

Contractors: Complying with OSHA's New Hazard Communications Standard

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All construction companies' work involves a wide variety of products and chemicals that are considered hazardous, such as solvents, caulks, paints and fuels. Beginning in December 2013, contractors will have to comply with new standards for hazardous materials warnings and safety information. The move to the new standard, which brings the United States in line with a system being adopted globally, provides an opportunity for construction companies to enhance safety, manage chemical and product spills, and strengthen their overall risk management strategy. While preparing to meet the new requirements, contractors should take the time to review with their risk control experts the contractor's procedures for training employees on hazardous materials use handling and storage to identify any shortcomings. Contractors should also assess their insurance policies for potential gaps in coverage stemming from environmental and pollution exposures.

The Occupational Safety and Health Administration (OSHA) is implementing the Globally Harmonized System (GHS), a United Nations-developed approach to classifying hazardous chemicals and products and communicating the associated dangers with standardized label elements and safety data sheets.¹ The requirements, adopted in 2012 by OSHA in an update of its 1994 Hazard Communication Standard (HazCom), embrace a change in approach from workers' "right to know" about the chemicals and products they handle to a "right to understand" the hazards. While full implementation of the new system for classifying and labeling products and chemicals according to the GHS will take several years, employers are required to train workers on the new labels and safety data sheets by December 1, 2013.

The new system is expected to deliver significant benefits by improving working

understanding of the hazards presented by the chemicals and products they use, resulting in savings from reduced injuries and increased productivity. OSHA estimates the GHS standard should prevent 43 fatalities and 585 injuries a year.² OSHA estimates the combined net savings from improved safety and increased productivity should total about \$754 million a year, including \$266 million in reduced safety and health costs. More than 5 million United States workplaces with more than 40 million workers will be affected. Although the training deadline is December 1, 2013, the new rule does not become fully effective until June 2016.

A Common Global Standard

Currently, the United States trades chemicals with countries around the world, but the labeling and the way in which product information, including hazards and procedures, is presented, varies among countries. The GHS is based on several existing systems, including OSHA's 1994 HazCom Standard. GHS provides standardized classification criteria for health, physical and environmental hazards of chemicals. Some of the countries that have adopted the GHS in full or part include Brazil, China, Japan, New Zealand, and European Union member states where the rules are known as the CLP Regulation (Classification, Labelling and Packaging of substances and mixtures).³

The major changes in both labels and the current material safety data sheets (MSDS), which are a major component of OSHA's 1994 HazCom standard, are aimed at providing more information about the health and physical hazards of products and mixtures in a more accessible manner. Manufacturers and importers will be required to provide labels that include a designated signal word, pictogram and hazard statement for each

class and category. Safety data sheets (SDS), previously known as material safety data (MSDS) sheets, will now have a specific 16-section format⁴

Currently, companies either use the National Fire Protection Association (NFPA) or Hazardous Materials Identification System (HMIS) standards for labeling.⁵ NFPA uses a color- and number-coded diamond hazard identification system that ranks health (blue), flammability (red) and instability (yellow) threats along with other special (white) concerns (such as reactivity with water), on a zero (0)-to-four (4) rating, with four being the highest hazard. The HMIS standard uses color-coded bars and numbers to convey the same information along with a personal protective equipment rating, such as for gloves and safety goggles, in the white area.

From 'Right to Know' to 'Right to Understand'

The GHS system also features nine black pictograms enclosed within a red diamond. Some of the pictograms, such as those for flame, explosion and acute toxins, should be readily understandable and recognizable, for example, the skull and crossbones represent deadly poisons. Others, such as those for gases under pressure, oxidizers and health threats (which is simply an exclamation point) are likely to require explanation. Eight of the pictograms concern health, and the ninth, a dead fish and withered tree, identifies environmental hazards. The environmental pictogram is not mandatory under the OSHA regulations. It is, however, valuable for risk management purposes because it helps workers identify substances that pose a threat to the environment and provides information on proper handling and storage that can reduce the risk of spills that may lead to expensive cleanups in

addition to bodily injury claims.

The GHS standard strives to provide more information in a readily available, standardized and easy-to-understand format. Labels include six standard elements: a product name or identifier, a pictogram illustrating the danger, a signal word ranking the hazard, a statement explaining the hazard, precautionary information such as protective gear, and contact information for the supplier. The new labels will feature one of two signal words, "danger" for more severe hazards and "warning" for lesser ones, eliminating the use of "caution" as a signal word under the old standard. The hazard statement will identify threats, such as "skin irritant" or "fatal if swallowed." Precautionary statements may include protective equipment such as gloves and goggles, and actions to take or avoid while using the chemical, such as not smoking or washing hands afterward, along with basic first aid advice. The label also carries the name, address and telephone number of the supplier.

Safety data sheet information will remain essentially the same as in the MSDS, but it will be presented in a standard, 16-section format. Data includes the identification of the chemical and its associated hazards, routes of entry into the body, first aid and fire-fighting measures, and handling and storage procedures.

Under the 1994 OSHA standards, the regulation assumed English as the primary language used, however, the new rule mandates that information be presented in a way that is easily understood by workers. Chemical containers must retain the GHS product label as delivered to the workplace. The GHS label elements also may be used for workplace containers such as storage tanks.

There are several deadlines that contractors need to know about under

the new OSHA standard. As previously mentioned, employees who will be working with products must be trained on the new labels and safety data sheets by December 1, 2013. By June 1, 2015, contractors should be in compliance with all provisions of the new standard, although distributors may continue to ship labels under the previous standard until December 1, 2015. By June 1, 2016, employers must update alternative workplace labeling and hazard communications, and provide training for any newly identified physical or health hazards. This means contractors should keep up to date with all the products and chemicals they use to see if they have been reclassified and may require different hazard controls.

Contractor Actions

The transition period adds some complexity because contractors will have to continue to train employees on the existing 1994 HazCom requirements as well as the new GHS standard.

It is recommended that contractors review their training materials to ensure employees are trained on the GHS pictograms and signal words as well as the hazard and precautionary statements. Contractors, and their subcontractors, that receive products from countries and companies that already use the GHS should make sure employees are trained on that system as soon as those labels and safety data sheets are encountered.

Other actions include performing an inventory of on-site chemicals and products, and obtaining updated safety data sheets for each of those. Labels and signs may need updating and replacement, including for secondary containers. Contractors should make sure that their product suppliers provide labels containing all required information.

As they seek to meet the new requirements, contractors may choose to work with outside risk control experts to develop effective employee training. Experts knowledgeable about health, safety and environmental exposures can assess the company's procedures for working with and disposing of products, and identify any areas that may need strengthening. These actions can help to mitigate the risk of a spill or leak that can cause bodily injury or property damage.

Construction companies should also evaluate their insurance programs to make sure they have the appropriate insurance coverage for environmental exposures associated with the products they use. Products coverage is typically excluded from general liability policies. Contractors should consider a contractor pollution liability policy that addresses third party claims which could result from products and operations as well as third-party bodily injury, property damage and clean-up costs. The policy should cover the full range of construction activities, including legal defense fees; offer coverage for subcontractors; and use a broad definition of pollution conditions. Contractors may want to also review pollution exposures at their owned facilities where chemicals and products are stored.

What's Required in the New Safety Data Sheets

OSHA's 2012 HazCom rule replaces the material safety data sheets (MSDS) mandated by its 1994 HazCom regulation with safety data sheets (SDS) organized into 16 standard sections to align with the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

The SDS includes information such as the properties and hazards of each chemical or product, protective measures and safety precautions. Sections 1 through 8 cover general information about the chemical, hazards, safe handling procedures and emergency control measures. Sections 9 through 11 and 16 provide technical and scientific information such as chemical properties, stability, reactivity and exposure control. To be consistent with the GHS, the SDS should contain Sections 12 through 15, but OSHA has indicated that it will not enforce these sections because they fall outside its authority.

Here is a brief overview of each section:

Section 1 - Identifies the chemical, including common names; provides contact information for the manufacturer, importer or other responsible party and an emergency telephone number; includes recommended uses and restrictions.

Section 2 - Provides the hazard classification; signal word ("danger" or "warning"); pictogram or description ("skull and crossbones"); precautionary statements and description of hazards; and information on the ingredients of mixtures.

Section 3 - Identifies the ingredients of the products, including mixtures, along with impurities and stabilizing additives.

Section 4 - Provides first aid measures that can be given by untrained personnel, such as instructions by routes of exposures (i.e., inhalation), description of the side effects and recommendations for immediate medical care.

Section 5 - Details firefighting measures, including suitable and inappropriate extinguishing equipment and recommendations on protective equipment.

Section 6 - Recommends the appropriate response to accidental spills, leaks or release including containment and cleanup to minimize exposure.

Section 7 - Provides guidance on safe handling, general hygiene and storage.

Section 8 - Indicates the exposure limits, engineering controls, such as ventilation, and personal protective measures to minimize worker exposure.

Section 9 - Identifies the physical and chemical properties, including odor, melting point, boiling point, flammability, auto-ignition temperature and viscosity.

Section 10 - Describes the reactivity hazards, chemical stability and other information such as the conditions to avoid, e.g. static discharge or vibration.

Section 11 - Identifies the toxicological and health effects, including routes of exposure, such as inhalation or eye contact. May also indicate where toxicological information is not available.

Section 12 - Provides ecological information on the environmental impacts associated with release to the environment. (non-mandatory).

Section 13 - Offers guidance on proper disposal, recycling or reclamation. (non-mandatory).

Section 14 - Provides information for shipping and transporting hazardous products by road, air, sea or rail. (non-mandatory).

Section 15 - Identifies the safety, health and environmental regulations specific to the product that is not indicated elsewhere on the SDS. (non-mandatory).

Section 16 - Indicates when the SDS was prepared or when the last known revision was made, and may state where changes have been made to the previous version.

Source: OSHA, Hazard Communication Standard: *Safety Data Sheets*.

1 Hazard Communication Standard: Safety Data Sheets, OSHA. See: <https://www.osha.gov/Publications/OSHA3514.pdf>

Construction companies should evaluate their insurance programs to make sure they have the appropriate insurance coverage for environmental exposures associated with the products they use.

Mitigating Chemical and Environmental Exposures

While the move to the GHS standard will require time and expense, the new system also offers a variety of benefits. By replacing the various labels and MSDS in use today, the global approach should make it easier for workers to understand how to properly work with and store chemicals and products, and to protect themselves and others. The GHS should reduce confusion at projects especially since there may be a number of subcontractors working on any given site, which should result in safer handling and use of chemicals and products. Once fully implemented, the standardized information should also help employers develop better training programs and make training less burdensome and more effective.

The transition also provides an opportunity for construction companies to strengthen their risk management by providing more clarity about the chemicals and products they use and the potential health and environmental risks. This will help companies in developing more effective risk controls for hazardous chemicals and products, and in evaluating their insurance programs to make sure that there are no potentially expensive gaps in coverage. Taken together, these steps should prove valuable for construction companies in mitigating their chemical hazards and environmental exposures.

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Endnotes:

1. Findings and Recommendations of the Special Panel on Public Private Partnerships, U.S. House of Representatives, Committee on Transportation and Infrastructure, September 2014, Page 10. See: http://transportation.house.gov/uploadedfiles/p3_panel_report.pdf
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3. Findings and Recommendations of the Special Panel on Public Private Partnerships, U.S. House of Representatives, Committee on Transportation and Infrastructure, September 2014, Page 9. See: http://transportation.house.gov/uploadedfiles/p3_panel_report.pdf
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11. Brookings Rockefeller Project, page 3
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13. House Panel report, Page 43
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15. The Role of Private Investment in Meeting U.S. Transportation Infrastructure Needs, Page 5
16. House Panel Report, Page 34

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