

Weber's Guide to GHS Labeling

Get the answers to your GHS questions!

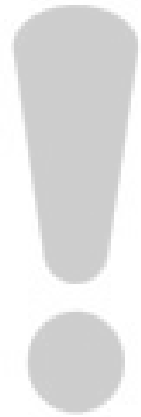


Weber[®]
Labels & Labeling Systems

Chemical labeling requirements are changing.

Make sure your company is ready.

- Today's HCS Requirements
- The basics of GHS labeling
- Who does this affect?
- What does Weber recommend?
- Advice for HazComm labeling
- Application Checklist
- Weber Label Solutions



Today's HCS requirement.



The old Hazard Communication System (HCS) stipulated you must have 3 items on labels of hazardous chemicals that would be used in the workplace:

1. Chemical Name
2. Hazard Statement
3. Company Information

Additionally, the old law requires manufacturers and distributors to create Material Safety Data Sheets (MSDS).

These provide hazard information in high detail, including the concentration of hazardous chemicals present in the product. These sheets are to be kept on site by the users of the chemicals in case of emergency.

The HCS has been said to give workers the “*right to know.*”

The Basics of GHS Labeling

The Globally Harmonized System (GHS) of Classification and Labeling of Chemicals, a communication system used widely around the world, is aligned with the new HCS.

In addition to the 3 previous requirements, there are 3 new requirements:

1. Signal Words
2. Precautionary Statements
3. Pictograms

Also, the MSDS is now called the Safety Data Sheet (SDS), and now includes pictograms.

This new version of the HCS is said to give workers the *"right to understand."*

The Basic Parts of A GHS-Compliant Label

1 → **n-Propyl Alcohol**
UN No. 1274
CAS No. 71-23-8

2 → **DANGER**

3 → Highly flammable liquid and vapor. Causes serious eye damage. May cause drowsiness and dizziness.

4 → Keep away from heat/sparks/open flames/hot surfaces. No smoking. Avoid breathing fumes/mist/vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present. Continue rinsing.

5 → Fill Weight: 18.65 lbs. Lot Number: B56754434
Gross Weight: 20 lbs. Fill Date: 6/21/2013
Expiration Date: 6/21/2020 See SDS for further information.
Acme Chemical Company - 711 Roadrunner St. - Chicago, IL 60601 USA - www.acmechem.com - 123-444-5567










6 →

1. **Product Identifier** - Should match the product identifier on the Safety Data Sheet.
2. **Signal Word** - Either use "Danger" (severe) or "Warning" (less severe)
3. **Hazard Statements** - A phrase assigned to a hazard class that describes the nature of the product's hazards
4. **Precautionary Statements** - Describes recommended measures to minimize or prevent adverse effects resulting from exposure.
5. **Supplier Identification** - The name, address and telephone number of the manufacturer or supplier.
6. **Pictograms** - Graphical symbols intended to convey specific hazard information visually.

Sample label courtesy of Weber Packaging Solutions • www.weberpackaging.com

Who does this affect?

All manufacturers, distributors and users of chemicals in the workplace must comply with this new regulation.

Health Hazard 	Flammables 	Oxidizers 
Irritant 	Gases Under Pressure 	Explosives 
Corrosives 	Environmental Toxicity 	Acute Toxicity 

There may be a lot of new information that needs to go on the labels; however, since many companies use the HMIS system as a best practice, they are used to lots of info on their labels. Now the precautionary statements and hazard statements will be standardized in every workplace.

The biggest change that affects everyone, though, is that now these pictograms will become part of their variable information. These pictograms will include red diamonds which companies have never needed to print in an on-demand format previously.

Is there a difference if I am a chemical company or just a company that uses chemicals?



Companies that manufacture and distribute chemicals must begin using the new labeling June 1st, 2015.

Those companies that use hazardous chemicals in their day-to-day operations, such as a machine shop or a printing company, will have until June 1st, 2016 to update their workplace labeling.

More information on the rules and regulations of the Globally Harmonized System of Classification and Labeling of Chemicals can be found [here](#) at the [Department of Labor OSHA site](#).

What is Weber's solution to help with compliance?

After reviewing our customer base in the petrochemical industry, we really like a technology from Epson. It is a great fit for a large number of these customers and we encourage them to explore it. There are two print systems, and both of them are designed for long-term industrial use.

The Epson GP-C831 Inkjet Label Printer

The printer system allows you to variably print in color; and it allows you to do it in an efficient way. You can work from blank label stocks, so it allows you to easily manage label formats with the end product being a very presentable label, which enhances brand image.

Being compliant means only that you have the required information on your labels. But most manufacturers and distributors need some element of durability. The pigmented inks in this system show remarkable durability for the price. They are better than UV flexo inks typically found on chemical drum labels. The refills for



[Learn more about this printer](#)



[Learn more about this printer](#)

each of the CMY colors are \$17.50. The larger black refills, which hold 3 times the amount of ink as the other colors, are only \$53.00.

The printer itself is in the realm of affordability; less than half the cost of a wide-web thermal transfer printer (under \$2,000 vs. \$5,000). It comes with an optional SITA (Spare In The Air) program to ensure downtime is minimized.

Epson C3500 Inkjet Label Printer

The C3500 printer uses the same type of print technology and ink as the C831, but it comes in a smaller package. This has a maximum media width of only 4.125" so it lends itself ideally to small container labeling. We see this as a great fit for workplace labeling.

Like the C831, it gives you flexibility to design and print multiple label formats, all from blank labels. It has a compartment to print from 4.0" OD roll, but it can also accept externally placed media through a slot in the back.

The 3500 uses similar ink cartridges as the 831, but the black cartridge is the same size as the other three colors, in this case.



Color Inkjet Printing

Inkjet technology has greatly improved over the last several years. Inkjet printing is making its way into businesses by giving them color on demand at increasingly greater print resolutions, higher speeds and lower costs.

Color Inkjet offers the same flexibility as Color Laser in label design, lead-time and savings on blank label consumables.

A majority of inkjet systems use dye-based inks, which are not durable enough for chemical labeling, given the industry's typical outdoor storage/transportation and exposure to harsh chemicals. For chemical applications, look for pigmented inks, which have much better durability than dye-based inks. Additionally, there are few systems that will handle 8" wide drum labels, but they are available and should be of great interest to labelers of large containers like steel and plastic drums and intermediate bulk containers.

Inkjet systems lack the speed of modern thermal transfer and laser printers, but the lower cost should allow a labeler to deploy multiple printers for the price of one standard thermal transfer printer or high-speed laser printer.



Advice about HazComm compliance

Start with the SDS

Likely, the most difficult part of this process will be to get chemicals reclassified under the new system, and revise the MSDS to SDS. Most will go through a 3rd party to get this done. However, once that part is completed, you have all the information you need to create compliant labels.

To get started with labels, look at the SDS's involved. Here you'll have an understanding of the variability of pictograms required. This will help you narrow down the type of print system you'll need. For instance, if your labels will only require one pictogram, you can easily handle that with revised preprinted labels to be used with your existing thermal transfer print system.



What is a BS:5609 label?

It is the internationally recognized standard for the durability of a label used on containers that are shipped by sea. This is especially important for labels applied to drums of chemicals that require IMDG certification, the international guideline to the safe shipment of dangerous goods or hazardous materials by water vessel.

Look at your application requirements

✓ **How many label sizes do you need?**

This will ultimately affect the overall media costs for the printer.

✓ **What are the label sizes?**

Some printers that are great for GHS compliance may only print up to a certain width, such as 4" or 6.5". These will not be options when printing 8.5" x 14" labels.




✓ **What level of durability is required?**







Make sure that both the label material and printer ink are durable enough for the lifetime of the label, and meet any applicable standards, such as BS5609 for IMDG labeling.

✓ **Will labels be hand-applied or auto-applied?**

Going to auto-apply may require roll-to-roll unwind systems for some printers

Which inkjet printer will work best to print labels for my chemical container?

Container Type		Recommended Printer
Intermediate Bulk Container		Epson C831
HDPE Drum		Epson C831
Steel Drum		Epson C831
Fiber Drum		Epson C831
HDPE Pails		Epson C831

Container Type		Recommended Printer
Steel Pails		Epson C831
HDPE Jugs		Epson C831
HDPE Jars		Epson C831, Epson C3500
LDPE Wash Bottles		Epson C3500
LDPE Dispensing Bottles		Epson C3500
Glass Bottles & Vials		Epson C3500

Need help with a GHS label compliance requirement?

Talk to a Weber GHS Label Expert to find the best solution for your chemical labeling needs.



Contact a GHS Label Expert

Look at the big picture

✓ **What will the total system cost?**

Look at the costs of the printer(s), labels and inks

✓ **Maintenance**

How much time will employees spend making repairs?
How much does a service call for the new system compare to the old one?

✓ **Changeover Time & Ease of Operation**

How long does it take to get the system up and running and replacing the media? What setup, if any, needs to be done in between print jobs?

✓ **Print Speeds**

The max speeds vary greatly between print systems. It affects throughput (labor overhead), image clarity, and image durability. Which speed do you need to print at to optimize all three?

Weber[®]
Labels & Labeling Systems
www.weberpackaging.com