

IT'S ALL COMING TOGETHER

GETTING YOUR BUSINESS READY
FOR HCS 2012 COMPLIANCE

VOLUME

02

DANGEROUS GOODS REPORT

INSIGHTS ON ISSUES OF
DANGEROUS GOODS



PG 8 NEW CLASSIFICATIONS

Who is responsible for classifying chemicals?

PG 10 SECONDARY CONTAINERS

Hazard communication goes beyond the original packaging

PG 11 Q&A

We answer questions on GHS topics

LABELMASTER®

SOFTWARE PRODUCTS SERVICES

DANGEROUS
GOODS
REPORT

Welcome to the second issue of the *Dangerous Goods Report*

Competing in a global marketplace is an increasingly challenging proposition when supply chains cross borders, languages and international regulations. One way governments and regulatory agencies are helping to facilitate international trade—and improve employee safety along the way—is through the adoption of international standards for hazard communication.

In this issue of the *Dangerous Goods Report*, we take a look at one such initiative—OSHA's 2012 Hazard Communication Standard, which seeks to align workplace hazcom in the U.S. with the Globally Harmonized System (GHS).

As always, we at Labelmaster are here to help you make sense of the ever-changing regulations that govern the world of Dangerous Goods. We hope you find the information and solutions in the *Dangerous Goods Report* to be useful, and we welcome any questions.



Alan Schoen

President of Labelmaster

ONLINE RESOURCES**GET CONNECTED**

Visit labelmaster.com/GHS for more information and updates on GHS. You can also watch our series of webinars that provides detailed information on GHS conversion.

**STAY INFORMED**

The world of DG is constantly changing. To find updates on a wide range of DG topics, including GHS, visit blog.labelmaster.com.

**HEAR FROM OUR EXPERTS**

The Master Series is a collection of short videos that provides practical perspectives on current DG issues. For more, visit labelmaster.com/masterseries.

**MAINTAIN COMPLIANCE**

From advanced shipping software to logistics consulting, Labelmaster Services can help keep your business on the right side of DG regulations. Visit labelmasterservices.com to learn more.



COVER STORY: GHS

Understanding the Globally
Harmonized System for Classification
and Labeling of Chemicals

2



NEW CLASSIFICATIONS

Who is responsible for
classifying chemicals?

8



SECONDARY CONTAINERS

Hazard communication goes
beyond the original packaging

10



Q&A

We answer questions
on GHS topics

11



SOLUTIONS

Products and resources to help you
maintain compliance with GHS

12



Understanding the Globally Harmonized System for Classification and Labeling of Chemicals



IF YOU'RE CONFUSED about how the implementation of the Globally Harmonized System for Classification and Labeling of Chemicals (GHS) is going to impact your business, you're not alone. With key implementation deadlines on the calendar this year, people in all kinds of industries are scrambling to find out what they need to do to comply, and when these changes must be completed.

THE FIRST STEP TO UNDERSTANDING what GHS means to you is knowing what the regulations are actually regulating. In the simplest terms, GHS is about improving the hazard communication standard (HCS) that the Occupational Safety and Health Administration (OSHA) mandates for chemicals in the workplace. That means any potentially hazardous chemical in your office, warehouse, manufacturing areas, shipping docks, etc. that requires a warning label and a Material Safety Data Sheet (MSDS) will need to be reclassified, relabeled and re-documented with a new Safety Data Sheet (SDS).

Before you run screaming from the room, know this—unless you actually manufacture the chemicals, you probably won't have to do the reclassifying, relabeling and re-documenting. That will be up to the manufacturers of the chemicals you use.

That doesn't mean you can just go about your business as if nothing happened. You're still responsible for training your employees on the new standards (that deadline was December 1, 2013, by the way) and ensuring the labeling and documentation for the chemicals in your workplace comply with the new standards by June 1, 2016. If you repackage chemicals for sale or distribution, you'll have to ensure everything that goes out your door is compliant.

If you are a primary manufacturer of chemicals, hopefully you're well on your way with the GHS conversion, because after June 1, 2015, everything you make and ship will need to comply with the new standards.



WHAT GHS IS NOT

GHS is being implemented by OSHA through Title 29 of the Code of Federal Regulations (CFR) and does *not* cover the transportation of chemicals or other Dangerous Goods. All of the DOT regulations in Title 49 CFR for the transportation of Dangerous Goods still apply.

Also, OSHA's implementation of GHS deals strictly with hazards to *people* in the workplace and does *not* cover the environmental hazards of chemicals. That is up to the Environmental Protection Agency.

OSHA projects that the impact on U.S. companies² will be:

- ◆ A safer work environment and improved relations with employees
- ◆ An increase in efficiency and reduced costs from compliance with hazard communication regulations
- ◆ Application of expert systems resulting in maximizing expert resources and minimizing labor and costs
- ◆ Facilitation of electronic transmission systems with international scope
- ◆ Expanded use of training programs on health and safety
- ◆ Reduced costs due to fewer accidents and illnesses
- ◆ Improved corporate image and credibility

Also, according to OSHA, GHS adoption will³:

- ◆ Enhance the protection of human health and the environment by providing an internationally comprehensible system
- ◆ Provide a recognized framework to develop regulations for those countries without existing systems
- ◆ Facilitate international trade in chemicals whose hazards have been identified on an international basis
- ◆ Reduce the need for testing and evaluation against multiple classification systems

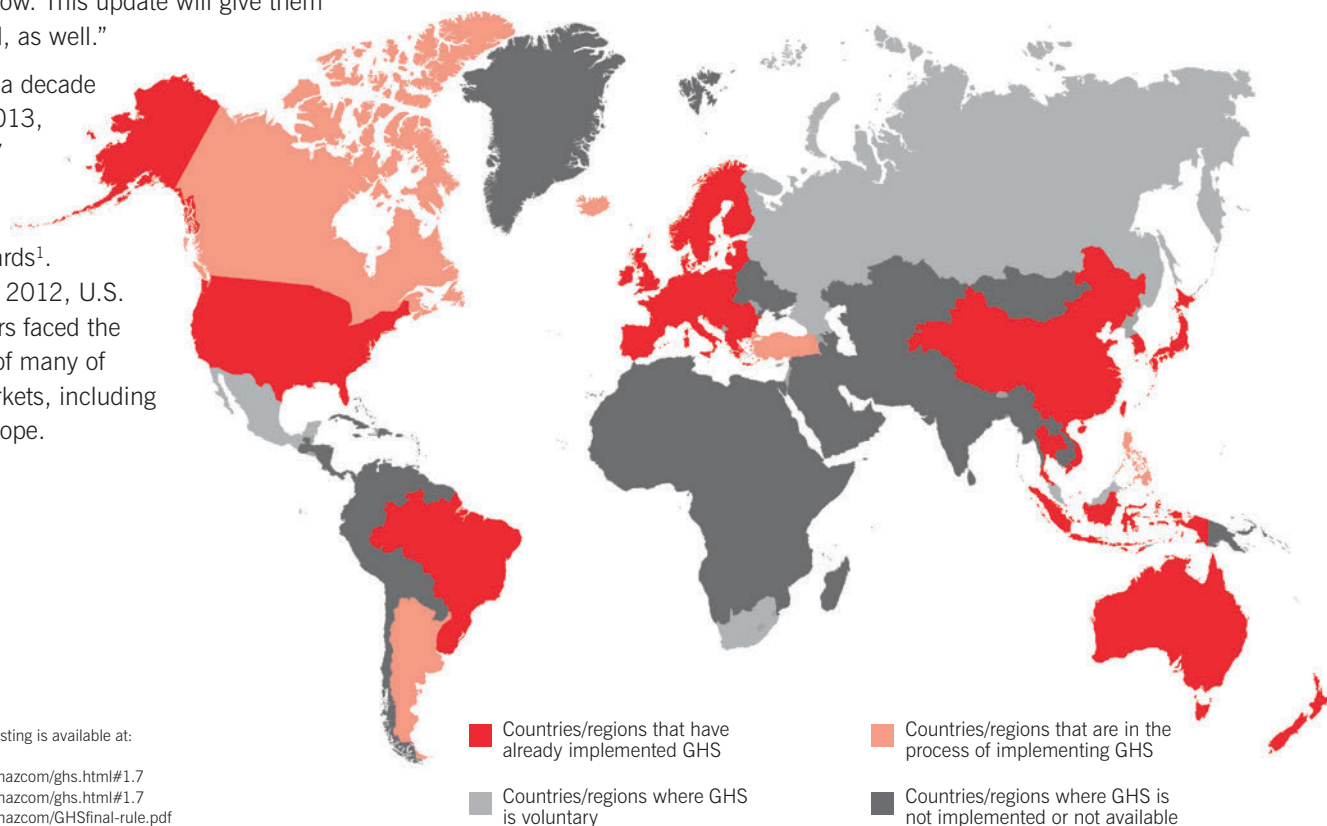
To put OSHA's rationale for alignment with the United Nations' framework into numbers, it's estimated that GHS adoption will save 43 U.S. worker lives on a yearly basis and account for an annual \$250 million in U.S. corporate savings associated with reduced occupational risk⁴.

OSHA'S ADOPTION OF GHS: HCS 2012

Trade globalization and cross-cultural communication affect how U.S. chemical manufacturers classify and label their chemicals. On March 26, 2012, OSHA revised its 1983 Hazard Communication Standard (HCS) by aligning it with the United Nations' global chemical communication system: the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). This action represented the single biggest change to workplace safety communication in nearly 30 years.

Dr. David Michaels, Assistant Secretary of Labor for Occupational Safety and Health, summed up the spirit of the 2012 revision to OSHA's HCS (29 CFR 1910.1200) with these words: "OSHA's 1983 Hazard Communication Standard gave workers the right to know. This update will give them the right to understand, as well."

The UN adopted GHS a decade ago, and as of early 2013, the UN reports that 67 countries have folded GHS into their hazard communication standards¹. Without adopting HCS 2012, U.S. chemical manufacturers faced the risk of being shut out of many of the world's largest markets, including China and most of Europe.



¹The U.N. GHS adoption country listing is available at: <http://www.unece.org/?id=25735>

²OSHA, <http://www.osha.gov/dsg/hazcom/ghs.html#1.7>

³OSHA, <http://www.osha.gov/dsg/hazcom/ghs.html#1.7>

⁴OSHA, <http://www.osha.gov/dsg/hazcom/GHSfinal-rule.pdf>

GETTING THE PICTURE WITH NEW LABELS

1

One of the most visible aspects of the new OSHA regulations is a new, more informative labeling system for all containers of hazardous chemicals. Under the old system, there was a label requirement, and that was about all the detail provided.

The new system incorporates a standardized, pictogram-based format that allows people from other countries to visually understand the hazards associated with the chemicals they import from the U.S. or from any country aligned with the GHS protocol.

CHEMICAL NAME

The scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name that will clearly identify the chemical for the purpose of conducting a hazard classification.

GHS 1.4.10.5.2 (d) (29 CFR 1910.1200(c))

PRODUCT IDENTIFIER

The name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.

GHS 1.4.10.5.2 (d) (29 CFR 1910.1200(c))

SIGNAL WORD

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 more severe hazards, while "warning" is used for less severe.

GHS 1.4.10.5.2 (d) (29 CFR 1910.1200(c))

PICTOGRAMS

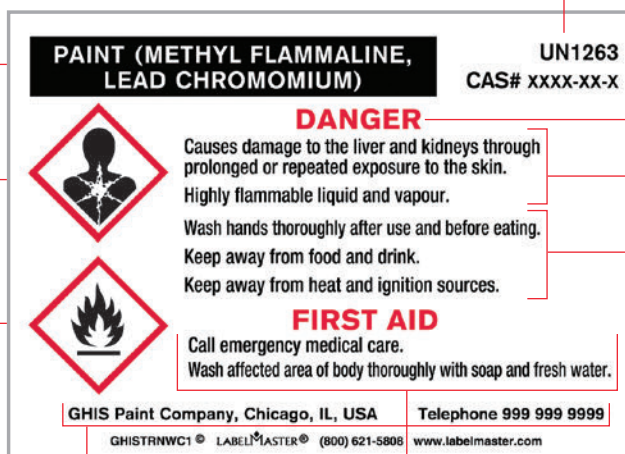
A composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under GHS for application to a hazard category.

GHS 1.4.10.4 (29 CFR 1910.1200(c))

SUPPLIER IDENTIFICATION

The name, address, and telephone number of the manufacturer, importer or other responsible party.

GHS 1.4.10.4 (29 CFR 1910.1200(f)(1)(vi))



HAZARD STATEMENT

A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Example: Fatal if swallowed.

GHS 1.4.10.5.2 (d) (29 CFR 1910.1200(c))

PRECAUTIONARY STATEMENT

There are four types of precautionary statements presented, "prevention," "response," "storage," and "disposal."

Example: Do not eat, drink, or smoke when using this product.

GHS 1.4.10.5.2 (d) (29 CFR 1910.1200(c))

FIRST AID STATEMENT

A phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical or improper storage or handling.

*GHS 1.4.10.5.2 (c) (29 CFR 1910.1200(c))

2

These internationally recognized pictograms are designed to limit the need for language conversion in our culturally diverse global trade.



FLAME

Flammables
Self-Reactives
Pyrophorics
Self-Heating
Emits Flammable Gas
Organic Peroxides



FLAME OVER CIRCLE

Oxidizers



SKULL AND CROSSBONES

Acute Toxicity (severe)



CORROSION

Corrosives

3

Compared to the previous standards, the new system provides significantly more information.

PREVIOUS HCS LABEL REQUIREMENTS

- Containers of Hazardous Chemicals
 - Identity of hazardous chemical(s)
 - Appropriate hazard warnings
 - Name, address and telephone number of chemical company or other responsible party
 - Three-month update of significant information regarding hazards

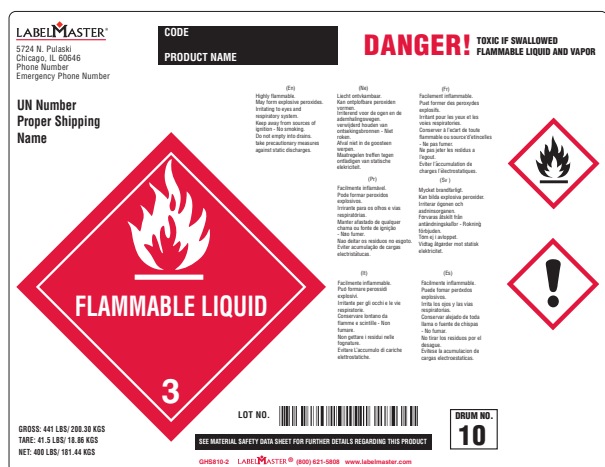
HCS 2012/GHS REQUIREMENTS

- Containers of Hazardous Chemicals
 - Product identifier
 - Signal word
 - Hazard statement(s)
 - Pictogram(s)
 - Precautionary statement(s)
 - Name, address and telephone number of chemical company or other responsible party
 - In certain cases:
 - OSHA-defined hazards
 - Percent of ingredients in mixture of unknown acute toxicity
 - Supplemental information
 - Six-month update of significant information regarding hazards
 - HNO (Hazards Not Otherwise Classified) are exempt on containers
 - No H/P number or codification

4

It's important to remember that these labels are applied to *each* container of hazardous chemicals. HCS 2012 does not require labels on the outside shipping container, but DOT labels may be required.

Several types of containers, most notably drums, chemical totes and tanks, serve as both the immediate container and the shipping packaging. In such cases, the GHS label elements can be applied separately or combined with the DOT-required labels, as shown here.



EXPLODING BOMB

Explosives
Self-Reactives
Organic Peroxides



EXCLAMATION MARK

Irritant
Dermal Sensitizer
Acute Toxicity (harmful)
Narcotic Effects
Respiratory Tract Irritation



HEALTH HAZARD

Carcinogen
Respiratory Sensitizer
Reproductive Toxicity
Target Organ Toxicity
Mutagenicity
Aspiration Toxicity



GAS CYLINDER

Gases Under Pressure

FROM MSDS TO SDS

The HCS 2012 requires the conversion of current Material Safety Data Sheets (MSDS) to Safety Data Sheets (SDS). And the requirement is more intensive than simply crossing out the “M” on your current sheets.

With the new SDS, chemical safety information is organized into 16 sections, providing consistency and harmonization for easy access to vital information.

- 1 Identification:** This section identifies the chemical on the SDS as well as the recommended uses. It also provides the essential contact information of the supplier.
- 2 Hazard(s) Identification:** This section identifies the hazards of the chemical presented on the SDS and the appropriate warning information associated with those hazards.
- 3 Composition/Information on Ingredients:** This section identifies the ingredient(s) contained in the product indicated on the SDS, including impurities and stabilizing additives. This section includes information on substances, mixtures and all chemicals where a trade secret is claimed.
- 4 First-Aid Measures:** This section describes the initial care that should be given by untrained responders to an individual who has been exposed to the chemical.
- 5 Firefighting Measures:** This section provides recommendations for fighting a fire caused by the chemical.
- 6 Accidental Release Measures:** This section provides recommendations on the appropriate response to spills, leaks or releases, including containment and cleanup practices to prevent or minimize exposure to people, properties or the environment. It may also include recommendations distinguishing between responses for large and small spills where the spill volume has a significant impact on the hazard.
- 7 Handling and Storage:** This section provides guidance on the safe handling practices and conditions for safe storage of the chemical.
- 8 Exposure Controls/Personal Protection:** This section indicates the exposure limits, engineering controls and personal protective measures that can be used to minimize worker exposure.
- 9 Physical and Chemical Properties:** This section identifies physical and chemical properties associated with the substance or mixture. The minimum required information consists of:
 - *Appearance (physical state, color, etc.)*
 - *Upper/lower flammability or explosive limits*
 - *Odor*
 - *Vapor pressure*
 - *Odor threshold*
 - *Vapor density*
 - *pH*
 - *Relative density*
 - *Melting point/freezing point*
 - *Solubility(ies)*
 - *Initial boiling point and boiling range*
 - *Flash point*
 - *Evaporation rate*
 - *Flammability (solid, gas)*
 - *Partition coefficient: n-octanol/water*
- 10 Stability and Reactivity:** This section describes the reactivity hazards of the chemical and the chemical stability information. This section is broken into three parts: reactivity, chemical stability and other.
- 11 Toxicological Information:** This section identifies toxicological and health effects information or indicates that such data are not available.
- 12 Ecological Information (non-mandatory):** This section provides information to evaluate the environmental impact of the chemical(s) if it were released into the environment.
- 13 Disposal Considerations (non-mandatory):** This section provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, and safe handling practices. To minimize exposure, this section should also refer the reader to Section 8 (Exposure Controls/Personal Protection) of the SDS.
- 14 Transport Information (non-mandatory):** This section provides guidance on classification information for shipping and transporting of hazardous chemical(s) by road, air, rail or sea.

SO, WHAT'S THE BOTTOM LINE?

15 Regulatory Information (non-mandatory):

This section identifies the safety, health and environmental regulations specific to the product that are not indicated anywhere else on the SDS.

16 Other Information:

This section indicates when the SDS was prepared or when the last known revision was made. The SDS may also state where the changes have been made to the previous version. You may wish to contact the supplier for an explanation of the changes. Other useful information also may be included here.

While labels have a six-month update requirement for information regarding hazards, the new SDS have a three-month requirement. GHS pictograms may be used in the SDS; the symbol name may be substituted if use of the pictogram is not feasible. Also, the manufacturer or importer must ensure the SDS is provided in English and must provide copies in other languages as necessary.

Reclassifying, relabeling and re-documenting all the hazardous chemicals in this country is a huge undertaking. There's no doubt about it. But it's extremely important, not only from a global commerce perspective, but from a risk management perspective as well.

It's important to remember that hazard communication serves two purposes: to help inform *employees* about the risks of exposure to harmful chemicals, and to help protect *employers* from liability. By complying with the provisions of HCS 2012 by the required deadlines, you can help improve employee safety, reduce your risk of liability and ensure your operations proceed smoothly into the future. ♦

KEY DATES FOR OSHA HCS 2012

DECEMBER 1, 2013

Employers must train employees on the new label elements and Safety Data Sheet (SDS) format

JUNE 1, 2015

Chemical manufacturers, importers, distributors and employers must comply with all modified provisions

DECEMBER 1, 2015

Distributors begin shipping containers labeled by the chemical manufacturer or importer with an HCS label

JUNE 1, 2016

Employers must update alternative workplace labeling and hazard communication programs as necessary and provide additional employee training for newly identified physical or health hazards



New Classifications

WHO IS RESPONSIBLE FOR CLASSIFYING CHEMICALS?

One of the most daunting aspects of OSHA's HCS 2012 is the need to reclassify hazardous chemicals. Under the outgoing HCS, "classification" was not formally defined because the standard required an "assessment of hazard" rather than classification. That changed in the HCS 2012, as "classification" is clearly outlined in 29 CFR 1910.1200(c).

In the outgoing standard, "Chemical name" was defined as: "...the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name which will clearly identify the chemical for the purpose of conducting a hazard evaluation."

Note the change in the HCS 2012:

"'Chemical name' means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name that will clearly identify the chemical for the purpose of conducting a hazard classification."

SO, WHO'S RESPONSIBLE?

The responsibility for classifying a chemical starts with the manufacturer. Ideally, all manufacturers in the U.S. will have completed their HCS 2012 compliance efforts by the June 1, 2015 deadline, and all the chemicals will flow into commerce safely and compliantly.

Anyone who repackages the chemical for distribution can simply transfer the compliant label and SDS information. There would be no need to reclassify a chemical unless it is mixed with other substances, which is described in appendices A and B of 29 CFR 1910.1200.

Importers receiving chemicals from a country that doesn't follow GHS will have to perform the classification before allowing the chemicals into the market in the U.S.

For businesses in general, the only time a chemical will need to be reclassified is if it's believed the current information provided with the chemical is insufficient or incorrect.

HOW IS CLASSIFICATION PERFORMED?

The previous HCS assumed that a hazard classification already existed for a given chemical. The HCS 2012 requires an evaluation and assignment of the classification of the hazards themselves, along with an assignment of risk.

The good news is that there is no requirement in HCS 2012 to physically test a chemical to determine how to classify its hazards, so there's no need to break out the lab coats. You can use existing documentation of the chemical's physical properties (e.g., MSDS sheets, R&D information).

And there's more good news: Everything you need to determine the hazard class and severity of risk can be found in 29 CFR 1910.1200. The regulations are clear and well written, and they're much less ambiguous than the previous HCS.




DIFFERENCES BETWEEN HCS 2012 AND THE UN GHS

OSHA's HCS 2012 was based on the UN's Revision 3, which outlines physical and health hazard classes.



Hear a recording of our last GHS webinar and its impact on your business and sign up for our next webinar at: labelmaster.com/webinars

APPENDIX A: HEALTH HAZARDS	APPENDIX B: PHYSICAL HAZARDS
Acute toxicity (any route of exposure)	Explosives
Skin corrosion or irritation	Flammable gases
Serious eye damage or eye irritation	Flammable aerosols
Respiratory or skin sensitization	Oxidizing gas
Germ cell mutagenicity: Carcinogenicity	Gases under pressure
Reproductive toxicity	Flammable liquids
Specific target organ toxicity (single or repeated exposure)	Flammable solids
Aspiration hazard	Self-reactive chemicals
	Pyrophoric liquids
	Pyrophoric solids
	Self-heating chemicals
	Chemicals which, in contact with water, emit flammable gases
	Oxidizing liquids
	Oxidizing solids
	Organic peroxides
	Corrosive to metals



Classifications not included in the HCS 2012 are:

- Environmental Hazards
- Acute Toxicity Category 5
- Skin Corrosion/Irritation Category 3
- Aspiration Hazard Category 2
- Acute Aquatic Toxicity Categories 1–3
- Chronic Aquatic Toxicity Categories 1–4
- Hazardous to the Ozone Layer

There is also a “catch-all” category for chemicals that don’t fall into the defined hazard classes: HNOG (Hazards Not Otherwise Classified). This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this section; rather, hazards in this category have effects that either fall below the cutoff value/concentration limit of the hazard class or are under a GHS hazard category that has not been adopted by OSHA.

There’s one significant difference in the GHS classification system compared to other systems with which you might be familiar (e.g., NFPA or HMIS®)—with GHS, *lower* risk classification numbers indicate greater risk. That is, a category 1 chemical represents a greater risk than a category 3.

MSDS TO SDS

The HCS 2012 includes detailed instructions for gathering and organizing the information required to convert existing MSDS to SDS. You’ll find the SDS definition in **29 CFR 1910.1200**. Safety Data Sheets (SDS) are written or printed material concerning a hazardous chemical that is prepared in accordance with paragraph (g) of this section.

- o **1910.1200(g)(1):** Chemical manufacturers and importers shall obtain or develop a safety data sheet for each hazardous chemical they produce or import. Employers shall have a safety data sheet in the workplace for each hazardous chemical which they use.
- o **1910.1200(g)(2):** 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), and includes at least the following section numbers and headings, and associated information under each heading, in the order listed (see Appendix D to 29 CFR 1910.1200—Safety Data Sheets, for the specific content of each section of the safety data sheet).

You can also enlist the aid of a third-party provider to assist with the conversion of your MSDS. If you choose this option, it’s important to look for companies with prior environmental health and safety (EH&S) experience, particularly with regard to the chemicals with which you work. ♦



Secondary Containers

**HAZARD COMMUNICATION GOES
BEYOND THE ORIGINAL PACKAGING**

FOR MANY CHEMICALS USED IN THE WORKPLACE,

the primary container in which they arrived is not the end of the journey. Big containers come in, and the chemical contents are transferred to smaller secondary containers for use by employees. And these smaller containers must provide compliant hazard communication for the safety of the end users.

Here's the hitch: When big containers with new, GHS-compliant labeling start arriving, they might not match the labeling on the secondary containers anymore.

Why is this an issue? If you transfer a chemical into a container with different labeling, you're essentially *re-labeling it*. Technically, the new regulations say this practice is acceptable, *provided the old label does not conflict with any provisions of the new label*. But the regulations don't provide guidance on what constitutes a "conflict." You're on your own there.

From a risk management perspective, if you re-label a chemical, you've accepted responsibility. If someone gets hurt, a clever attorney may notice a discrepancy between the labels, and you'll be on the hook to explain that discrepancy.

Consistency is the key here. The best course of action is to replace any old labels on your secondary containers with new, compliant labels *that have the same information as the primary containers in your workplace.* ♦



Q & A

We answer questions on GHS topics

Nikki Burgess is a Staff Regulatory Specialist at Labelmaster and the company's expert on OSHA's Hazard Communication Standard. Nikki's training includes degrees from the University of Washington and Governors State University, professional certifications as a Dangerous Goods Safety Advisor (DGSA) and EPA Hazardous Waste Operations and Emergency Response (HAZWOPER) Specialist, and training in the federal Transportation Worker Identification Credential (TWIC). Nikki has more than 30 years of experience in the hazard communication, Dangerous Goods, and environmental, health and safety sectors, including the U.S. Navy and the trucking, heavy manufacturing and railroad industries.

Q: What's the first thing you would tell general businesses out there that don't manufacture chemicals but use them in the workplace about GHS and HCS 2012?

A: The first step is to sit down and read the regulations. There's no better way to know what the regulations say than to take the time to actually read them. They're available online for free, and as far as federal regulations go, they're pretty well written and easy to understand.

The next step is to make sure your people are trained. OSHA stipulated in HCS 2012 that training on the new provisions had to be completed by December 1, 2013—regardless of whether a company had implemented the GHS-compliant labels and SDS or not. So, if your employees haven't been trained on the new hazard communication standards yet, you need to get it done soon.

Beyond that, it's really a matter of talking to your chemical vendors about when they'll be converting to the GHS standards so you'll know when you'll be getting new SDS for your chemicals.

Q: What can a company do if non-compliant shipments arrive at its facility?

A: There are basically two choices—a company can either reject the shipment and return it to the manufacturer or importer, or it can opt to classify the chemical itself according to HCS 2012, apply the GHS-compliant labeling and ensure the SDS is accurate. It's important to note, however, that the company that does the reclassifying is responsible for the accuracy of the labeling from that point in the supply chain onward.

Q: How does OSHA's HCS 2012 work with other labeling conventions such as the National Fire Protection Association (NFPA) and Hazardous Material Identification System (HMIS)?

A: This is an area where there's some confusion in the industry. OSHA considers the NFPA labels to be for first responders, rather than as hazard communication for employees, so the NFPA labels and GHS-compliant labels can exist together.

As far as the HMIS labels, OSHA says they can still be used, with the following caveat: "...the information supplied on these labels must be consistent with the revised HCS; e.g., no conflicting hazard warnings or pictograms." So, companies can continue to use HMIS labels for their in-plant hazard communication. But, it's important to remember that GHS/HCS 2012 uses a *lower* number to indicate a greater hazard risk (i.e., a "1" is the highest risk) while HMIS uses *higher* numbers to indicate a greater risk.

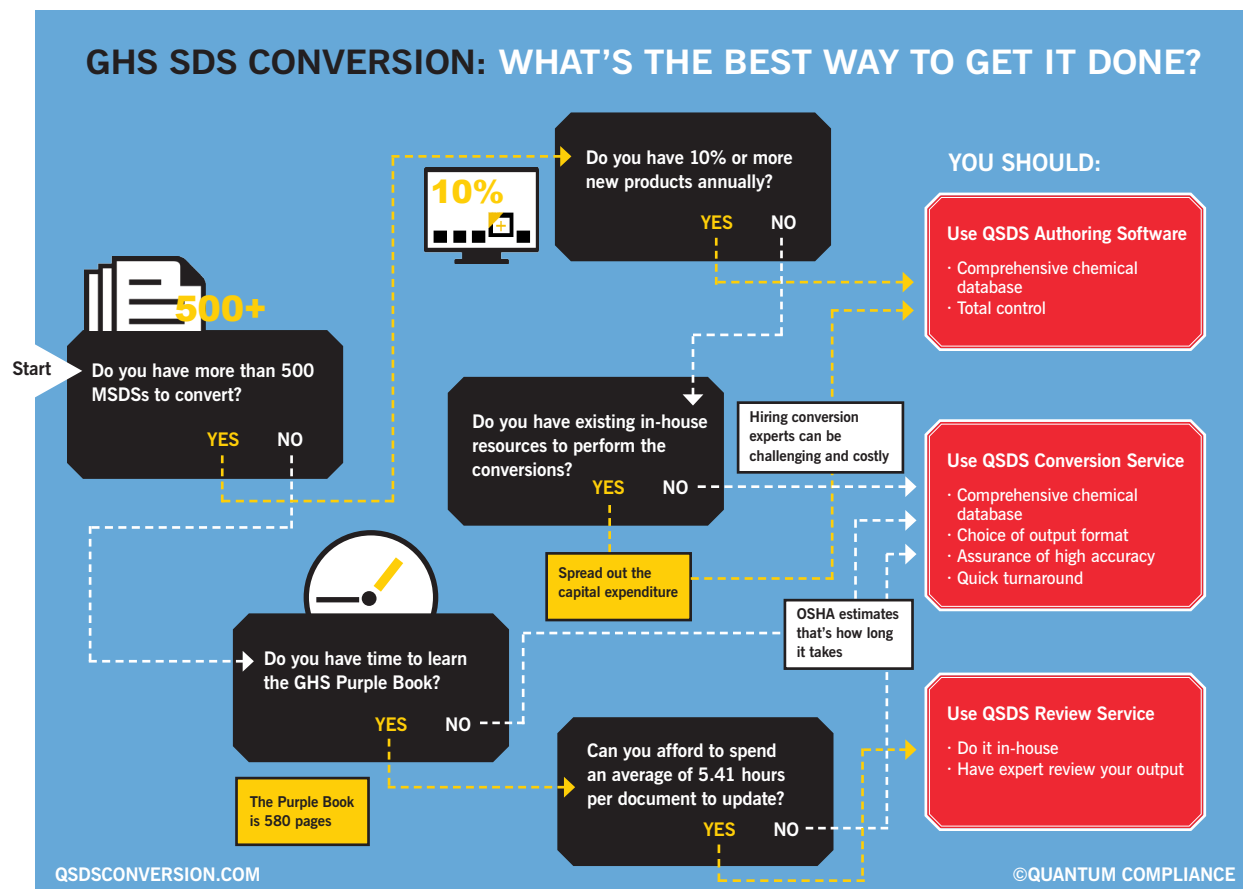
Q: How does the HCS 2012 affect DOT labeling requirements for shipping Dangerous Goods?

A: The simple answer is that it doesn't. All the existing DOT regulations for marking, labeling and documenting still apply. HCS 2012 affects labeling and documentation of chemicals in the workplace. In cases where the chemical container is the shipping container, GHS-compliant labels will accompany (or can be combined with) DOT-required labels. ♦

TOP THREE THINGS YOU NEED TO DO TODAY ABOUT GHS (if you haven't already):

- 1) **Read the regulations.** They're available at no charge at <https://www.osha.gov/dsg/hazcom/ghs-final-rule.html>
- 2) **Train your employees** on HCS 2012 compliance, even if you haven't implemented the labels and SDS yet.
- 3) **Talk to your chemical vendors** about when they will be converting to the new regulations.

Simplify Your MSDS-to-SDS Conversion



Labelmaster has partnered with an expert service provider in MSDS-to-SDS conversion and GHS compliance to help your business comply quickly and easily with the new Globally Harmonized System.

Quantum Compliance has been providing software solutions to help businesses implement and maintain compliant environmental health and safety (EH&S) practices for more than 30 years.

Depending on your business's needs, Quantum can provide:

- MSDS-to-SDS conversion as a service
- SDS authoring software
- Professional SDS review services

Visit Labelmaster.com/ghs to learn more about how Quantum Compliance can help make your GHS compliance experience hassle-free.



SDS COMPLIANCE



MSDS-to-SDS Conversion Services

Quantum SDS

We have partnered with an expert service provider in MSDS-to-SDS conversion and GHS compliance to help your business comply quickly, easily and hassle-free with the new global harmonization system.



GHS SDS Binders

HZ6030

Binders are designed to store and protect SDS where they can be readily accessible to your employees. They also can be used to complement your company's HCS/GHS training program. SDS binders have durable, polyethylene covers and are available in English, Spanish and French.



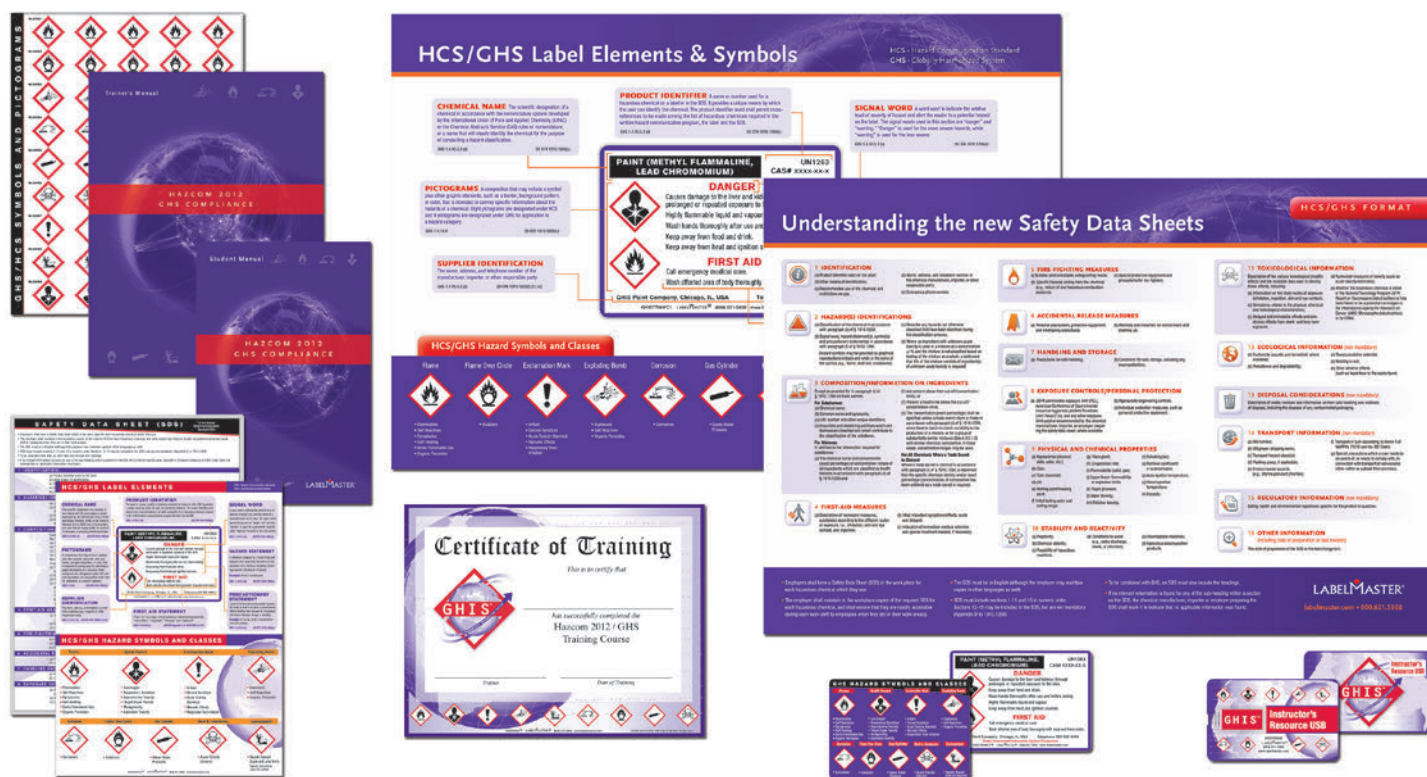
GHS SDS Compliance Centers

HZ6043

Keep safety data sheets and other safety-related materials easily available to all employees. We offer a variety of safety compliance centers, including a comprehensive selection of bilingual options. Centers are also ideal for use in your employee hazard communication training program and help demonstrate your compliance with the Hazcom 2012/GHS standard. SDS podiums, wire baskets and wall-mount stands are also available.



TRAINING



GHS Training Kits

GHSTRNKIT1

This easy-to-follow training kit provides all the tools to teach Hazcom 2012 to workers. The step-by-step guide helps employees understand how the standards apply to their workplace and the differences found in the new standard.



Visit labelmaster.com
TO ORDER
 Call 800.621.5808



GHS Training

GHSTRN1

Labelmaster offers a variety of training materials including a self-study program employees can complete on their own and training manuals to help make employees aware of the Hazcom 2012/GHS standards.

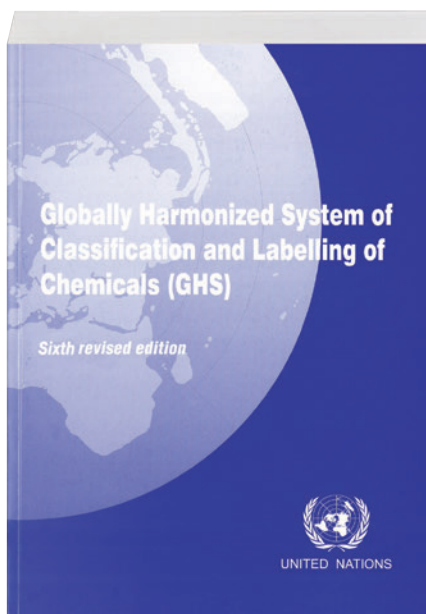


BOOKS

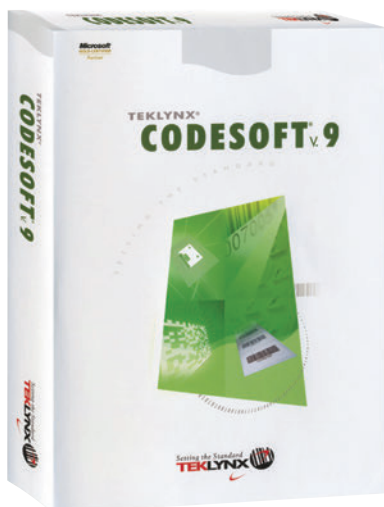
UN Purple Book

UNI530048

The sixth revised edition of the *Globally Harmonized System of Classification and Labeling of Chemicals* (GHS) includes the following amendments: new hazard categories for chemically unstable gases and non-flammable aerosols; further rationalization of precautionary statements; and further clarification of some of the criteria to help eliminate differences in their interpretation.



SOFTWARE



GHS Pictogram Software

TEKLABELGHS

GHS pictogram software from Labelmaster saves you time and money by allowing you to create GHS labeling at your facility. This intuitive software guides you through the process of producing custom hazcom labels.



GHS Printer and Accessories

BRA5076801

The GlobalMark® Industrial Color and Cut Printer has a PC connection for printing from your label-making software. The label printer incorporates touch-and-drag editing (can also use a mouse and/or stylus pen), built-in templates, graphics and applications along with 290 built-in symbols.

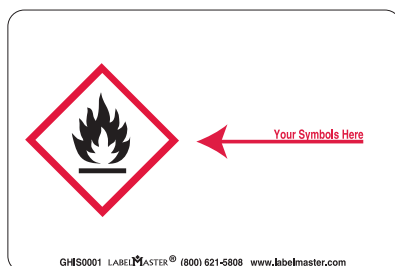
LABELS AND MARKINGS



GHS Pictogram Labels

GHIS0038

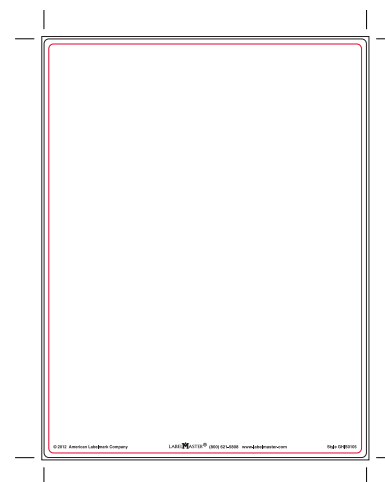
Labelmaster's full line of GHS pictograms and labeling is designed to help keep you in compliance with UN regulations and standards for the storage and handling of hazardous chemicals. When combined with our GHS training products and programs, these labels help ensure the safety of your workers.



GHS Personalized Labels

GHIS0001P

All our GHS labeling options use the new GHS label layout. To order, specify your chemical name, safety information and up to 4 GHS pictograms. Choose from heavyweight coated paper or weather-resistant film. GHS personalized labels have durable, permanent adhesive and fade-, chip- and peel-resistant UV inks.



GHS Laser Labels

GHIS0105

Communicate chemical hazards using the new GHS laser label layout. Choose from heavyweight coated paper or laser-imprintable vinyl. GHS laser labels have durable, permanent adhesive and fade-, chip- and peel-resistant UV inks.



GHS Pipe Markers

HRGS241

Mark clean, smooth pipes around your facility with these custom GHS pipe markers and directional arrows. To order, select the style number by pipe outer diameter. Specify chemical name, GHS pictogram(s), border color and quantity.

IEL

LABELMASTER®
5724 N. Pulaski
Chicago, IL 60646
Phone Number
Emergency Phone Number

UN Number
Proper Shipping
Name

CODE
PRODUCT NAME

DANGER! TOXIC IF SWALLOWED
FLAMMABLE LIQUID AND VAPOR

FLAMMABLE LIQUID
3

LOT NO.  **DRUM NO.**
10

GROSS: 441 LBS/ 200.30 KGS
TARE: 41.5 LBS/ 18.86 KGS
NET: 400 LBS/ 181.44 KGS

SEE MATERIAL SAFETY DATA SHEET FOR FURTHER DETAILS REGARDING THIS PRODUCT

GHS010-2 LABELMASTER® (800) 621-5808 www.labelmaster.com

English:
(E) Highly flammable. May form explosive peroxide. Irritating to eyes and respiratory system. Keep away from sources of ignition. No smoking. Do not empty into drains. Take precautionary measures against static discharges.
(E) Light sensitive. May form explosive peroxide. Irritating to eyes and respiratory system. Keep away from sources of ignition. No smoking. Do not empty into drains. Take precautionary measures against static discharges.
(E) Flammable. May form explosive peroxide. Irritating to eyes and respiratory system. Keep away from sources of ignition. No smoking. Do not empty into drains. Take precautionary measures against static discharges.
(E) Flammable. May form explosive peroxide. Irritating to eyes and respiratory system. Keep away from sources of ignition. No smoking. Do not empty into drains. Take precautionary measures against static discharges.
(E) Flammable. May form explosive peroxide. Irritating to eyes and respiratory system. Keep away from sources of ignition. No smoking. Do not empty into drains. Take precautionary measures against static discharges.
(E) Flammable. May form explosive peroxide. Irritating to eyes and respiratory system. Keep away from sources of ignition. No smoking. Do not empty into drains. Take precautionary measures against static discharges.
(E) Flammable. May form explosive peroxide. Irritating to eyes and respiratory system. Keep away from sources of ignition. No smoking. Do not empty into drains. Take precautionary measures against static discharges.
(E) Flammable. May form explosive peroxide. Irritating to eyes and respiratory system. Keep away from sources of ignition. No smoking. Do not empty into drains. Take precautionary measures against static discharges.
(E) Flammable. May form explosive peroxide. Irritating to eyes and respiratory system. Keep away from sources of ignition. No smoking. Do not empty into drains. Take precautionary measures against static discharges.
(E) Flammable. May form explosive peroxide. Irritating to eyes and respiratory system. Keep away from sources of ignition. No smoking. Do not empty into drains. Take precautionary measures against static discharges.

Spanish:
(E) Muy inflamable. Puede formar peróxido explosivo. Irritante para los ojos y la vía respiratoria. Mantenga alejado de las fuentes de ignición. No fumar. No vacíe en los desagües. Tome precauciones contra las descargas estáticas.
(E) Muy inflamable. Puede formar peróxido explosivo. Irritante para los ojos y la vía respiratoria. Mantenga alejado de las fuentes de ignición. No fumar. No vacíe en los desagües. Tome precauciones contra las descargas estáticas.
(E) Inflamable. Puede formar peróxido explosivo. Irritante para los ojos y la vía respiratoria. Mantenga alejado de las fuentes de ignición. No fumar. No vacíe en los desagües. Tome precauciones contra las descargas estáticas.
(E) Inflamable. Puede formar peróxido explosivo. Irritante para los ojos y la vía respiratoria. Mantenga alejado de las fuentes de ignición. No fumar. No vacíe en los desagües. Tome precauciones contra las descargas estáticas.
(E) Inflamable. Puede formar peróxido explosivo. Irritante para los ojos y la vía respiratoria. Mantenga alejado de las fuentes de ignición. No fumar. No vacíe en los desagües. Tome precauciones contra las descargas estáticas.
(E) Inflamable. Puede formar peróxido explosivo. Irritante para los ojos y la vía respiratoria. Mantenga alejado de las fuentes de ignición. No fumar. No vacíe en los desagües. Tome precauciones contra las descargas estáticas.
(E) Inflamable. Puede formar peróxido explosivo. Irritante para los ojos y la vía respiratoria. Mantenga alejado de las fuentes de ignición. No fumar. No vacíe en los desagües. Tome precauciones contra las descargas estáticas.
(E) Inflamable. Puede formar peróxido explosivo. Irritante para los ojos y la vía respiratoria. Mantenga alejado de las fuentes de ignición. No fumar. No vacíe en los desagües. Tome precauciones contra las descargas estáticas.
(E) Inflamable. Puede formar peróxido explosivo. Irritante para los ojos y la vía respiratoria. Mantenga alejado de las fuentes de ignición. No fumar. No vacíe en los desagües. Tome precauciones contra las descargas estáticas.
(E) Inflamable. Puede formar peróxido explosivo. Irritante para los ojos y la vía respiratoria. Mantenga alejado de las fuentes de ignición. No fumar. No vacíe en los desagües. Tome precauciones contra las descargas estáticas.

GHS Drum Labels

DV810W1

These large-format labels contain the same GHS information as smaller labels. To order, specify your chemical name, safety information and up to 4 GHS pictograms. Choose from laser imprintable paper (PLL Series) or laser imprintable vinyl (DV Series). Drum labels have durable, permanent adhesive and fade-, chip- and peel-resistant UV inks.

HMIS®

HEALTH ☐ ☐

FLAMMABILITY ☐

PHYSICAL HAZARD ☐

PERSONAL PROTECTION

HMIS0000 LABELMASTER® (800) 621-5808 www.labelmaster.com

HEALTH ☐ ☐ **Chemical Name**

FLAMMABILITY ☐ **Manufacturer Name**

PHYSICAL HAZARD ☐

HMIS0000 LABELMASTER® (800) 621-5808 www.labelmaster.com

HEALTH ☐ ☐ **HEALTH SALUD**

FLAMMABILITY ☐ **FLAMMABILITY INFLAMABLE**

PHYSICAL HAZARD ☐ **PHYSICAL HAZARD PELIGRO FISICO**

PERSONAL PROTECTION **PROTECCION PERSONAL**

HMIS0000 LABELMASTER® (800) 621-5808 www.labelmaster.com

HMIS Labels

HMIS0001

Standard Hazcom (HMIS®) labels are part of a comprehensive hazard communication program to help you comply with OSHA's Hazard Communication Standard. Our right-to-know labels use an easy-to-understand rating system to inform employees about the potential hazards of chemicals they might encounter in their workplace.

LABELMASTER PARTNERS WITH THE AMERICAN COATINGS ASSOCIATION (ACA) TO OFFER HMIS LABELS

ACA's HMIS hazard rating scheme is designed to be compatible with workplace labeling requirements of the OSHA's revised HCS that align with the UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS). It is constructed to communicate in-plant hazard information to employees through training and the use of colors, numbers, letters of the alphabet and symbols of types of personal protective equipment (PPE).

Labelmaster's full line of HMIS labels includes a complete system for use in the United States and for chemicals shipped to countries without a standard hazcom system.



LABELMASTER®

5724 N. Pulaski Road
Chicago, IL 60646-6797

GHS

Get an in-depth look at the HCS 2012 regulations—from training requirements to chemical classifications—with our GHS webinars. Visit labelmaster.com/GHS



VOLUME
02

**DANGEROUS
GOODS
REPORT**
INSIGHTS ON ISSUES OF
DANGEROUS GOODS



labelmaster.com
800.621.5808