

2017



White Paper

# On-site Chemicals:

*Do You Know Your Exposure?*



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and ends with chemical intelligence.*

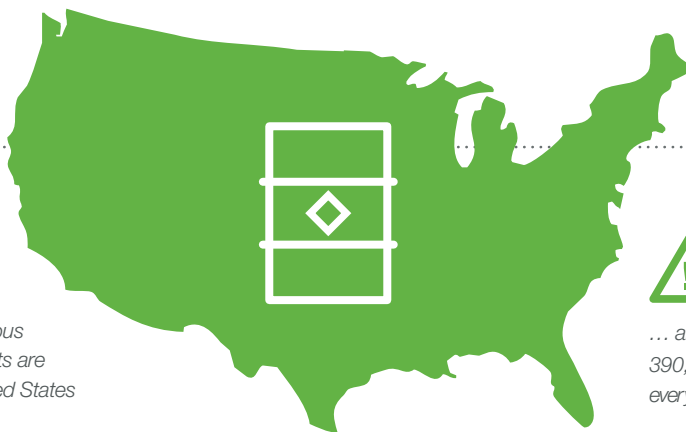
With more than three million facilities employing over 30 million workers exposed daily to chemicals, it's surprising how little most employers know about the chemicals they have on-premise<sup>1</sup>.

This paper explores the necessity, the benefits and the process required to conduct a chemical inventory at your facility to maintain OSHA compliance and keep employees safe.

Way back in 1976, a Congressional committee reviewing "chemical dangers in the workplace" reported that the threat posed by toxic substances to the health of workers caused an estimated 390,000 illnesses every year<sup>2</sup>. Today, 650,000 hazardous chemical products used in the United States and according to the U.S. Department of Labor Occupational Safety and Health Administration (OSHA), illnesses from exposure to chemicals kill nearly 50,000 people every single year<sup>1,3</sup>.



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Although OSHA's Hazard Communication Standard (HCS) states that employees have both a need and a right to know the identities and hazards of the chemicals they are exposed to when working, on average **ONLY 40%** of chemicals match the Safety Data Sheet (SDS) records on site. Experts have also found that due to long shelf lives and poor inventory management, more than 40% of chemicals in laboratories are obsolete or expired.

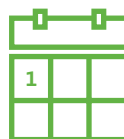
...**ONLY 40%**  
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## *Additional Regulation:*

Since 2012, the OSHA Hazard Communication Standard (HCS) has been aligned with the United Nations' Globally Harmonized System (GHS)—a worldwide system for standardizing chemical classification and labeling.

As of June 1, 2016, all U.S. employers using chemicals must be fully compliant with GHS regulations which require communicating hazard information—as well as protective measures—on GHS-compliant labels and redefined Safety Data Sheets (SDS).

Under GHS all existing MSDSs became obsolete and are now required to be reformatted into new SDSs. With that, now is the time to identify all hazardous chemicals on-site. An accurate on-site inventory is critical in setting the baseline for compliance and providing a roadmap for sourcing updated SDSs.



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## *How Can You Comply When You Don't Know Which Chemicals Are On Premise?*



### *Challenge:*

Today's workers have the right to know what chemicals they're being exposed to and what the hazards are.

For today's employers, this means they are required to provide an inventory of hazardous chemicals, HazCom and GHS training, a written HazCom plan, GHS-compliant chemical labels and an SDS for each chemical on site.

Though many companies are successful at putting a HazCom compliance program in place, they fall short in maintaining up-to-date compliance due to the lack of inventory controls. Neglecting to track purchasing data to maintain an accurate chemical inventory simply makes achieving 100% compliance impossible, thereby potentially exposing employees to dangerous situations.



### *Solution:*

An on-site chemical inventory is the first and most important step for any business to get a true understanding of all its existing chemicals.

By conducting a comprehensive chemical inventory, you'll discover which chemicals are on site so you can accurately determine which need new SDS documentation and what documentation should be archived for safe keeping.

No wasting time maintaining documents for chemicals you no longer have, and no cluttering up your active SDS collections with unnecessary documents.



### *Benefits:*

With accurate chemical inventories you can comfortably meet regulatory compliance, reduce your liability by actively archiving chemicals not in use and identify hazardous workstations, enabling you to provide targeted trainings to specific employees working in those areas.

You'll now have the data required to develop an integrated chemical tracking system; allow-ing you to marry an SDS to each material, create GHS-compliant labels and generate accurate hazardous chemical lists.



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# Conducting An Effective Chemical Inventory.



Once you decide to conduct a chemical inventory, you'll want to determine who's the best fit for the job. You can do it yourself or hire someone to do it for you. Just be sure to employ a dedicated team.

Regardless of who you select, there are a few key process components you'll want to utilize to achieve all the benefits of your inventory effort.

- Get a database in place (using SDS management software) to capture and maintain your findings
- Collect, scan and store all SDSs electronically
- Tackle the inventory in a logical pattern; complete one room at a time and work from top-to-bottom, left-to-right.
- Include fields in your database to capture information necessary to track down any missing SDSs, consisting of:
  - Product number
  - Manufacturer's name
  - Manufacturer's phone number
  - Manufacturer's website URL
- Include fields in your database to capture qualitative location data on each chemical, consisting of:
  - Building location
  - Room location
  - Cabinet and/or shelf locations
- Include fields in your database to capture quantitative data on each chemical, consisting of:
  - Container type
  - Unit of measure
  - On-hand inventory count
  - User supplied data such as classifications, part numbers, etc.

*Many companies make the mistake of not capturing the detailed quantitative AND qualitative data sets mentioned above that provide the necessary information to proactively conduct reporting requiring aggregate chemical information, such as Tier II reports.*



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# What Can You Do With An Accurate Chemical Inventory?

*A Current And Accurate Chemical Inventory Enables You To Be Prepared To Confidently:*

1. Curate an accurate library of up-to-date SDS data.
2. Ensure GHS-compliant labels are created and adhered to each chemical container.
3. Know the exact location and quantity of all your on-site chemicals.
4. Implement Environmental Health & Safety best practices for chemical management.
5. Know on-demand what to do in case of exposure to protect all employees.
6. Archive any unnecessary, pre-existing SDS data sheets while maintaining access to the records in the event they are needed as proof for protection during a lawsuit.
7. Properly dispose of any unnecessary or expired chemicals.
8. Identify hazards and assess their associated risks.
9. Know which employees require special safety training for highly dangerous chemicals.
10. Manage chemical exposure to reduce exposures and prevent illnesses.
11. Proactively manage your HazCom plan (i.e. update your list of hazardous chemicals).
12. Generate your EPCRA Section 311/312 Tier II report and initiate other reports that require threshold analysis (i.e. Department of Homeland Security's Chemical Facility Anti-Terrorism Standards, CFATS report)



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# In The Case Of Emergency: Data At Your Fingertips.

...instant access to  
safety information on  
every chemical  
container at your facility.

When you have completed your chemical inventory, you will have accurate and up-to-date records containing the names, quantities and locations of all your company's chemicals. After you label all your chemicals, you'll have instant access to safety information on every chemical container at your facility—hazard information, as well as protective measures. And, after you acquire corresponding SDS data, filing your EPCRA 311/312 Tier II report will provide first responders and environment cleanup personnel the critical information needed to safely and effectively perform their jobs.

“During emergency situations and after catastrophic events or chemical spills, it is extremely important to determine quickly the location of the most dangerous chemicals on premise. Accurate data is vital.”



*Betty Hicks, SafeTec Director of Operations and Authoring Services*



It's equally important to maintain an accurate ongoing record—because people use, move, buy, receive, transport and dispose of chemicals daily. Therefore, implementing an approval process for incoming chemicals is crucial to preserving dominion over your data.



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# Considerations For Hiring An Expert.

Conducting and maintaining accurate inventories requires significant time and internal processes. When dedicated resources are not readily available, the result is poor compliance, potential health hazards and often inaccurate reporting.

The primary reason that regulatory compliance is lacking in most businesses is that quantitative inventory data is rarely tied to other chemical data, like data sheets, purchase history and employee exposure.

Many companies fall short in maintaining compliance even after an inventory takes place due to the lack of proper inventory controls, which is why conducting regular inventories to get back on track can be critical as well.

For companies that don't have dedicated inventory personnel available, it's often a better option to hire an experienced team to conduct the initial and subsequent annual on-site chemical inventories.



## *Recommended Outsourced Inventory Team Requirements:*

1. Technicians have security clearance and have passed background checks.
2. They are experienced – having completed chemical inventories across industries, in multiple facility types.
3. Technicians utilize equipment to automatically correlate chemicals to existing SDS data on the fly.
4. They do NOT use spreadsheets.
5. Technicians who use spreadsheets and not an integrated application, introduce the risk of creating errors when matching materials to SDSs and drastically increase the time it takes to perform an audit. This ultimately comes down to having a **more expensive audit** with **less value** and **puts employees at greater risk**. When employee safety is at play, being as efficient as possible is key.



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# Why Is Digital Data Better?

## *More Effective Chemical Management.*

Your EHS team is not the only group of people within your organization who are going to want access to your chemical inventory data. Having up-to-date digital data about the quantities and locations of the chemicals in your organization make it easier for you to SHARE information across the organization, with external regulatory agencies and with emergency personnel.

Using a cloud-based SDS management system provides instant access to this data, drastically reducing liabilities and increasing data that's easily dissectable for reporting and analysis. Cost savings and operational efficiencies also multiply when you can easily feed digital inventory data into other systems such as Purchase & Procurement, Human Resource Management, Emergency Medical and Waste Management systems and SAP systems that manage business operations and customer relations.

If you're interested in maximizing your chemical inventory data collection, sharing and analysis capabilities, hiring an expert that specializes in chemical management software AND inventory services is the way to go.



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# Recommended Chemical Management System And Inventory Vendor Requirements:

*Choose An Enterprise-Level Digital Inventory And Chemical Management System That:*

- Is easy to access, use and learn to ensure user adoption
- Seamlessly integrates with other systems, such as purchasing, operations and accounts payable through an enterprise API
- Generates reports of all on-premise hazardous chemicals sorted by name, location, CAS number, formula, etc.
- Includes a powerful search engine so chemicals can be documented and located by very specific physical locations, such as individual cabinet, shelf or bin
- Enables control over incoming chemicals from point of entry through an automated chemical approval process
- Includes hand-held, mobile technology that can upload inventory data on location in near real-time into a highly organized inventory record
- Utilizes features like barcode labeling and tracking
- Has a robust chemical approval process to monitor and track new materials that are brought on-site

“ Customers report they’ve seen financial savings as high as 40-50%  
in the first year of a CMS program implementation. ”

*GreenBiz*



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# Upping Your Chemical Intelligence Quotient:

According to a GreenBiz environmental study, rather than pushing to sell more chemicals, today's savvy chemical suppliers are profiting more by helping customers manage chemicals over their entire life cycle, improve inventory management and reduce chemical use and waste.

End-to-end cloud-based chemical management solutions are playing an essential role in supporting intelligent chemical management across industries. With a system in place, visibility of crucial chemical information is easily provided to employees, OSHA and first responders; all contributing to the ability to limit liabilities and manage public perceptions during instances of chemical spills and unwanted exposure.

More importantly, these systems are arming companies with the tools needed to be proactive stewards of their local communities.

## About SafeTec

The adaptable SafeTec System™ goes beyond chemical inventory and SDS documentation to help you fully understand, analyze and report on the chemicals used in your organization, SafeTec's team of seasoned inventory experts utilize industry-leading tools, including the proprietary SMIS (SafeTec Mobile Inventory System), to collect and store the chemical data you have, while working to retrieve the data you're missing. All on-site, in real-time.

[Learn more about the SafeTec™ System](#)

## Sources

- 1 - <https://www.osha.gov/dsg/hazcom/finalmsdsreport.html>
- 2 - THE PRESIDENT'S REPORT ON OCCUPATIONAL SAFETY AND HEALTH I I I (1972).
- 3 - [https://www.osha.gov/dsg/safer\\_chemicals/](https://www.osha.gov/dsg/safer_chemicals/)