicals, or only those that are used in quantities greater than consumers would use in their household? This was how the old system required MSDS.**

14. **Must we maintain "old" MSDSs for 30 years as employee exposure records, per 1910.1020?**

15. **Should old MSDSs be maintained and archived?**

16. **How can you guarantee with an electronic system that you have access to the SDS's all of the time - what about a power failure or network failure?**

17. **Where would we get the pictogram(s) to place on the SDS?**

18. **Does the border on the pictogram need to be red on the SDS?**

19. **What if an SDS is not provided by a manufacturer?**

20. **Please review this “Waiver” for SDS you mentioned!**

21. **When should we start referencing SDS in safety plans in safety plans?**

22. **How does OSHA intend to hold the manufacturers accountable for complying with the SDS portion of the standard?**

23. **We have over 20 different languages spoken in our plants. Are there requirements for us to translate data sheets and labels into these languages?**

**Training**

1. **By when does the training have to be completed?**
2. I know we are focusing on U.S. requirements, but do you know the training requirements internationally?
3. No employee training documentation / certification requirements?

General Compliance

1. Given the current political climate, do you anticipate a lot of opposition to this change?
2. What is STOT?
3. Does GHS internationally use the signal words DANGER and WARNING?
4. How do the new requirements connect with the Toxic Substance Control Act (TSCA)?
5. I have a question about the State Plan OSHA states. Is it true they have 6 months to adopt the new changes? Do you think they most likely will adopt the changes?
6. How are these changes or requirements going to affect research universities (state universities)?
7. Are you aware of anyone who can review our current written plan and let us know what changes we need to make to it as a "user" level business?
8. When will the updated CFR become available?
9. If this goes into effect May 25th, 2012...by what date do I have to have my written plan updated/training completed/and MSDSs replaced with new?
10. What about common household cleaners used in a workplace environment?
11. What about Haz-waste mixtures?
12. Please clarify requirements for labels, SDSs and training for Combustible Dust.

MSDSonline Specific

1. How about an expanded 10 Steps as the program moves forward??
2. When will MSDSonline have the updated SDS's available?
LABELS AND WARNING SIGNS

1. I’m still confused about workplace labels -- do ALL labels need the exact same information as what is on the shipped containers (even name, address, phone number)?
   a. The short answer is, no. Workplace (in-plant) containers are not required to replicate the information on the shipped container. But let’s back up and get our bearings.

GHS formatted labels on shipped containers have six elements:

1. Product identifier
2. Manufacturer/Supplier information (name, address, phone)
3. Pictogram(s) (if applicable)
4. Signal words
5. Hazard Statements
6. Precautionary Statements

Workplace labels on the other hand, are performance based – in other words, OSHA allows employers flexibility in the presentation of the required information.

OSHA answers a similar question on its website in the HazCom 2012 FAQ section:

“Q. How will workplace labeling provisions be changing under the revised Hazard Communication Standard? Answer: The current standard provides employers with flexibility regarding the type of system to be used in their workplaces and OSHA has retained that flexibility in the revised Hazard Communication Standard (HCS). Employers may choose to label workplace containers either with the same label that would be on shipped containers for the chemical under the revised rule, or with label alternatives that meet the requirements for the standard. Alternative labeling systems such as the National Fire Protection Association (NFPA) 704 Hazard Rating and the Hazardous Material Information System (HMIS) are permitted for workplace containers. However, the information supplied on these labels must be consistent with the revised HCS, e.g., no conflicting hazard warnings or pictograms.”

Here’s what OSHA says about workplace labels in the final rule (page 153), “...the employer can choose to label workplace containers either with the same label that would be on shipped containers for the chemical under the revised rule, or with label alternatives that meet the requirements for the standard. It should be noted that while alternatives are permitted for workplace containers, the information supplied must be consistent with the revised HCS.”

In the HazCom 2012 Regulatory Text, OSHA says, “…the employer shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged or marked with either:
(i) The information specified under paragraphs (f)(1)(i) through (v) for labels on shipped containers; or,

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

OSHA says employers can continue to use their current systems as long as they take into account the new GHS classifications, etc. However, when using a secondary label that does not contain all of the elements required on a shipping label, employers must ensure that employees still “get” all of the hazard information from the elements of the hazard communication program implemented in their workplaces that they would have gotten from a shipping label. These elements could include additional training, safety data sheets, and signs, process sheets, batch tickets, or other types of workplace warnings to supplement the alternative label.

2. Please clarify: Are new labeling requirements only applicable to shipping containers? Meaning secondary containers are exempt from the NEW labeling requirements?  
Workplace containers must be labeled under the revised rule. One option for labeling them is to use the shipped container label. However, as described above, OSHA has allowed employers to have alternative labeling systems as long as the workplace program as a whole provides employees with appropriate information. It should also be noted that there are exemptions in the current rule that are maintained in HazCom 2012 that affect certain types of containers—such as portable containers that are always under the control of the employee transferring a hazardous chemical from a labeled container into the portable container (paragraph (f)(8). In addition, the definition of “container” remains the same, and includes the following: For purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

3. Q: Do secondary containers require full labeling? Currently they may state only the chemical contained in the bottle.

The first part of this question is answered above. However, we want to point out that the second part of this question contains an incorrect assumption about requirements under the current HCS standard: There is nothing in the HCS that says an employer may state “only” the chemical contained in the bottle. The current system follows a performance based approach to labeling, as does HazCom 2012.

Employers would do well when thinking about workplace labels to not ask “what’s the least amount of information I can put on a label to be compliant?” Instead, the better question would be, “How can I best convey information about the hazards of this chemical to my employees via a workplace label?”
From strictly a compliance perspective, choosing to label your workplace containers with anything other than the information provided on the shipped label opens your label up to subjective interpretation. During an OSHA inspection, the inspector will be looking to see that the employer has made a “good faith” effort to inform employees of the relevant hazards via their secondary labeling system. Providing the least amount of information you can get away with is not an effective strategy.

Furthermore, the current test for determining if a secondary label system is compliant is somewhat rigorous, as evident from the following excerpt from OSHA Directive Number CPL 02-02-038 –Title: Inspection Procedures for the Hazard Communication Standard.

“Workplace Labeling

The standard recognizes the use of alternative in-plant labeling systems such as the HMIS (Hazardous Material Information System), NFPA (National Fire Protection Association), and others which may be used in industry. These systems rely on numerical and/or alphabetic codes to convey hazards and are generally non-specific. OSHA has permitted these types of in-plant labeling systems to be used when an employer’s overall HCS program is proven to be effective despite the potential absence of target organ information on container labels. Under these circumstances, the employer should assure - through more intensified training - that its employees are fully aware of the hazards of the chemicals used. Additionally, 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 (including target organ 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.

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 F.R. 6156)”.

This above directive will likely be updated in the wake of GHS alignment; however, the resulting directive is not expected to be any less stringent.

4. **Will the new GHS symbols be consistent with current DOT hazardous markings? Or will DOT change?**
A: The GHS includes the symbols used in international transport recommendations for physical hazards and acute toxicity. This was done to harmonize transport with other sectors where chemicals are used. DOT aligned with the international transport system many years ago. OSHA’s alignment with GHS harmonizes the standards of the two agencies with regard to symbols.

Paragraph (f)(5) of the HazCom 2012 regulatory text says, “Chemical manufacturers, importers, or distributors shall ensure that each container of hazardous chemicals leaving the workplace is labeled, tagged, or marked in accordance with this section in a manner which does not conflict with the requirements of the Hazardous Materials Transportation Act (49 U.S.C. 1801 et seq.) and regulations issued under that Act by the Department of Transportation.”

Here’s what OSHA says in the final rule on page 152-153, “… since transport rules have been harmonized with the other sectors under the GHS, the possibility of a conflict in information is less likely when the HCS is consistent with the international approach...there are some cases where the single container serves as both the shipping container and the workplace container, such as drums. In these situations, there are rules in the GHS regarding which pictograms take precedence and the ways in which to display the information. These rules are set forth in Appendix C of the final standard.

Appendix C of HazCom 2012 says, “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 shall not appear.”

5. Do chemicals used/stored in the workplace prior to HazCom 2012 require labels to be updated to comply with HazCom 2012?

HazCom 2012 requires all containers in workplaces to be labeled in accordance with the standard by June 1, 2016, a full year after chemical manufacturers and importers must have all labels and SDSs for shipped containers prepared in accordance with the revised rule. The four-year phase-in period for workplace containers allows employers to deplete products in inventory, and to modify workplace labels as appropriate. OSHA states on p. 60 of the final rule: “The phase-in period for the revisions to the HCS provides adequate time for firms to deplete products in inventory that are not labeled with GHS-compliant labels and to replace workplace containers or signs/permanent labels (such as regulated area signs) in the course of the normal cycle for wear-and-tear replacement.”

Chemical manufacturers and importers will be shipping containers with new labels and SDSs as they phase in requirements during the next three years. Any containers shipped to you after June 1, 2015 from a chemical manufacturer or importer will have to be appropriately labeled,
and accompanied by a new SDS. If not, you should contact your supplier to obtain the information. Distributors have an additional 6 months during which they can ship containers labeled by chemical manufacturers or importers prior to the June 1, 2015 deadline to their customers. After December 1, 2015, all shipped containers will have to be appropriately labeled. Implementation of HazCom 2012 is an excellent opportunity to examine your workplaces to determine what chemicals you have that are being stored for long periods of time, or are not being used any more. It may be possible to adjust inventory practices so as not to store chemicals for long periods of time, find a use for them, or to properly dispose of them, and thus reduce the hazards in the workplace. This would also reduce logistical issues regarding information available for them. As OSHA revises its compliance directive to address issues related to HazCom 2012, it is expected that the Agency will indicate what its policies will be after June 1, 2016 regarding workplace containers that were received before the new standard’s phase-in dates for compliance. However, employers may want to follow best practices, and take a proactive approach to ensuring that such containers are limited and that information is obtained from suppliers for employees’ protection.

6. What are the labeling requirements for secondary labeling for importers of hazardous chemicals?
   The requirements for distributors and importers are the same as the requirements for chemical manufacturers. The following is taken from the HazCom 2012 regulatory text:

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

   (i) Product identifier;

   (ii) Signal word;

   (iii) Hazard statement(s);

   (iv) Pictogram(s);

   (v) Precautionary statement(s); and,
(vi) Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party.

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

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

If the question is solely in regards to workplace secondary container labeling (e.g. an employer breaking down a larger container of chemicals into smaller containers), then the labeling requirements are those of an employer, and obligations would align with the answer to question #1 above.

7. How do they recommend labeling small re-use containers with all the new information that is required?
Like the current HCS, HazCom2012 has no specific exemptions for small containers. Assuming that this question applies to workplace containers, as explained above, OSHA takes a performance based approach to workplace labels. This is because OSHA understands it would be impossible to design workplace label guidance that was applicable to every workplace situation. There are millions of workplaces, each with their own unique needs. For that reason, OSHA allows companies to determine how best to meet the requirements for workplace labeling. As noted above, there is an exemption for portable containers that are under the control of the employee performing the transfer from the labeled container in both the existing and new final rules.

What OSHA does not budge on is the requirement for employees to be informed on the chemical hazards to which they are exposed. If a label does not contain and convey the necessary information, then employers must fill in the gaps and train employees to understand the hazards, and their resulting comprehension of those hazards needs to be on par with the level possible if the information from the shipping label had been used.

8. Are placards going to change?
If you are referring to transport placards, the answer is no – at least, not as a result of OSHA’s revision to align HCS with GHS. See the answer to question #4 above.

If you are referring to in-plant signs and placards, see the answer to question #9 below.
9. Will there be changes to the signs required outside of buildings, storerooms, etc., where chemicals are stored?

OSHA has some substance-specific requirements for signs in workplaces, such as signs for regulated areas required by an OSHA standard. The Agency does not have general requirements under the HCS for signs on the outside of buildings—you may be referring to requirements of state standards in this situation. OSHA has changed the sign requirements in the substance-specific standards to make them consistent with the information now required under HazCom 2012 (p. 11 of the final rule): “OSHA has also updated the language for workplace signs and labels to incorporate the GHS hazard statement and the applicable precautionary statement(s), where required. Most OSHA substance-specific health standards require hazard warning signs, usually for regulated areas, and the language required on the signs varies. With the GHS revision, these standards retain the requirements for specific warning language for specific signs; however, OSHA has modified the language to be compatible with GHS and consistent throughout the OSHA standards. The GHS classification process for a specific substance dictates the hazard warnings and the precautionary statements that will be required on the new GHS-compliant product labels. OSHA believes that having signs and labels in the same formats and containing identical warnings for the same health effects will make it far easier for employers and employees to quickly recognize the hazard and the degree of danger of a hazard, thus enhancing communication.”

A vigorous discussion of signs under GHS takes place between pages 168-175 of the final rule. As part of the discussion, there is a helpful table (Table III-4) with before and after requirements for signs.

As mentioned earlier, OSHA believes “the phase-in period for the revisions to the HCS provides adequate time for firms to deplete products in inventory that are not labeled with GHS-compliant labels and to replace workplace containers or signs/permanent labels (such as regulated area signs) in the course of the normal cycle for wear-and-tear replacement. OSHA believes that any costs incurred that are outside the costs that would normally be incurred to replace in-house containers would be negligible and has not estimated a cost for this activity.”

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

10. What about labels on shipments of Haz waste? Does it affect hazardous waste labeling?
Hazardous waste, as regulated by the EPA is exempted from HazCom 2012 per regulatory text (paragraph (b)(6)(i) and (ii).

(b)(6) This section does not apply to:

(i) Any hazardous waste as such term is defined by the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901 et seq.), when subject to regulations issued under that Act by the Environmental Protection Agency;

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

However regarding contaminated clothing, PPE, and waste and debris, the final rule (page 168) says, “Labels required by the current standards for contaminated clothing, PPE, and waste and debris, which are not addressed in the GHS, are retained, but their language has been changed to be as reflective of GHS terminology as possible.”

On page 180, the final rule states, “Employers must be using new labels for contaminated clothing and waste and debris by June 1, 2015, the date by which manufacturers and importers must comply with the labeling and SDS requirements of the revised HCS.”

Finally, OSHA’s alignment with GHS affects OSHA’s HAZWOPER Standard as discussed in the final rule on page 181.

11. If an end user uses "luggage tags" for labeling piping and other drop locations for chemicals, will they be required to update labeling, pictograms, etc?

In general, the spirit of GHS is that all hazard communication be harmonized to the extent possible with the language and guidance provided by GHS for any given hazard. However, regarding the labeling of pipes, there is nothing in the final rule that addresses pipe labeling requirements.

In the regulatory text, pipes are mentioned in paragraph C under the definition of Container:

"Container" means any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.
Then in paragraph (e) (1) (ii), the regulatory text states that employers must describe in their written hazard program “The methods the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels), and the hazards associated with chemicals contained in unlabeled pipes in their work areas.”

If the employer chooses to label pipes or piping systems, the labels must comply with the workplace labeling requirements.
NFPA/HMIS LABELS

1. Will the NFPA and/or HMIS diamonds still be applicable? Or, will the trend to just go to the pictograms?

First, will NFPA and HMIS labels still be applicable? The short answer is yes. There is nothing in HazCom 2012 that prevents their use. In fact, the final rule as published in the Federal Register (page 185) explicitly says, “Neither the proposal nor final rule prohibits the use of NFPA or HMIS rating systems.” However, NFPA and HMIS are voluntary systems, and their use has never been part of the mandatory requirements of the HCS.

Labels on shipped containers must include the label elements specified in HazCom 2012, consistent with the GHS. Additional information may be provided, but not as a substitute for the required elements. And when it comes to workplace container labels, the final rule (page 153) says, “…the employer can choose to label workplace containers either with the same label that would be on shipped containers for the chemical under the revised rule, or with label alternatives that meet the requirements for the standard. It should be noted that while alternatives are permitted for workplace containers, the information supplied must be consistent with the revised HCS. Hazard classifications must be revised as necessary to conform with the final rule, and the other information provided must be revised accordingly to ensure the appropriate message is conveyed.”

In the HCS Regulatory Text it says, “…the employer shall ensure that each container of hazardous chemicals in the workplace is labeled, tagged or marked with either:

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

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

So if you use NFPA or HMIS labels, your responsibility is still to ensure that employees are provided with the specific physical and health hazards of the hazardous chemicals to which they are exposed. To summarize, on workplace labels, employers can replicate the shipping label (which might be considered the OSHA preferred best practice) or they can use some combination of elements from the shipping label that when combined with employee training and other information available in the workplace under the employer’s hazard communication...
program achieves the same level of hazard awareness that the shipping label would’ve provided.

Again, there is nothing in OSHA’s alignment with GHS that precludes the use of NFPA and HMIS labels on workplace containers. However, the threshold is high for proving the workplace labeling system conveys the necessary understanding of chemical hazards to employees.

Second, will the trend will be to go towards pictograms? Let us first clarify — pictograms are an element of a HazCom 2012/GHS label and not a substitute for the label itself, or a substitute for NFPA and HMIS labels.

Shipping labels in the GHS format will have pictograms (if required by classification). If contents of a shipped container are repackaged into smaller containers for distribution, those containers also need to have the required shipping label. If an employer puts a chemical into “secondary” workplace containers, those containers also need to be appropriately labeled. The label for the secondary workplace container would not necessarily have to replicate all of the elements of the manufacturer label (e.g. pictograms). However, employees looking at the secondary container label would need to "get" all of the information they would have gotten from a manufacturer label — either by the label itself explicitly conveying the information, or by providing training or other information in conjunction with the label.

OSHA’s test for compliance on this issue is a stringent one and involves an inspector questioning employees about the hazards of a chemical based upon the information provided by a secondary container label. Employees must demonstrate they have as great an understanding of the hazards based on the secondary label as they would have from the label of a shipped container.

The spirit of your question seems to be ‘will NFPA and HMIS labels become irrelevant with GHS?’ That’s a difficult question to answer at this juncture. Both the NFPA and HMIS labeling systems have served important roles in safety efforts, and change takes time. Furthermore, the American Coatings Association has made it known that it intends to modify HMIS to align with HazCom 2012. NFPA has expressed similar sentiments.

That said, many companies likely turned to alternative labeling systems, in part, due to the vacuum of specifications in the old HazCom Standard. Now that the HCS has been aligned to GHS, and label information is specified to a high degree, many companies may find managing multiple labeling systems taxing. In that event, HazCom 2012 — being the law of the land — will have a distinct advantage.
2. I have heard that the numbering scheme is reversed internationally from what we use in the U.S. I have not seen any mention of this in the latest articles that I have been reading. Is this still a concern? We use 4 for most hazardous and the International scene uses 1...?

We need to address this carefully. As Jennifer Silk pointed out during the Webinar, there is a big difference in the way OSHA uses numbers in HazCom 2012 versus the way the NFPA and HMIS labeling systems use them. In OSHA’s HazCom 2012, category numbers would not appear on labels at all. They would only be on the SDS.

As explained in OSHA’s 2009 Proposed HCS Rule “GHS category\numbers determine the label elements that would be required for a chemical, but the category numbers themselves would not appear on labels. Where GHS category numbers would appear on the SDS (Section 2–Hazards identification), they would be accompanied by the label elements for the chemical, which would clearly indicate the degree of hazard. OSHA, therefore, does not anticipate that this information will cause employees to become confused. Moreover, the approach taken in the GHS (i.e., assigning higher category numbers to denote less serious hazards) is consistent with the approach used in the DOT transport regulations for many years.”

Conversely, on NFPA and HMIS labels, the numbers themselves communicate information regarding the level of severity for a given hazard.

Changing the numbering of the hazard categories in OSHA’s adoption of the GHS would have led to international inconsistency, rather than harmonization. While the NFPA objected to the approach adopted OSHA pointed out that the NFPA’s use of numbers is not always consistent between the NFPA’s various systems, and furthermore, end users application of NFPA ratings are not always appropriate when taking information on the safety data sheet into consideration (final rule, page 184).

Some commenters had specific concerns about the GHS classifications of flammable and combustible liquids. OSHA believes these concerns were misplaced and has provided a detailed discussion on page 182 of the final rule.
SAFETY DATA SHEETS

1. **On the new SDS, are the appendices included within the text format?**
   We’re not exactly sure what is being asked here, probably a result of the questioner having to type their question into a very small box on the computer screen.

   So, more generally, let us say, detailed information regarding safety data sheets can be found in HazCom 2012 Appendix D on OSHA’s website. Appendix D is mandatory, and it specifies what information must be addressed in each section of an SDS.

2. **Please elaborate on safety data sheet quick card. The note at bottom states "Since other Agencies regulate this information, OSHA will NOT be enforcing Sections 12-15."**
   First, let us point out that Quick Cards are training tools OSHA has created for HazCom 2012 that can be printed and given to employees free of charge. They can be found on OSHA’s Hazard Communication Standard Quick Cards Web page. Currently, there are three quick cards available:

   1. Safety Data Sheets [PDF 171 KB]
   2. Labeling [PDF 261 KB]
   3. Pictograms [PDF 238 KB]

   As the questioner points out, the safety data sheet Quick Card lists the 16 sections of a GHS formatted SDS and states at the bottom, “Since other Agencies regulate this information, OSHA will NOT be enforcing Sections 12-15.” This is actually a pretty straightforward statement.

   Sections 12-15 of a GHS formatted SDS are as follows:

   - Section 12, Ecological information*
   - Section 13, Disposal considerations*
   - Section 14, Transport information*
   - Section 15, Regulatory information*

   Each of these sections is outside of OSHA’s jurisdiction, or otherwise, not mandatory under HazCom 2012.

   For instance, section 12 pertains to chemical information under the EPA’s jurisdiction and section 14 is information better covered by the DOT. So why are these sections even part of an HCS compliant SDS? Because GHS is an international approach, and these sections are in use in other countries. It is possible, even likely, that these sections will be used by chemical manufacturers creating SDSs for use in the United States and other countries at the same time.
In order to ease the regulatory burdens of such companies, OSHA does not prevent the inclusion of such information on the SDS. However, without regulatory control over the information contained within these sections, OSHA has made them non-mandatory and will not be enforcing these sections.

A more detailed description of each section is available in Appendix D of OSHA’s website.

3. Can a chemical supplier leave sections 12-15 off of the SDS and still be considered compliant with HazCom 2012?
   Here’s what the regulatory text says about sections 12-15:

   Note 1 to paragraph (g)(2): To be consistent with the GHS, an SDS must also include the following headings in this order:
   
   (xii) Section 12, Ecological information;
   
   (xiii) Section 13, Disposal considerations;
   
   (xiv) Section 14, Transport information; and
   
   (xv) Section 15, Regulatory information.

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

In producing a compliant SDS, a manufacturer could just leave off these sections, i.e., just go from 11 to 16. However, this would not be accepted in other countries as being a complete SDS. Furthermore, these sections provide useful information to downstream users of the chemicals, so not including the information would cause problems for a chemical manufacturer’s customers. There may also be product liability concerns. Thus, OSHA enforcement is not the only concern that should be considered.

4. You mentioned that Appendix D requires ACGIH TLV's on SDS's. Does this mean that where different, OSHA will be issuing citations to the lower TLV's as opposed to PEL's?
   OSHA originally intended to leave TLV’s, Threshold Limit Values, off of the SDS. However, it received strong (though, not universal) recommendations to include them.

   In the final rule (pages 161-162) OSHA explains its reason for including them, “...based on many comments in the record, OSHA has concluded that the TLVs provide useful information for those designing protection programs for employees exposed to the chemicals involved, and are already widely used and applied for that purpose in American workplaces, as well as around the world. Referencing TLVs on the SDSs does not make them mandatory or establish them as control
guidelines. It simply provides additional information that can help employers determine the proper levels.”

There is no mention in the final rule of OSHA using the TLV’s to issue fines. OSHA bases its assessments where applicable on its own permissible exposure limits (PELs).

5. How will the new standard affect electronic storage of SDSs? Will it still be allowed as long as the employee has access?

These are actually two very different issues, the electronic storage of SDSs and the requirements for safety data sheets to be readily accessible to employees. Let’s separate out these issues to determine OSHA’s perspective on each.

First, electronic management of SDSs can be a beneficial tool regardless of whether or not the electronic system is also used to provide employee access to SDSs. For instance, an electronic system could be used by a safety manager to manage SDSs at a high level, and access and download SDSs as needed from a master database, while still providing traditional SDS access to employees via a paper system.

On the other hand, a good electronic system also makes it easy to deploy SDSs to employees as part of the “Right to Know” requirements. To that end, OSHA provides the following directive in the HazCom 2012 regulatory text, paragraph (g)(8), “The employer shall maintain in the workplace copies of the required safety data sheets for each hazardous chemical, and shall ensure that they are readily accessible during each work shift to employees when they are in their work area(s). (Electronic access and other alternatives to maintaining paper copies of the safety data sheets are permitted as long as no barriers to immediate employee access in each workplace are created by such options.)”

In other words, if an employer uses an electronic system to provide employees with access to SDSs, then the employees need to have direct access to the SDSs in their workplaces, without having to go through anyone else to get the information. OSHA also requires a backup to electronic systems in case of power outages, disruptions of service, etc. This backup can be in the form of a master copy of SDSs kept in a central location, use of a fax-back service, the backing up of SDSs to a computer that has an external power source, or other means.

Finally, employers using an electronic system must also be able to immediately produce a paper copy of the SDS upon request of an employee or an OSHA representative, per paragraph (g)(11) of the regulatory text. “Safety data sheets shall also be made readily available, upon request, to designated representatives, the Assistant Secretary, and the Director, in accordance with the requirements of 29 CFR 1910.1020(e).”

More information on electronic management can be found in the final rule on page 156.
6. **Will we have to keep two books (MSDS & SDS) until full implementation?**

No. During the transition period, which extends from May 25, 2012 (the date HazCom 2012 goes into effect) through the various phase-in deadlines ending on June 1, 2016, employers may be compliant with either the old HCS or HazCom 2012 or a combination of the two. This question was addressed by OSHA on its [HazCom 2012 FAQs Web page](https://www.osha.gov/SLTC/hazardcom2012/FAQs/FAQ_HazardCom2012.html).

This topic is also addressed in the latter part of the answer to question 3, regarding the phase-in period of the revised HCS, where it states, “During the phase-in period, employers would be required to be in compliance with either the existing HCS or the revised HCS, or both. OSHA recognizes that hazard communication programs will go through a period of time where labels and SDSs under both standards will be present in the workplace. This will be considered acceptable, and employers are not required to maintain two sets of labels and SDSs for compliance purposes.”

7. **I believe I heard Jennifer indicate that hazard categories (i.e. numbers) were not required on MSDSs. Doesn’t d(2) state classification includes the category where appropriate. MSDSs are to be in accordance with (d). Also the GHS SDS examples given on the OSHA website include hazard categories, numbers. Are numbers/hazard categories to be put on SDSs?**

Thank you for the question and a chance to clarify this point. **You are correct**; hazard categories are a required component of section 2 of a GHS formatted SDS. (Jennifer had been talking about labels, and then accidentally also included SDSs—but later clarified in the discussion that hazard categories are on SDSs.

Guidance on this issue can be found in the [OSHA Brief on SDSs, HazCom 2012 Appendix D](https://www.osha.gov/SLTC/hazardcom2012/AppendixD.html), paragraph (d) of the regulatory text, as well as page 24 of the final rule which states:

> “Classification of hazards will play an important role in increasing the usefulness of SDSs under the final rule. By including the classification of the substance on the SDS, employers will be in a much better position to compare the hazards of different chemicals. Hazard categories generally give an indication of the severity of the hazard associated with a chemical. For example, all other things being equal, a chemical classified for skin corrosion/irritation in category 1 as a skin corrosive would be more hazardous than a chemical classified in category 2 as a skin irritant. If chemicals are classified into hazard categories, this information can be used to simplify the process of comparing chemicals. As noted previously, employers use SDSs as a means of comparing chemical hazards to select less hazardous alternatives. Thus, it is reasonable to conclude that this final rule will result in more effective use of the SDS as an instrument for identifying less hazardous substitutes for hazardous chemicals.”

8. **If manufacturers must classify materials, yet are not required to put these classifications on SDSs, how do we the end user find out what the classifications are so that we may put them on our HMIS or NFPA labels?**
Classifications are required on the SDS. The classifications are not the same as HMIS or NFPA ratings. See answer to question #7 above for more information.

9. Do all chemicals used/stored in the workplace prior to HazCom 2012 require replacement of MSDSs to SDSs to comply with HCS2012?

The manufacturer or distributor is not required to send updated HazCom 2012 safety data sheets or labels independent of a new shipment. In such a case, it would be helpful for employers to contact their suppliers to obtain such information in order to have an effective hazard communication program. It is expected that OSHA will indicate in the revised compliance directive how this situation will be dealt with from an enforcement perspective after the standard is fully implemented in 2016. As noted previously, it is anticipated that the four year compliance phase-in should result in a situation where there are few chemicals in 2016 in workplaces without revised labels and SDSs.

However, in the event of a manufacturer or distributor not providing GHS formatted labels or SDSs with a shipment after the final HazCom 2012 compliance dates, OSHA would require employers to reach out to the manufacturer or distributor and request the necessary documents and labels.

10. Does the producer or manufacturer have to produce SDSs for all chemicals and send SDSs to previous purchasers?

There is no requirement for manufacturers to produce SDSs for chemicals it no longer produces or ships, nor is there a requirement to send SDSs to previous purchasers. As mentioned above, the regulatory text states that “(g)(6)(i) Chemical manufacturers or importers shall ensure that distributors and employers are provided an appropriate safety data sheet with their initial shipment, and with the first shipment after a safety data sheet is updated;”

11. Does the producer/manufacturer just need to convert MSDS to SDS and send the SDS with purchases occurring after required implementation date?

Correct. However the process of converting an MSDS to a GHS formatted SDS is a key responsibility for manufacturers and distributors. Hazardous chemicals need to be reclassified using GHS criteria in order to produce the GHS compliant SDS. HazCom 2012 also specifies what information must be included on an SDS. In addition, a new GHS formatted label will also be required.

12. Has OSHA said anything about keeping SDSs electronically vs. on paper?

As discussed in question #5 above, OSHA does permit electronic management of SDSs so long as SDSs are readily accessible to employees. Best practice is to also maintain a master paper set, which a good electronic system can produce easily.
13. Does an SDS need to be on site for ALL chemicals, or only those that are used in quantities greater than consumers would use in their household? This was how the old system required MSDS.

To better answer this question, we’d like to adjust some of the terminology used. The question is really about whether or not SDSs are needed for consumer products (e.g. glass cleaner or white out) as defined by the Consumer Product Safety Commission (CPSC). The answer depends (as the questioner points out) on how the product is being used and in what quantities. On this point, HazCom 2012 continues the precedents set by the current HCS. Paragraph (b)(6)(ix) in the regulatory text states:

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

In other words, if your employees use consumer chemical products in the same manner that any other consumer would, and as directed by the manufacturer, you probably don’t need to worry about having an SDS, though there is nothing preventing you from requesting one.

On the contrary, if your employees use consumer chemical products for purposes that extend beyond that of an average consumer, especially in regards to the frequency and quantity of use, then their exposure is higher and you would need SDSs for those products.

In the final rule (pages 122-123), OSHA states, “Thus, under the current HCS, SDSs and employee training are required where employee exposure to a consumer product exceeds the range that “could reasonably be experienced by consumers when used for the purpose intended.” 29 CFR 1910.1200(b)(6)(ix). OSHA sees no need to revisit this issue now, and in any event it is outside the scope of this rulemaking, which is aimed at the changes necessary to bring the HCS in conformity with the GHS.”

14. Must we maintain “old” MSDSs for 30 years as employee exposure records, per 1910.1020?

As updated safety data sheets start rolling in, the first thing you’ll need to do is to look them over and compare them with the MSDSs they replace (if any) to see what’s changed. There may be new information or newly identified hazards that need to be addressed with employees via training. Next, you will need to update your safety data sheet library or libraries.

The question then becomes ‘what to do with old MSDSs; do you have to keep them?’ Technically, the answer is no. Per the Access to Employee Exposure and Medical Records Standard (29 CFR 1910.1020), you are required to keep records of the chemicals in use at your
facilities for 30 years beyond their end use date. Where an SDS is the only exposure record available, it would have to be kept under the Access rule for 30 years.

If you do not keep a safety data sheet to meet the Access to Employee Exposure and Medical Records Standard, then you must keep additional information about the chemical, specifically, the chemical identity and when and where it was used.

This additional information is valuable, even if you choose to keep the safety data sheet. A good electronic system allows you to both archive the MSDS along with information about where and when it was used.

15. Should old MSDSs be maintained and archived?
Continuing on from the answer to question #14 above, this question is really a judgment call. And the best answer will be dependent upon how you are maintaining your archived safety data sheets, and what kind of information you would like to have in the future about the chemical information you had in the past.

Maybe the best way to think about it is to consider a hypothetical situation in the future where a former employee comes back and asks about certain chemicals he or she was exposed to. The more information you have, the better you'll be able to paint an accurate picture about the specific hazards that employee was exposed to, as well as the quality of information you had available at that time.

Of course, if you maintain thousands of SDSs, it may not be practical to file and store old SDSs (and their many revisions) for 30 years or more. Again, a good electronic system can ease this pain point.

16. How can you guarantee with an electronic system that you have access to the SDS's all of the time - what about a power failure or network failure?
One of OSHA’s requirements for electronic SDS management system is that the employer has an adequate back-up in the event of a system failure, etc. To that end, there are lots of ways to back up your library. With a good electronic system, you should be able to print a hardcopy set. Fax-back services and backing up to computers with external power sources or to portable storage devices with external power sources, are good methods. And in some cases, information can be transmitted via phone – as explained in the February 1999 OSHA Letter of Interpretation.

Following are two of the questions posed in the interpretation, along with OSHA’s responses:

“If an employer maintains an electronic system as the primary means of providing MSDSs in the workplace, is it acceptable for employees to obtain hazard information verbally over the phone if the primary system is temporarily inoperable? Is it acceptable for employees to
obtain hazard information over the phone in the case of other kinds of emergencies?

In the event of a power outage, equipment failure, or other "emergency" involving a foreseeable failure of the primary electronic system, OSHA would consider telephone transmittal of hazard information to be an adequate back-up as long as the MSDS is delivered to the site as soon as possible. In emergencies other than failure of the primary electronic system, the MSDSs must be available and we would consider telephone transmittal of hazard information supplemental to the data sheets”

Is an auxiliary power system acceptable to ensure that an MSDS is retrievable in case of a general power failure?

Yes. An auxiliary power system would be acceptable to ensure that MSDSs are retrievable in the situation of a general power failure.

17. Where would we get the pictogram(s) to place on the SDS?

Pictogram information is available on OSHA’s website in HazCom 2012 Appendix C. For nice labels you can download and use, here are a couple of good sources:

MSDSonline Flickr Account:
http://www.flickr.com/photos/msdsonline/sets/72157623957976547/

United Nations Economic Commission for Europe (UNECE)
http://www.unece.org/trans/danger/publi/ghs/pictograms.html

18. Does the border on the pictogram need to be red on the SDS?

No, pictograms on SDSs do not have to have red borders (on the contrary, they are required on shipping Labels). OSHA is very flexible about how pictogram information is presented in Section 2 of the SDS. This is what OSHA says in Appendix D regarding pictograms in section 2 of an SDS:

“(Hazard symbols may be provided as graphical reproductions in black and white or the name of the symbol, e.g., flame, skull and crossbones);”

So you can produce the pictogram with a red border, in black and white, or with no symbol at all—and instead just the name of the symbol(s).

19. What if an SDS is not provided by a manufacturer?

In the event of a manufacturer or distributor not providing GHS formatted labels or SDSs with shipments after the final compliance dates, employers should contact the supplier to obtain the necessary information. Here’s what OSHA says about the issue in the regulatory text:
(g)(6)(iii) If the safety data sheet is not provided with a shipment that has been labeled as a hazardous chemical, the distributor or employer shall obtain one from the chemical manufacturer or importer as soon as possible; and,

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

In OSHA’s Citation Guidelines for inspectors, the agency says this about employers’ responsibilities:

“If MSDSs or labels are missing or have not been received, the employer shall be cited unless a good faith effort has been made to obtain the information.

The question also brings up a good to-do item — instead of waiting to see if a supplier will provide the appropriate materials, we recommend that companies reach out to their vendors to ask about the vendors’ plans to transition to GHS. This type of market pressure can prime the pump and help get the entire marketplace moving quickly in the GHS direction. In addition, knowing your vendors’ plans also gives you an opportunity to alert your team about when to expect the new documents and labels. In addition, for those chemicals purchased prior to the dates by which revised labels and SDSs must be provided, it would also be good practice to contact suppliers to obtain the new SDS and label information in order to have an effective hazard communication program in the workplace.

20. Please review this "Waiver" for SDS you mentioned!
SDS waiver" is not an OSHA term, and it is not part of the HCS. The HCS and HazCom 2012 cover hazardous chemicals. Chemicals that are not hazardous are immaterial to the HCS.

That said, in some cases, when an employer is unsure if an SDS is needed for a certain chemical or product, he/she might contact the manufacturer and ask for one. If told that there is no SDS for that item or that one is not required, he/she might ask for some sort of “official” confirmation. In those instances, some manufacturers and distributors will provide an “SDS Waiver”, which is basically documentation that no SDS is required. It is not an official HCS approved document, it’s basically used to pacify the requesting party.

21. When should we start referencing SDS in safety plans in safety plans?
Let’s work backwards: June 1, 2016 is the date by which employers must be in full compliance with HazCom 2012. By that date, any updates to the hazard communication program should be in place. The effective date for HazCom 2012 is May 25, 2012, so anytime between that date and June 2016 would be acceptable.
For what it’s worth, GHS adoption does not bring a lot of changes to the Written Hazard Communication Programs, and as such, they are not discussed much in the final rule. However, there is a discussion starting on page 150 that specifically addresses the Written Plan

22. How does OSHA intend to hold the manufacturers accountable for complying with the SDS portion of the standard?
HCS violations have routinely ranked in the top 3 of OSHA violations each year. Among those violations, are citations for manufacturers and distributors who fail to provide compliant safety data sheets and labels to downstream users. While not specifically addressed in the final rule, the current Inspection Procedures for the Hazard Communication Standard provides inspectors the following guidance:

(g)(6) Chemical manufacturers and importers have an affirmative duty to provide MSDSs to distributors and employers upon initial shipment and also upon request. Thus, a chemical manufacturer and/or importer shall be cited under (g)(6) if they withhold sending MSDSs to downstream users with an initial shipment, with the first shipment after updating an MSDSs, or upon request pending a separate payment for the MSDSs.

(g)(7) As in paragraph (g)(6), distributors have an affirmative duty to provide MSDSs to other distributors and downstream employers and cannot withhold sending the MSDSs pending separate payment. CSHOs should be aware of various changes regulating the relationship between distributors (both retail and wholesale) and employers in the standard.

It is expected—given the time allotted for transition—that most manufacturers, distributors and employers covered by the HCS will comply. If you encounter a non-compliant vendor, your local OSHA office is your best resource. Remember, manufacturers and distributors have until June 1, 2015 to comply; and distributors get an additional six months (until December 1, 2015) to move older shipments.

23. We have over 20 different languages spoken in our plants. Are there requirements for us to translate data sheets and labels into these languages?
The short answer is no. OSHA’s only language requirement is that employers have English labels and SDSs. Other languages are permitted. Paragraph (g)(2) of the regulatory text states:

“The chemical manufacturer or importer preparing the safety data sheet shall ensure that it is in English (although the employer may maintain copies in other languages as well)...”

However, having SDSs in your employees’ preferred language is not a bad idea, and two of the benefits of the Globally Harmonized System, are that it is being adopted around the world, which increases the likelihood of an SDS being available in another language, and in addition, its use of standardized pictograms helps to visually convey hazards, improving chances of
comprehensibility by people who speak any language. Of course, you must be careful to ensure classifications, etc., are the same as those found on the OSHA compliant English version.
TRAINING

1. **By when does the training have to be completed?**
   Employers have two different compliance deadlines related to training as found on OSHA’s [HazCom 2012 Effective Dates Web page](mailto:www.MSDSonline.com):

   - **December 1, 2013** – Employees trained on how to read GHS formatted SDSs and labels
   - **June 1, 2016** – Employers need to be fully compliant on GHS, including training employees on any new hazards, making any updates to the Written Hazard Communication Program, as well as to any workplace labeling/signage

   The first deadline, December 1, 2013, is considerably sooner than the 2 years OSHA had originally proposed for training. The reason for that is, OSHA believes employees need to be prepared to deal with and understand incoming GHS-formatted labels and SDSs, which are expected to arrive in increased quantities soon after the May 25 effective date. In fact, chemicals with GHS styled labels and SDSs are already turning up at workplaces around the United States, and employees will be better protected if they have had at least an introduction to the symbols and elements in use on labels, as well as an understanding of the new SDS structure.

   Thus, it makes sense for employers to consider training employees well before the 2013 deadline. Especially, since employees will be an employer’s first line of defense when it comes to identifying GHS styled SDSs and labels as they enter the workplace. Employers will want to pull those new SDSs aside to compare them against the older MSDSs, to identify any new hazards and to ensure they are swapped out in the safety data sheet library.

   The second deadline, June 1, 2016, is considerably longer than the 3 years OSHA had originally proposed for full compliance. This extension helps account for the delay from when a manufacturer or distributor is required to updates an SDS or label to when an employer will actually receive the next shipment of the chemical containing the GHS-formatted label and/or SDS. The extended deadline is intended to give employers several more months, beyond that of the manufacturer and distributor deadlines, to update their SDSs, labels, alternative labeling systems, and written program, and to provide training on any chemical reclassifications.

   [Manufacturers must complete their reclassification of chemicals and preparation of new SDSs and labels by June 1, 2015. Distributors must also be up to speed by June 1, 2015, but are given 6 additional months (until December 1, 2015) to divest themselves of products received too close to the June 1, 2015 date to re-label and ship.]

   Regardless, by June 1, 2016, employers must have updated their hazard communication programs, made any necessary adjustments to their workplace labeling system, and trained employees fully on any new hazards identified in during the reclassification process.
2. I know we are focusing on U.S. requirements, but do you know the training requirements internationally?
That’s a trickier question than it might appear. There are over 65 countries that have already adopted or are in the process of adopting GHS. One of the best sources of information on international progress is on the UNECE GHS Implementation Web Page.

3. No employee training documentation / certification requirements?
No. This is one area that remains unchanged from the present HCS, which does not require training documentation or certification. This does not mean that training is not an essential element of HazCom 2012. In fact, it could be argued that training is one of the center pieces of compliance under the revised HCS. At the very least, training has been and will continue to be a core component of a compliant hazard communication program.

OSHA talks about training in the final rule on page 25 and 162-164. On page 163, OSHA alludes to a training resource (a draft Model Training Program) it posted for comment and is currently revising for use with the HazCom 2012.

Furthermore, the HazCom 2012 regulatory text contains several items on training, most specifically, paragraph (h) through (h)(3)(iv). It begins:

(h) Employee information and training.

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

General Compliance

1. Given the current political climate, do you anticipate a lot of opposition to this change?
The question is a fair one, considering the political climate in Washington D.C. these days with regards to regulations. Nevertheless, one of the most important things manufacturers, distributors and employers can do at this time is to recognize that GHS is here to stay.

In the fall of 2011, OSHA Director Dr. David Michaels testified before a house committee that wanted to address a number of concerns it had with pending regulatory initiatives. Dr. Michaels opened his testimony by saying a revision to the HCS would be among its next rules
promulgated. It was one of the only items the committee did not question him on, which serves as evidence of the wide-spread support OSHA has on the revision.

The fact is, the seeds for GHS adoption were sewn into the preamble of the original HCS back in 1983. At that time, it was recommended that OSHA pursue a global hazard communication system. This means GHS has been a goal of the United States going on 30 years.

Not only has the process of getting to the final rule been slow, it has been open—with a great deal of input and participation by a number of stakeholders. And, without pandering, it is safe to say that OSHA has been sensitive to the feedback it has received along the way.

The revised HCS was published on March 26, 2012 and goes into effect on May 25, 2012. Still, that does not mean the new standard will be etched in stone. OSHA has made it clear that GHS is a living system and OSHA intends to make adjustments as warranted.

2. **What is STOT?**

STOT stands for Specific Target Organ Toxicity. It is a health hazard class in GHS and HazCom 2012. [See Appendix A](#). As a classification, STOT is referenced either in terms of hazards from a single exposure (A.8.1, Appendix A) or hazards from repeated exposure (A.9.1, Appendix A).

3. **Does GHS internationally use the signal words DANGER and WARNING?**

Yes. GHS, in all its iterations, as published by the United Nations, designates two signal words: Danger and Warning. In HazCom 2012, paragraph C, Definitions, OSHA says this about signal words:

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

You can see that this is in accordance with the United Nations latest revision of GHS (Rev 4), which states, “Signal word means a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The GHS uses “Danger” and “Warning” as signal words.”

4. **How do the new requirements connect with the Toxic Substance Control Act (TSCA)?**

According to OSHA, connections between HazCom 2012 and the Toxic Substances Control Act are a work in progress. On page 117 of the final rule, OSHA comments, “EPA and CPSC have not initiated rulemaking on the GHS. However, as will be discussed later in this preamble, EPA and OSHA have worked together to develop a common position on coverage of pesticides and chemicals covered by the hazard communication requirements of the Toxic...
Substances Control Act’s (TSCA’s) significant new use rules. Clearly, there is no way to coordinate timelines for adoption given that OSHA is at the final rule stage, and neither EPA nor CPSC has started a rulemaking process. As rulemaking develops in these Agencies, discussions will continue to take place in the interagency committee on this subject.”

Additionally, on page 162 of the final rule, OSHA states,

“OSHA indicated in the NPRM that Sections 12 through 15 of the SDS were not going to be mandatory since they involved information that is outside OSHA’s jurisdiction. With regard to Section 12 on environmental effects, some commenters expressed concern about the lack of harmonization with trading partners on environmental issues, or suggested that OSHA should work with EPA on this issue (See, e.g., Document ID #0351 and 0377). OSHA and EPA have discussed this issue, and EPA’s Office of Chemical Safety and Pollution Prevention will be updating applicable Toxic Substances Control Act (TSCA) regulations consistent with modifications made in this Federal Register Notice. Dates will be published in the Unified Regulatory Agenda (www.reginfo.gov).”

5. I have a question about the State Plan OSHA states. Is it true they have 6 months to adopt the new changes? Do you think they most likely will adopt the changes?
Yes, and yes. You are quite correct that States with OSHA approved State Plans must adopt the new changes or show why no revision is necessary. This is explained in the final rule on page 114:

“When federal OSHA promulgates a new standard or more stringent amendment to an existing standard, the 27 States or U.S. territories with their own OSHA-approved occupational safety and health plans must revise their standards to reflect the new standard or amendment, or show OSHA why there is no need for action, e.g., because an existing state standard covering this area is already “at least as effective” as the new federal standard or amendment. 29 CFR 1953.5(a). The state standard must be at least as effective as the final federal rule, must be applicable to both the private and public (state and local government employees) sectors, and must be completed within six months of the publication date of the final federal rule... Therefore, State Plan States must adopt comparable provisions within six months of publication of the final rule. Each State’s existing requirements will continue to be in effect until it adopts the required revisions.”

6. How are these changes or requirements going to affect research universities (state universities)?
Changes to the Hazard Communication Standard affect everyone covered by the current HCS. So, to the extent that research universities must follow the compliance guidelines set out by the HCS today, their obligations will be similar going forward with HazCom 2012. To review, there are five key responsibilities for downstream users (employers) under the HCS:
- Maintain a written Hazard Communication program
- Maintain an updated written chemical inventory
- Properly use labels and warning signs
- Maintain and provide employee access to safety data sheets
- Train employees on Hazard Communication program and workplace chemical safety

To the extent that HCS makes changes to SDSs and labels and requires updates to the written program and training, universities covered by the HCS would have to follow suit.

It’s worth noting, many research universities must also comply with the Occupational Exposure to Hazardous Chemicals in Laboratories standard (29 CFR 1910.1450). Last fall, OSHA issued new Laboratory Safety Guidelines that touched on changes brought about by GHS adoption. So, to the extent that the Laboratory Standard intersects with HCS (e.g. SDSs, labels), universities under its jurisdiction will need to adhere to the changes brought about by HazCom 2012.

7. Are you aware of anyone who can review our current written plan and let us know what changes we need to make to it as a "user" level business?

There are a number of well qualified safety consultants in each state that should be able to provide guidance in this area. ASSE publishes a Consultants Directory that may be useful in your search. OSHA also has a number of resources available, such as its On-site Consultation Program and its Compliance Assistance / Outreach Web page. In addition, as Glenn Trout mentioned in the Webinar, MSDSonline has many resources that can help you maintain a compliant hazard communication program.

8. When will the updated CFR become available?

The CFR is updated annually by the Government Printing Office. An electronic version is also available online. It is not clear when the print version will be available for 2012. The text of the standard is available now. OSHA published the final rule on GHS on March 26, 2012. You can access the final rule, the regulatory text, and the appendices by clicking the links below.

- Final Rule as published in the Federal Register
- HCS Regulatory Text as provided on OSHA’s Website
- HCS Appendices as provided on OSHA’s Website

9. If this goes into effect May 25th, 2012...by what date do I have to have my written plan updated/training completed/and MSDSs replaced with new?

See the answer to question #1 under the training heading for more information. However, in short, there are two training dates employers must adhere to during the phase-in period.

- December 1, 2013 is the date by which all employees must be trained on how to read GHS formatted labels.
June 1, 2016 is the date by which employers must complete updates to the written plan, complete hazard training, and updated their labeling systems. By that date, employers should expect that most, if not all, of their safety data sheet library will be updated.

10. What about common household cleaners used in a workplace environment?
On this point, HazCom 2012 continues the precedents set by the current HCS. Paragraph (b)(6)(ix) in the regulatory text states:

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

In other words, if your employees use consumer chemical products in the same manner, including the same frequency and quantity, that any other consumer would and as directed by the manufacturer, you probably don’t need to worry about having an SDS, although, there is nothing preventing you from maintaining one.

On the contrary, if your employees use consumer chemical products for purposes that extend beyond that of an average consumer, especially in regards to the frequency and quantity of use, then their exposure rate is higher and you would need SDSs for those products.

In the final rule (pages 122-123), OSHA states, “Thus, under the current HCS, SDSs and employee training are required where employee exposure to a consumer product exceeds the range that “could reasonably be experienced by consumers when used for the purpose intended.” 29 CFR 1910.1200(b)(6)(ix). OSHA sees no need to revisit this issue now, and in any event it is outside the scope of this rulemaking, which is aimed at the changes necessary to bring the HCS in conformity with the GHS”.

11. What about Haz-waste mixtures?
Haz-waste mixtures are not directly addressed by OSHA’s Hazard Communication Standard. Haz-waste mixtures are regulated by the EPA. In the HazCom 2012 regulatory text, paragraph (b)(6)(i), OSHA states:

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

12. Please clarify requirements for labels, SDSs and training for Combustible Dust.
Combustible dust is considered to be a hazardous chemical under HazCom 2012. The Agency did not provide a specific definition of combustible dust, but refers employers to existing guidance in OSHA’s compliance directive, as well as NFPA standards. OSHA’s guidance may be found in the following sources: OSHA’s Hazard Communication Guidance for Combustible Dusts, OSHA (3371–08 2009), its Combustible Dust National Emphasis Program Directive CPL 03–00–008, and its Combustible Dust Web Page

Here’s how OSHA addresses the question of combustible dust in its HazCom 2012 FAQ’s.

Q. How has OSHA addressed pyrophoric gases, simple asphyxiants, and combustible dust?

A. In the revised Hazard Communication Standard (HCS), OSHA has added pyrophoric gases, simple asphyxiants and combustible dust to the definition of "hazardous chemical". OSHA has also added definitions to the revised HCS for pyrophoric gases and simple asphyxiants, and provided guidance on how to define combustible dust for the purposes of complying with the HCS... In the final HCS, combustible dust hazards must be addressed on labels and SDSs. Label elements are provided for combustible dust in the final HCS and include the signal word "warning" and the hazard statement "May form combustible dust concentrations in the air".

“For chemicals in a solid form that do not present a combustible dust hazard, but may form combustible dusts while being processed in normal downstream uses, paragraph (f)(4) of the HCS allows the chemical manufacturer some flexibility in labeling requirements. The manufacturer or importer may transmit the label to the customer at the time of the initial shipment, but the label does not need to be included with subsequent shipments unless it changes. This provides the needed information to the downstream users on the potential hazards in the workplace, while acknowledging that the solid metal or other materials do not present the same hazards that are produced when these materials are processed under normal conditions of use.”

OSHA has proposed that the GHS add coverage of combustible dust to its scope, and is working with other countries on the issue. In addition, the Agency is in the preliminary stages of a comprehensive rulemaking on combustible dust that would establish methods of controlling the hazard. OSHA has always interpreted the HCS as covering communication of the hazards of combustible dust, and HazCom 2012 continues that coverage. Combustible dust will need to be addressed in Section 2 of the SDS (Hazards Identification), and any appropriate control information, etc. should also be addressed. Training programs also need to address combustible dust as a hazardous chemical. Where there are containers of dusts that may be combustible, the containers will have to be labeled with the signal word “warning”, and the hazard statement “May form combustible dust concentrations in air.”

**MSDSonline Specific**
1. **How about an expanded 10 Steps as the program moves forward??**
   Thank you! The ten steps are outlined in this article MSDSonline contributed to Workplace HR & Safety entitled [10 Steps to Take Now on the New GHS Standard](http://www.msdsonline.com). Additional information in a similar vein regarding GHS and HazCom compliance can be found on [MSDSonline.com](http://www.msdsonline.com) and [blog.msdsonline.com](http://blog.msdsonline.com). There, you will also be able to learn about any future Webinar topics, including a possible expanded version of the 10 Steps.

2. **When will MSDSonline have the updated SDS's available?**
   MSDSonline has millions of safety data sheets in our database and adds over 10,000 new or updated safety data sheet each week. As we upload GHS formatted SDSs to our database for products that are currently in your eBinder (for non-MSDSonline customers, think of the eBinder as an online filing cabinet for SDSs), you will be notified that there is an updated SDS available for you to approve and add to your library. Furthermore, we will be flagging GHS formatted SDSs, and our system allows users to sort information based on revision date—all of which, should make it easier for companies to stay on top of the GHS transition.

   It's possible that you'll get an updated SDS at your facility before we've added it to the database. In those cases, you can let us know and we'll go out and get it, or you can easily upload it to your eBinder.

   It’s important to remember, OSHA has only just been published in the Federal Register on March 26. The effective date for the final rule is May 25. As such, manufacturers and distributors do not need to complete their reclassifying work or produce GHS formatted labels and SDSs until June 1, 2015.

   Many manufacturers have already completed their work and our customers are reporting seeing them in the workplace. However, technically speaking, vendors are not yet obligated to provide GHS formatted documents. In some ways, the duration of the transition period will make keeping track of the SDS flow more difficult, not less.