

# Houghton International GHS Tales from the Frontline

Implementing HCS 2012 from the Perspective of Small Lubricant Manufacturers:

A Panel Presentation

April 19, 2016 Ria Scheuren Global VP – EHS & PS

## Introduction

- Who am I/Who is Houghton?
  - ✓ Ria Scheuren Global V.P. of EHS & Product Stewardship
  - ✓ 28+ years experience with 20+ years in variety of positions in specialty and petrochemical industries
- Objectives
  - ✓ Provide some perspective from the field post-GHS deadline
  - ✓ Provide examples or typical scenarios encountered
  - ✓ Q&A



## **Houghton at a Glance**

- Houghton was founded in 1865 and is headquartered in Valley Forge, PA
- Formulates, manufactures and markets Metalworking Fluid ("MWF") products and services
- Serving established customers across diverse and growing industry segments in a \$7.6B+ global
   Metalworking Fluids industry
- 11 manufacturing facilities in 10 countries across 5 continents
- Over 2000 employees in 33 countries with sales in 79 countries

#### **Houghton's Global Facilities**

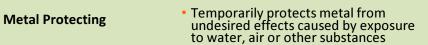




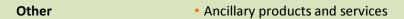
# Houghton markets a diverse, global portfolio of

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mission-critical products				
Product Category	Fluid Functionality			
Metal Removal	<ul> <li>Lubricates and cools the contact point between the metal surface and work tool (e.g. cutting, grinding or drilling operation)</li> </ul>			
Metal Forming	<ul> <li>Lubricates and cools in processes involving changing the shape of metal (e.g. drawing, stamping, rolling or bending)</li> </ul>			
Specialty Hydraulics	Used for hydraulic machine operation			
Heat Treatment	<ul> <li>Alters metal properties via controlled heating and cooling processes (e.g. hardness, stiffness or elasticity)</li> </ul>			
Metal Finishing	Chemicals for anodizing architectural aluminum surfaces and conversion			





**Metal Cleaning**  Removes soils and other contaminants from equipment and metal surfaces











**Broad Product Offering Addresses the Full Range of Customer Applications** 



## Long-standing Relationships with Diverse, Blue-chip Customers



- Worldwide customer base across a broad range of end markets
- Long-standing relationships, often spanning decades
- Strategically positioned globally to grow with customers in emerging markets



# **Approach – Global Implementation**

- Implemented a global SDS authoring system
- Standardized/harmonized global components
- Harmonized raw material specifications
- Harmonized formulations that can be used in multiple GHS templates
- Multiple GHS classifications per formulation based on country/regional templates
- Language translations



## Comments from the field...

- Isn't there a simple conversion tool?
- Can't you just add the pictogram to match the current ANSI description?
- If it has pictograms on it, it must be correct or GHS compliant.
- If it has a US GHS SDS, it can be shipped anywhere in the world.
- We do not understand how this change can occur; going from a slight hazard to serious hazard when referencing HMIS/NFPA (not understanding the new NFPA/HMIS ratings)
- It has a corrosive pictogram, it must be shipped as a DOT corrosive.



## Comments from the field...

- How can the product be non-hazardous?
- I won't accept it if it does not have a pictogram.
- Product B is practically the "same" as Product A, how can it have a different classification?



# **General GHS Challenges**

- Lack of understanding of finer points for GHS classification
  - Pictogram precedence rules (e.g., including both the exclamation point and health hazard pictogram for a skin and respiratory sensitization when the health hazard pictogram should take precedence)
  - Strict adherence to pH values for corrosivity without consideration for acid/alkaline reserves, buffering capacity, etc.
- Changes in GHS classification impacts alternative labelling schemes (HMIS, NFPA, etc.)
  - ✓ Lack of understanding that HMIS and NFPA guidance has changed along with GHS
- Employees not confident in explaining new hazards and risk mitigation factors to customers
  - Leads to 'fear factor' (Health hazard exploding chest pictogram)
  - Effects via lactation Resulting in HMIS Health rating 4

## **General GHS Challenges**

- Jumping to the conclusion that the formula changed due to a change in hazard classification (lack of understanding the paradigm shift in classification methodology)
- Changes in GHS classifications impact other regulatory schemes
  - ✓ Skin corrosivity classification DOT corrosive
  - ✓ Corrosive to metals classification DOT corrosive
  - ✓ Environmental classification potential marine pollutants
- Anticipation that US GHS SDS will be identical to Mexico or Canada GHS.



# **Supplier SDS Challenges**

- GHS not really global or harmonized
- Many suppliers not prepared for GHS (less than 30% to 40% GHS compliant by the June 2015 deadline)
- Various levels of completeness and competency (some required significant validation)
  - ✓ Conflicting data from different suppliers for same components.
  - ✓ Surprises additional/new disclosures from suppliers
  - ✓ Frequently missing or incomplete regulatory data, especially at state or country level
  - ✓ Comprehensive transport regulatory information is often not provided or incomplete
    - Inconsistent CAS # by supplier

# **Supplier SDS Challenges**

- Had to identify alternative methods for classifying raw materials (e.g., ECHA, LOLI, publically available data)
- Still receiving new GHS classification data from suppliers potentially resulting in significant re-authoring (one RM in multiple formulations)



## Real World Examples – One global GHS SDS

#### Notice to reader

The company operates a world-wide system for hazard communication. Some hazards shown in Section 2 may apply to non-EU countries and may not result in classification and labeling in the EU. Please see Sections 3 and 15 for country specific classification information, and Section 11 for additional details.

US & Canada only classification

EU only classification

Europe: The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Australia: HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

Primary hazards and critical effects: WARNING!
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
MAY CAUSE ALL ERGIC SKIN REACTION
Physical/chemical hazards: COMBUSTIBLE - United States and Canada
VAPOR MAY CAUSE FLASH FIRE.

Environmental hazards: Toxic|to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Hazardous Material Information System (U.S.A.)



#### **GHS Classification**

Hazard classification : FLAMMABLE LIQUIDS - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B SKIN SENSITIZATION - Category 1
AQUATIC TOXICITY (CHRONIC) - Category 2

Symbol





Signal word : Warning

Hazard statements

Combustible liquid. Causes skin irritation. Causes eye irritation.

May cause an allergic skin reaction.

Toxic to aquatic life with long lasting effects.



## Real World Examples – Inaccurate or Incomplete Data

Suppliers providing insufficient information (Hazardous product classification with no components disclosed. Components with aspiration toxicity or flammability properties, but no product viscosity or flash provided.

#### Section 3:

Ingredient Name	CAS Number	% vol
Severely Hydrotreated Heavy Naphthenic Petroleum Oil	64742-52-5	0,001

## Section 9: (No viscosity or Flash)

Physical State: Liquid Appearance: Clear & bright

Color: Amber

Odor: Mild Petroleum Odor
Odor Threshold: Not determined
Vapor Pressure: Not applicable
Vapor Density (Air=1): > 5
Specific Gravity (H2O=1): 0.92

Water Solubility: Nil

Boiling Point: 500-1100°F (260-595°C)

Melting Point: 15°F (-9°C) % Volatile: Nil (LVP-VOC) Evaporation Rate: Not available

pH: Not applicable



## Real World Examples – Contradictory Statements – Example 1

Supplier has provided a new classification (Section 2), but Section 11 still contains ANSI wording, 'May cause irritation, May cause allergy/asthma etc...)

#### Section 2:

HAZARD CLASSIFICATION	Not Assessed. Not Assessed.
Hazard Statements	Not Assessed.
Precautionary Statements	Not Assessed.
Other Hazards	Not Assessed.

#### Section 11:

EYE CONTACT	May cause eye irritation. Avoid eye contact. May cause irritation of nose, throat or respiratory tract. Avoid inhalation. Not expected to be a health hazard. Do not ingest. Pre-existing respiratory disease may be aggrevated by this material.
SIGNS OF OVER EXPOSURE	Prolonged, excessive exposure to dust may cause chronic pulmonary disease. No additional remark.  May cause eye irritation. May cause irritation to respiratory tract. Ingestion and inhalation may cause CNS effects such as dizziness, drowsiness and unconsciousness.



## Real World Examples – Contradictory Statements – Example 2

#### Section 2:

#### Label Elements

**GHS-US Labeling** 

No labeling required

## Section 11:

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.



## Real World Examples – Contradictory Statements – Example 3

#### Section 2:

This product is NOT classified as hazardous according to 29 CFR 1910, amended to conform to the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (OSHA / GHS); SOR/88-66, the Canadian Controlled Products Regulations (CPR); and/or NOM-002-SCT-2003 (Mexico).

#### Section 11:

Inhalation	May cause allergic respiratory reaction. Health injuries are not known or expected under
Ingestion	normal use.  May produce an allergic reaction. Large oral doses may result in gastrointestinal
8.	disturbance.



## Real World Examples – Different CAS #s in Different Regions

Global suppliers using different CAS #s in different regions – to ensure maximum inventory compliance for each location

#### Section 3:

Chemical Name	EC-No	REACH Registration Number	CAS-No
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	918-167-1	01-2119472146-39	SWS

## Section 15:

International Invento	ories
Related CAS	90622-58-5 90622-57-4° 64742-48-9°
	68551-17-7



## Real World Examples – HMIS and NFPA

## Suppliers not using new NFPA and HMIS classification schemes

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2.1 HAZARD STATEMENTS: (CAT = Hazard Category)
(H200s) PHYSICAL: Flammable liquids(CAT:2)
H226 COMBUSTIBLE LIQUID (North America);
FLAMMABLE LIQUID AND VAPOR (Elsewhere)
(H300s) HEALTH: Acute Toxicity, Oral(CAT:5)
H303 MAY BE HARMFUL IF SWALLOWED.
(H300s) HEALTH: Skin Corrosion/Irritation(CAT:1)
H314 CAUSES SEVERE SKIN BURNS AND EYE DAMAGE (When Heated).
(H300s) HEALTH: Serious Eye Damage/Eye Irritation(CAT:2)
H318 CAUSES SEVERE EYE BURNS (When Heated).
(H300s) HEALTH: Acute Toxicity, Inhalation(CAT:4)
H332 HARMFUL IF INHALED.
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16.1 HAZARD RATINGS:
HEALTH (NFPA): 1, HEALTH (HMIS): 1, FLAMMABILITY: 2, PHYSICAL HAZARD: 0
```



# **Label Challenges**

- Difficulties in fitting all required data on one label resulting in the need for multiple labels or relabeling as the product moves through the supply chain
- Misinterpretation of specific GHS elements
  - Precautionary statements can be added or deleted ad libitum; they are not prescriptive (especially with label text)
  - Equating hazard classifications with incorrect pictograms
- Customers/distributors/tollers concerned about insufficient information on the labels.
  - Change from large amounts of text guidance on the label, to restricted regulatory content only.
- Belief that labels for nonhazardous/non-classified products should still contain precautionary statements and if they don't, they are noncompliant or "blank"
- Belief that there is no need to relabel a product when it put on the market in other countries.

# Questions?

