



2016 Indiana Safety & Health Conference

Driving Innovation: A Data-driven Approach to Raising Chemical Safety Awareness

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Agenda

- Changing Regulatory Landscape
- Business Trends Changing EH&S Mindsets
- Evolution of Chemical Data Management (Maturity Model)
- Case Study: Grundfos Peerless Pump
- Common Challenges
- Five Solutions for Improvement
- Q&A



Chemical Safety & Changing Regulatory Landscape

- More than a dozen federal laws create a safety net to oversee the safe use of chemical products.
- Understanding Compliance Obligations Amid The Changing Regulatory Landscape has always been difficult to keep up with, but over the last 5 years changes to the regulatory landscape have shifted into high gear and there is no indication of a slow down.



DID YOU
KNOW



Canada adopted GHS under the
requirements of WHMIS 2015?

True or False?



International GHS Update

- US (HazCom 2012) final deadline is June 1, 2016
 - June 1, 2016 – employers must update alternative workplace labeling and hazard communication program as necessary, and provide additional training for newly identified physical or health hazards.
- Canada adopted in February 2015
 - WHMIS 2015 (WHMIS 1988)
 - 3-year transition period
- Mexico adopted in October 2015
 - 3-year transition period
- EU as of June 1, 2015 CLP must be used for substances and mixtures
- Asia-Pacific Varies (China, Japan, Korea, Taiwan in full effect)



Source: http://www.unece.org/trans/danger/publi/ghs/implementation_e.html



Required GHS Label Elements

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
Acme Chemical Company • 711 Roadrunner St. • Chicago, IL 60601 USA • www.acmechem.com • 123-444-5567

6 → (Pictograms: Flame, Exclamation mark)

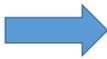
See SDS for further information.

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



Classification

Classification: Method of determining the hazard class(es) of chemicals, and where appropriate the category (severity) per class.

- Hazard Determination (OLD)
 - Corrosive
 - Irritant
- 
- Hazard Classification (NEW)
 - Skin Corrosion 1A
 - Skin Corrosion 1B
 - Skin Corrosion 1C
 - Skin Irritation 2
 - Serious Eye Damage 1
 - Eye Irritation 2A
 - Eye Mild Irritation 2B
 - STOT-SE 3 (Resp. Irr.)



DID YOU
KNOW



Congress Passed TSCA in 1976

True or False?

DID YOU
KNOW



OSHA adopted current Permissible
Exposure Levels (PELs) in 1971



True or False?

9

Business Trends Changing EH&S Mindsets

- Increase in Business Acquisitions/Mergers
 - E.g.: Airlines, Pharmaceutical, Manufacturing
- Consolidation of Systems
- Focus on running leaner and more efficient
- Transition from a local to a global marketplace
 - Additional language and regulatory requirements



EHS Managers are Buried in Paperwork

- Challenge 1 – Data
 - Data is disparate, multiple systems, formats, locations, input sources
- Challenge 2 – Lack of Automation
 - From SDSs to material approvals, technology has not been leveraged in EHS as it has in other industries
- Challenge 3 – Quality
 - Omission, human error, duplication
- Challenge 4 – Regulation
 - Regulation, management and oversight often perpetuate paper-based, error-prone, human intensive processes



Chemical Data Management Maturity Model

	Manual Methods	Homegrown Software	Full-Service Solution
Resources	Internally Developed	Externally Developed	Externally Developed
Level of Potential Risk	High	Medium	Low
Maintenance	Internally Maintained	Internally Maintained	Externally Maintained

Level of Maturity



Case Study



The Company

Part of the Grundfos Group of Companies, Peerless Pump is the leader in fluid handling systems.

Challenges

- Maintaining updated manufacturer SDSs
- Controlling chemical approval processes
- Standardizing HazCom compliance & employee “Right to Understand”

Solution

- Onsite chemical inventory
- Deployed SiteHawk across multiple shop floor computers and throughout the main manufacturing facility
- Stations included chemical labeling to create workplace labels with information from the SiteHawk system
- “Inside Peerless” intranet access to SDSs, chemical information, PPE requirements, etc.



Transition – How do you get there?

- MSDS(SDS) Inventory
 - Character Building
- Moving from Paper to Computer
 - All SDSs were sent to SiteHawk for uploading
 - SiteHawk ensured the most current version was being uploaded
- Training
 - Posting work instructions
 - Labeling stations
 - Hands on walk through
- Showing employees the benefit
 - Summary Sheet for labeling



Overcoming Obstacles

- MSDS(SDS) Inventory
 - Collecting Data = Paperwork Intensive
- Moving from Paper to Computer
 - Everyone loves the books ☺
 - Company transition to online resources
- Training – at least annual
 - Monitored during periodic audits
- Ensuring all SDSs are submitted for approval
 - One purchasing source
- SDS onsite before the chemical is onsite
- Maintaining inventory for 4 sites
 - Identifying purchasing source and a monthly check-in



Benefits

- MSDS(SDS) Inventory
 - Automatic SDS updating
- Control of what is at the facility
 - One chemical approver
- Central Data location for 4 Facilities
 - Check any site at any time from anywhere
 - Improved practice for ISO conformance
- Search functions
- Annual reports
- Storage of obsolete



Polling Question: How do you currently manage your SDSs?



A. Traditional Method

- Paper & Binders, Spreadsheets etc.

B. Homegrown Software

- Software built for a specific scope at a point in time

C. Full-Service Solution

- Software which is globally capable and highly configurable, coupled with professional services



Common Challenges: Manual Method

- Storage of your 30-Year History
- Difficulty in Finding an SDS
- Tracking any SDS changes: Versions, GHS, Formulations, Regulatory, etc.



Common Challenges: Homegrown Software

- Continuous updating and maintenance of the software due to the global regulatory environment
- Massive load on internal resources
- Global language support
- Inability to move away from old business practices



Common Challenges: Full-Service Solution

- Budget
- Executive Support
- Global agreement on one system



Addressing the challenges?

- Identify the gaps
 - How accurate is your inventory?
 - Do you have chemical approval process?
 - How do you know you have the latest SDS?
- Have a plan for short term and long term goals
 - How do you plan on tracking GHS compliant SDSs?
 - How do you plan on addressing the ever growing regulatory changes?



Get Started: 5 “I’s” to Improvement

- **INVENTORY** facilities on a regular basis
- **IMPLEMENT** a formal chemical approval process
- **INCLUDE** environmental – leverage chemical data for regulatory and environmental reporting
- **INTEGRATE** chemical data with ERP, EMIS, etc.
- **INSTITUTE** regular employee training



Ultimate Objective: Stay Abreast & Work to Reduce Risk

- A chemical risk assessment follows the same steps as a risk assessment for any other hazards in your workplace
- There are three basic steps:
 - Identify the hazard: This involves identifying the chemicals you have in your workplace and the hazards associated with them.
 - Assess the risk: This involves assessing the risk from chemicals or processes in your workplace
 - Control the exposure: This involves considering the various recognized control measures to eliminate or reduce the risk

