

GHS Implementation

- From the Law to Labeling
- Top questions and answers



Thomas Smith - Product Manager

HazCom / GHS

29CFR 1910.1200



GHS Implementation

- Where We Are, Checklist
- Challenges for Employers
 - Hazard Classifications
 - Training: Right-to-Know vs. Understand
 - Shipped vs Workplace Labels
 - GHS Scenarios
- Simplify In-Plant Labeling Tasks

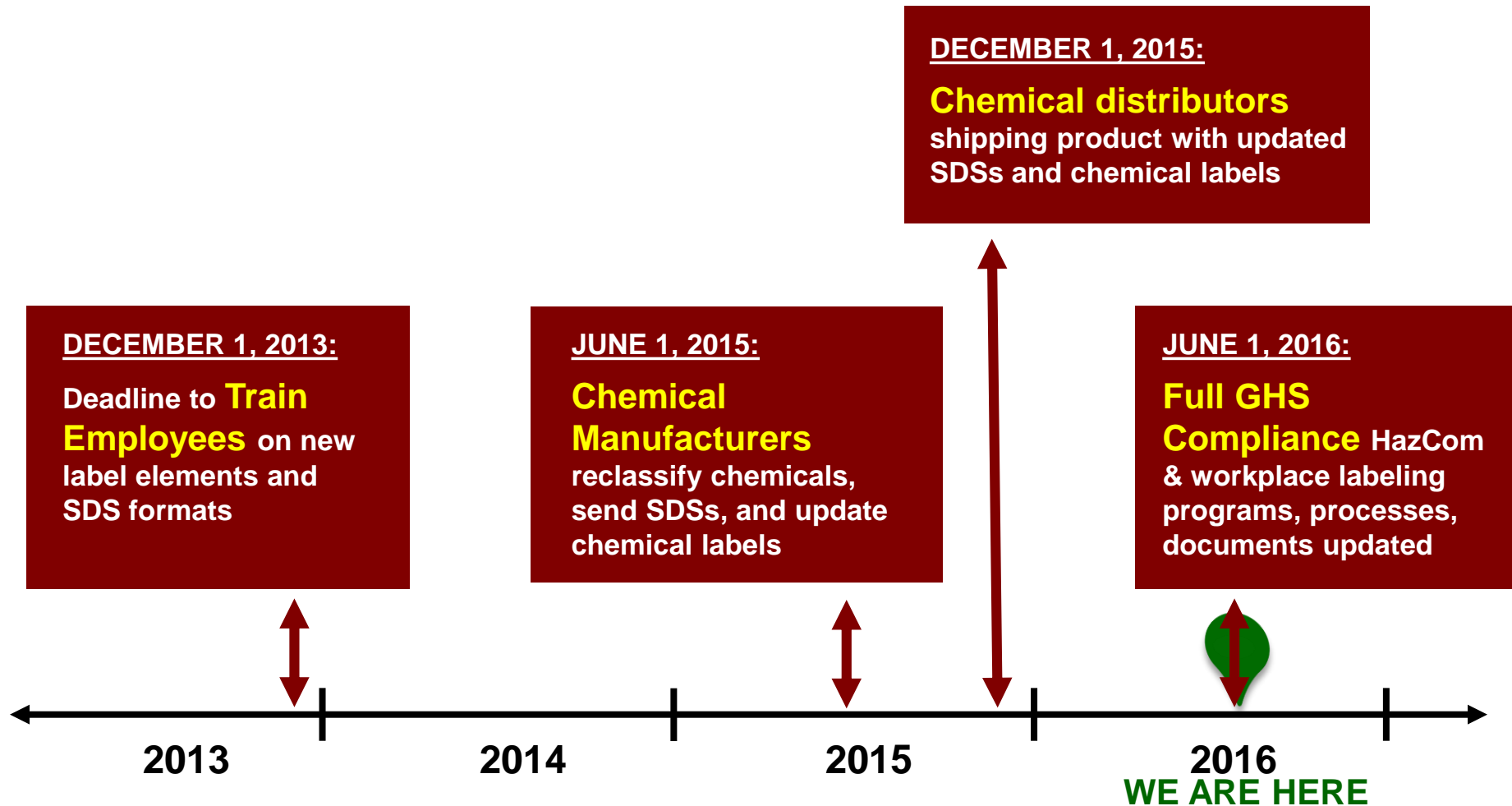
GHS – Where We Are

- 72 Countries
- USA (HAZCOM)-
June 2016
- Canada (WHMIS)–
May 2018
- Mexico (NOM) –
Oct. 2018



US Implementation Timeline

Federal OSHA 1910.1200



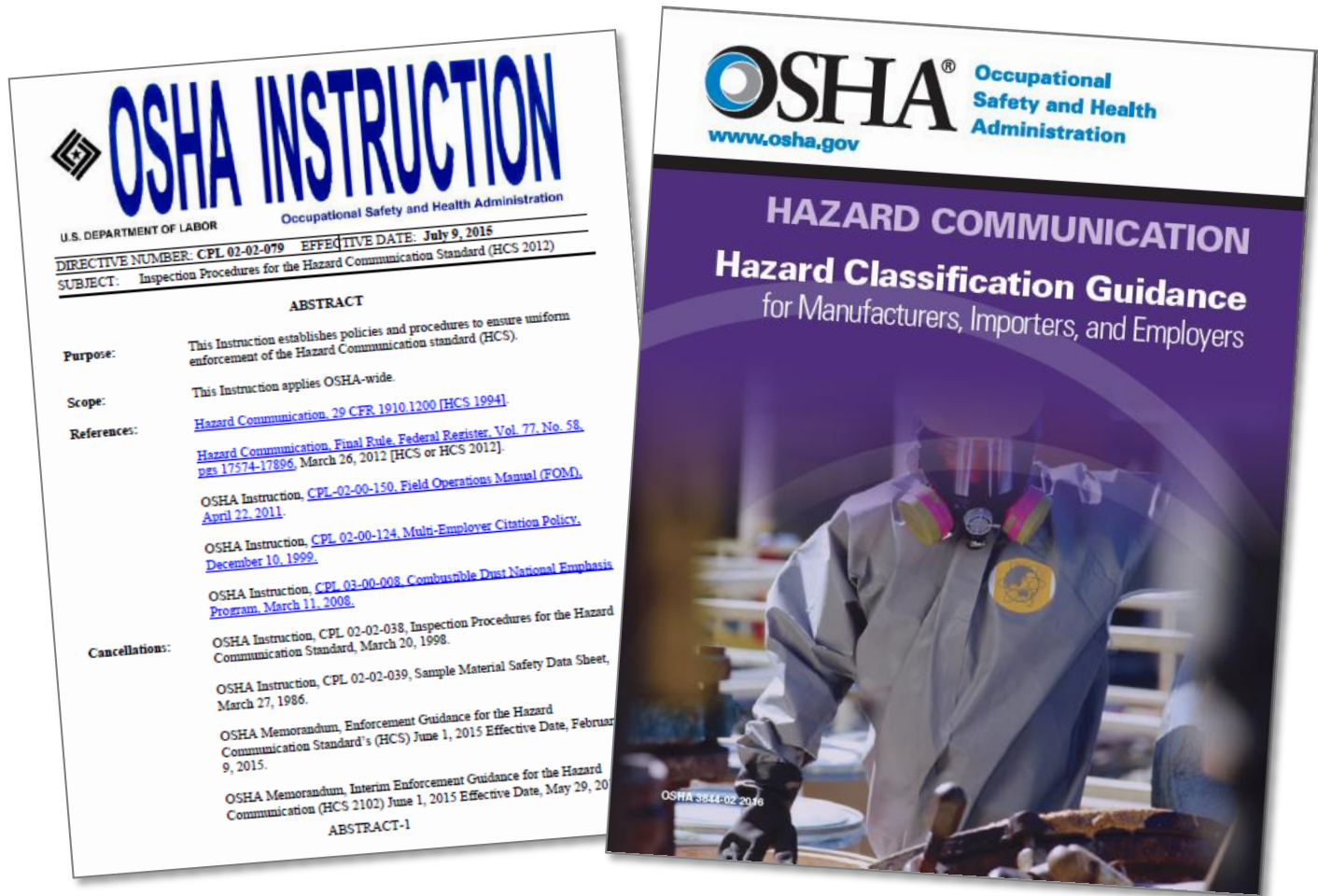
What's Not Covered by Hazcom/GHS

- Pesticides (EPA)
- Food, additives, drugs, cosmetics, medical or veterinary devices (FDA)
- Beverages & distilled spirits (Bureau of Alcohol, Tobacco, Firearms)
- Consumer products (CPSC)
- Agricultural
- Wood (unless processing creates hazard - combustible dust)
- Radiation
- Biological Hazards

What is Covered?

- Bricks & Ingots
- Wood (where hazard is not just combustion)
- Combustible Dusts
- Welding Rods/Wire
- Acid Batteries
- Drugs (not in final form – e.g. crushed)
- Consumer Products (used in qty's and manner inconsistent with how a consumer would use them)

Useful Documents



Source: <https://www.osha.gov/dsg/hazcom/>

GHS Checklist – These Should be **Complete**

- ✓ Employees trained.
- ✓ Implementation plan created.
- ✓ Chemical inventory updated.
- ✓ SDS Management.
 - ✓ MSDSs separated from SDSs.
 - ✓ Access, storage, backup, on-line, hard copies etc.
- ✓ Labeling needs identified.

GHS Checklist – These Should be **In-Process**

- Update current HazCom program.
- Reinforce training (30 mo's ago).
- Document supplier deviations (inability to provide SDS's).
- Label printer (if needed) or pre-printed labels from suppliers.
- Audit & stress test hazcom plan.

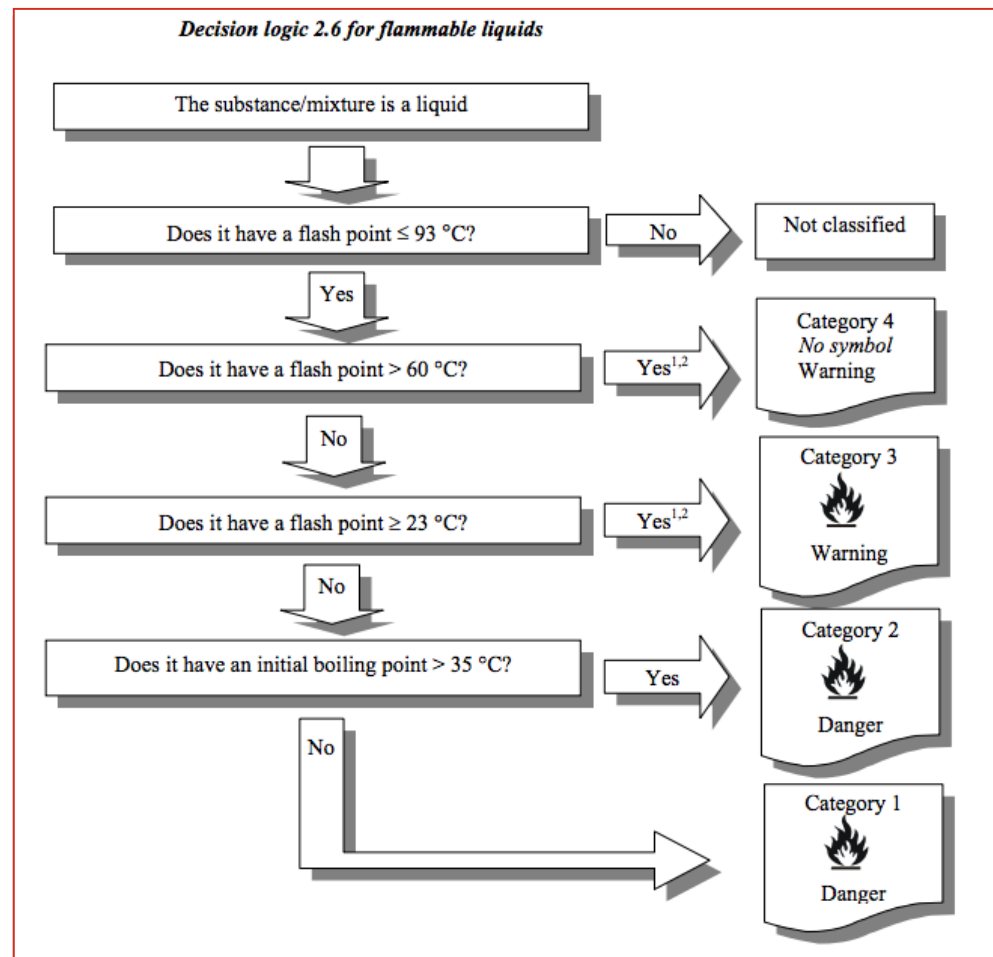
Biggest Challenges for Employers

Hazard Communication

- ✓ Labels
- ✓ Safety Data Sheets (SDS)
- ✓ Training

New Classifications


- ✓ Health & Physical Hazards
- ✓ GHS vs NFPA
- ✓ Defining Mixtures



Label Changes...


NFPA RTK - US

Methanol
67-56-1



WARNING
HEALTH HAZARDS: Flammable
ORGAN HAZARDS: Eye, Kidney
If ingested, do not induce vomiting.
Consult Material Safety Data Sheet for further information on hazards.

Lead
7439-92-1



DANGER
HEALTH HAZARDS: Poison
ORGAN HAZARDS: Nervous System, Kidney, Blood, Reproductive System
Consult Material Safety Data Sheet for further information on hazards.

WHMIS Std - Canada

Acetone 1128-89

Be sure to handle this substance safely!!
Target health hazards include corrosive hazard and vapor hazard. Always wear proper PPE and consult Material Safety Data Sheet




REFER TO MATERIAL SAFETY DATA SHEET FOR FURTHER INFORMATION
POUR PLUS D'INFORMATION, CONSULTEZ LA FICHE SIGNALÉTIQUE

HSID Std - Europe



Globally-Standardized GHS

Acetone
ACETONE



ENGLISH: H200: Unstable explosives. - H221: Flammable gas. - H260: In contact with water releases flammable gases which may ignite spontaneously.
P101: If medical advice is needed, have product container or label at hand. - P220: Keep away from combustible materials. - P223: Keep away from any possible contact with water, because of violent reaction and possible flash fire.

FRANÇAIS: H200: Explosif instable. - H221: Gaz inflammable. - H260: Dégage au contact de l'eau des gaz inflammables qui peuvent s'enflammer spontanément.
P101: En cas de consultation d'un médecin, garder à disposition le récipient ou l'étiquette. - P220: Tenir à l'écart des matières combustibles. - P223: Éviter tout contact avec l'eau, à cause du risque de réaction violente et d'inflammation spontanée.

DANGER	2222222-22-2	333-333-33-3
DANGER	111-111-1	Reach Authorization #
Brady Corporation 6555 West Good Hope Road Milwaukee, WI 53223		Insert Comment here: ...
414-444-4444		

250L

Shipped Label

9 Label Pictograms

* Note there's a precedence to the pictograms

Toxicity...










If  than ~~~~

Skin corrosion...

If  than ~~~~

Respiratory...

If  than ~~~~

Health Hazard  <ul style="list-style-type: none"> • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity 	Flame  <ul style="list-style-type: none"> • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides 	Exclamation Mark  <ul style="list-style-type: none"> • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
Gas Cylinder  <ul style="list-style-type: none"> • Gases Under Pressure 	Corrosion  <ul style="list-style-type: none"> • Skin Corrosion/ Burns • Eye Damage • Corrosive to Metals 	Exploding Bomb  <ul style="list-style-type: none"> • Explosives • Self-Reactives • Organic Peroxides
Flame Over Circle  <ul style="list-style-type: none"> • Oxidizers 	Environment (Non-Mandatory)  <ul style="list-style-type: none"> • Aquatic Toxicity 	Skull and Crossbones  <ul style="list-style-type: none"> • Acute Toxicity (fatal or toxic)

SDS Changes

MSDS

- 8 (OSHA) or 16 (ANSI) section format.
- **Material** data safety sheets.
 1. Product identifier
 2. Hazardous ingredients
 3. Physical/chemical data
 4. Fire/explosion data
 5. Reactivity
 6. Health, toxicological data
 7. Precautions for handling
 8. Control measures



SDS

- 16 Mandatory sections.
- Uniform format.
- **Safety** data sheets.
 1. Product identification
 2. Hazard identification
 3. Composition/ingredients
 4. First aid measures
 5. Firefighting measures
 6. Accidental release measures
 7. Handling & storage
 8. Exposure controls / PPE
 9. Physical, chemical properties
 10. Stability, reactivity
 11. Toxicological info
 12. Ecological info
 13. Disposal considerations
 14. Transport information
 15. Regulatory information
 16. Other information

Creating Labels from SDS's

Black Liquor

1. Identification

TRADE NAME(S): **1.** Black Liquor

SYNONYMS and/or GRADES: Spent Kraft Cooking Liquor, Spent Kraft Pulping Liquor

PRODUCT USES: The liquor is burned in the recovery boiler to reclaim certain pulping chemicals. Tall oil may also be extracted from the liquor.

CHEMICAL NAME/CLASS: Chemical mixture. CAS# 66071-92-9

MANUFACTURER'S NAME: Weyerhaeuser

ADDRESS: 33663 Weyerhaeuser Way S., Federal Way WA 98001-9620

EMERGENCY PHONE: (844) 523-4081 (3E Company)




BUSINESS PHONE: (253) 924-3865


INTERNET ACCESS: See section 16

REVISED DATE: May 26, 2015 **6.**

2. Hazard(s) Identification

Signal Word(s): **DANGER 2.**

Product Classification	3. Hazard Statement(s)	4. Pictogram
HEALTH		
Skin Corrosion/Irritation - Category 1	Causes Severe Skin Burns and Eye Damage	
Eye Damage/Irritation - Category 1	Causes Serious Eye Damage	
Acute Toxicity Oral - category 3*	Toxic If Swallowed	
Specific Target Organ Toxicity (STOT) Single Exposure Respiratory - Category 1B	May Cause Damage to the Respiratory System	

Skin Sensitization - Category - 1B	May Cause an Allergic Skin Reaction	
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HMIS Rating (Scale 0-4): Health = 3 Fire = 1 Physical Hazard = 0
 NFPA Rating (Scale 0-4): Health = 3 Fire = 1 Reactivity = 1

***NOTE:** Acute toxicity determinations have not been made for black liquor specifically as a product (CAS # 66071-92-9) due to its high pH (12-13). Caustic liquids cause coagulative necrosis that result in substantial tissue damage. Due to the caustic nature of the solution it is expected that there would be toxic effects (e.g. edema) to the respiratory system if mists or vapors are inhaled and toxic effects for skin and eye exposures, especially at elevated temperatures. The toxicity ranking above is associated with representative components of the black liquor (sodium sulfide and sodium hydroxide, etc.) which are presented as a surrogate for relative toxicity of the complex mixture.

CAUTION: Caustic process liquors may, under certain conditions of reaction, produce total reduced sulfur gases (TRS) including hydrogen sulfide (H₂S); methyl mercaptan (MM), dimethyl sulfide (DMS) and dimethyl disulfide (DMDS). These four gases may be formed by reaction at varying concentrations depending on environmental conditions (acidification, heating, etc.) as well as the location within the process where gases are generated (digestion vs. evaporation, etc.). These gases are hazardous (H₂S being the most toxic for acute short term exposures). The concentration of the gases will also vary depending on whether the liquor is strong or weak, but are typically below 1%. Potential exposures must be evaluated in process areas where emissions from reaction are likely and during line break and confined space entry in vessels and piping which have contained liquors. Although the sulfide content of black liquors is high, the sulfide gas concentrations are very low at the normal pH levels of these liquors. Unless the liquor is acidified to pH < 10, free H₂S concentrations would be low. The DMS and DMDS are not pH dependent and may be present in the airborne phase; even at the high pH of liquor.

Precautionary Statement(s):

Prevention Statements:

P261: Avoid breathing mist or vapors.
 P271: Use only outdoors or in a well-ventilated area.
 P272: Contaminated clothing should not be taken out of the workplace.
 P273: Avoid release to the environment.
 P280: Wear gloves, clothing, eye, face and respiratory protection.
 P264: Wash hands after handling.

Response Statements:

P305 and P351: If in eyes rinse cautiously with water for several minutes.
 P338: Remove contact lenses if present and easy to do, continue rinsing.
 P337 and P313: If eye irritation persists get medical advice/attention.
 P301 and P330: If swallowed, rinse mouth.
 P301, P304, P310 and P340: If swallowed or inhaled immediately call a poison center or doctor, remove victim to fresh air and keep at rest in a position that is comfortable for breathing.
 P302, P352 and P353: Rinse skin with water/shower, continue rinsing. Wash with plenty of soap and water.
 P361 and P354: Immediately take off all contaminated clothing. Wash contaminated clothing before reuse.
 P333 and P313: If skin irritation or rash occurs, get medical advice/attention.

Disposal:

P501: Dispose of in accordance with federal, state and local regulations.

Ingredients of Unknown Acute Toxicity (>1%): NAP

Reinforce Training



Hazard Communication

The standard that gave workers the right to know, now gives them the right to understand.

Right-to-Know



Knowledge *"The What's"*

Pictos, SDSs, Hazards, PPE required

Right-to-Understand



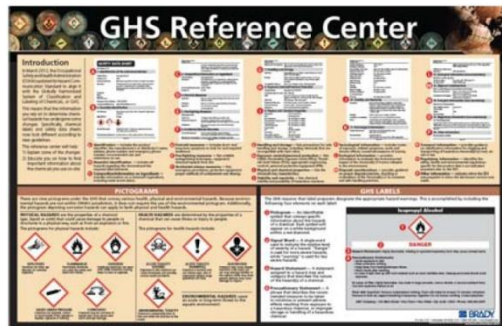
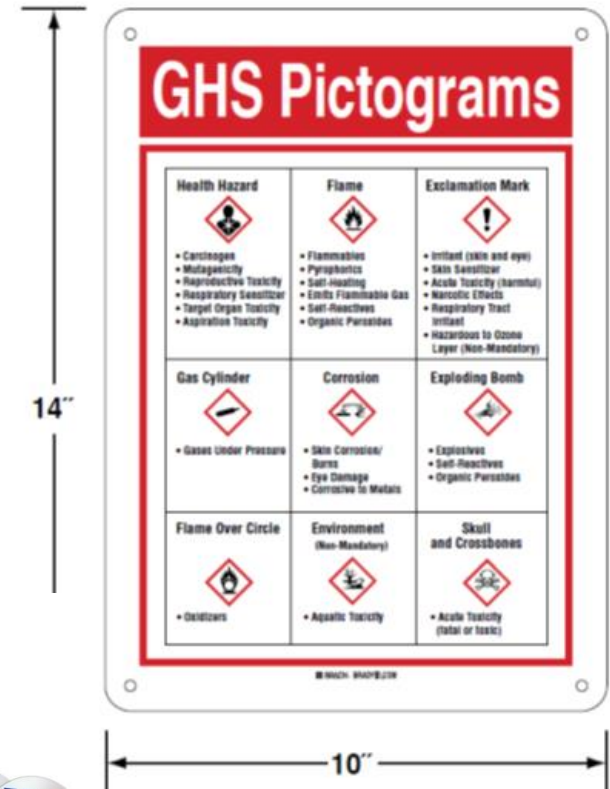
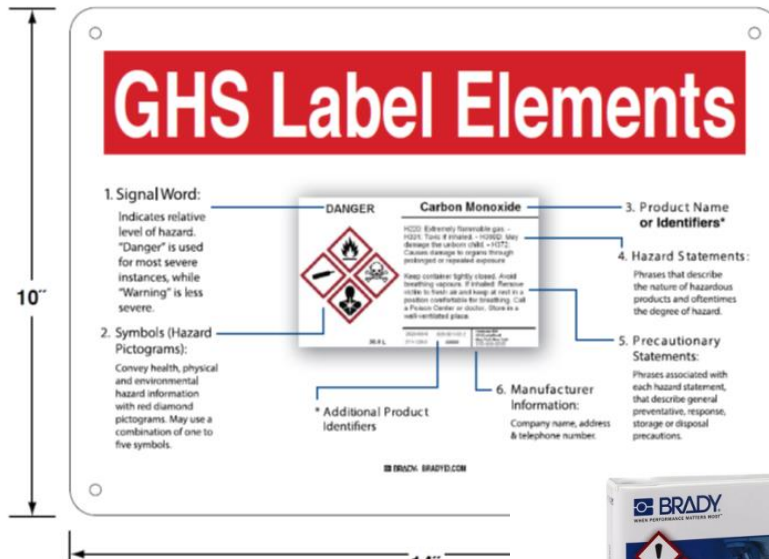
Understanding

"The How's, Who's, Why's"

*How do I handle... Who do I contact...
How will this affect the...*

Simply handing an employee the SDS sheet doesn't comply.

Reinforce w/Visuals



GHS Labels Shipped and Workplace Labels

1 **ISOBUTYL ALCOHOL**

LD50 Mammals: 50.01 g/kg
LD50 Mammals: 145.12 g/kg

DANGER

Highly flammable liquid and vapor. Causes severe eye damage. May cause drowsiness and dizziness.

Keep away from heat/sparks/open flames/sunlight. Do not smoke. Avoid breathing fumes/vapors/aerosols. Wear protective gloves/protective clothing/eye protection/face protection. See MSDS for further information.

Net Weight: 123.45 lbs.
Gross Weight: 145.60 lbs.
Net Date: 10/15/2013

IMPRINT ENTERPRISES (US is Connected)

2 **DEGREASEALINE**

DANGER

HAZARD STATEMENTS:
Highly flammable liquid and vapor.
May be harmful if swallowed and enters airways.

PRECAUTIONARY STATEMENTS:
Keep container tightly closed. Do not breathe vapors. Suspected of causing cancer by inhalation. Wear respiratory protection, gloves and eye protection. Store in a well-ventilated place. Keep Cool. Keep away from heat/sparks/open flames. No smoking. Dispose of contents/container in accordance with local regulations. H021, A01. If exposed seek immediate medical attention.

EMERGENCY: 1-800-234-5678
ABC Fire Chemical, 1234 Deer Track St., Any Town
Tel: (555) 456-7890

3 **ACETONITRILE**

DANGER

Highly flammable liquid and vapor. Causes skin irritation. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs.

PREVENTION
Keep away from heat, sparks, and open flames. — No smoking. Keep container tightly closed.
Do not breathe vapors. Wash hands and any other contaminated skin thoroughly after handling. Wear protective gloves and eye protection. Use only outdoors or in a well-ventilated area.
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

RESPONSE
If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with plenty of soap and water/shower. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. If exposed or concerned: Get medical services. Get medical attention if you feel unwell.
In case of fire: Use foam, water spray or fog. Dry chemical, carbon dioxide or sand may be used for small fires only. Do NOT use water in a jet.

4 **ACETONITRILE**

DANGER

Highly flammable liquid and vapor. Causes skin irritation. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs.

PREVENTION
Keep away from heat, sparks, and open flames. — No smoking. Keep container tightly closed.
Do not breathe vapors. Wash hands and any other contaminated skin thoroughly after handling. Wear protective gloves and eye protection. Use only outdoors or in a well-ventilated area.
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

RESPONSE
If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with plenty of soap and water/shower. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. If exposed or concerned: Get medical services. Get medical attention if you feel unwell.
In case of fire: Use foam, water spray or fog. Dry chemical, carbon dioxide or sand may be used for small fires only. Do NOT use water in a jet.

5 **Gasoline**

DANGER

Highly flammable liquid and vapor. Causes skin irritation. May be fatal if swallowed and enters airways. May cause drowsiness or dizziness. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs.

PREVENTION
Keep away from heat, sparks, and open flames. — No smoking. Keep container tightly closed.
Do not breathe vapors. Wash hands and any other contaminated skin thoroughly after handling. Wear protective gloves and eye protection. Use only outdoors or in a well-ventilated area.
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

RESPONSE
If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with plenty of soap and water/shower. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. If exposed or concerned: Get medical services. Get medical attention if you feel unwell.
In case of fire: Use foam, water spray or fog. Dry chemical, carbon dioxide or sand may be used for small fires only. Do NOT use water in a jet.

四乙基米氏酮 CAS# 00-03-7; EC# 202-025-4 纯度: >96%

警告

引起严重的眼睛刺激, 对水生生物有害并且有长期持续影响。

【预防措施】
戴防护手套/穿防护服/戴防护眼罩/戴防护面具。
操作后彻底清洗手。
禁止倒入环境。

【事故响应】
如接触眼睛: 用水和清水冲洗数分钟。如戴隐形眼镜并可方便地取出, 取出隐形眼镜。继续冲洗。
如果眼睛刺激持续: 就医。
收集泄漏物。

【安全储存】
无

【废弃处置】
本品、容器的处置应符合相关法规。

请查阅化学品安全技术说明书
电话: XXX
邮编: XXX
化学事故应急咨询电话:

Two Types of Labels

Primary (Shipped) Container Label

- “Shipped Container” = “Any container leaving the workplace”
- 6 required elements
- Pictos with red diamonds
- Chemical, signal word, hazard & precautionary statements, supplier info



Workplace (Secondary Container) Label

- Match primary label (*best practice*)
-or-
- Chemical, words, pictures, symbols or in combination with other info conveys all the physical and health hazards of the chemical



Additional Shipped Label Requirements

- English
- Legible (readable with corrective lenses)
- Pictograms – Red diamonds, black pictos, white background

Supplementary information permitted:

- Additional languages
- PPE symbols/info
- HMIS / NFPA designations



Classification Differences



Also...

- “**Chronic Health Hazards**” are not addressed by NFPA704.
- Includes carcinogenicity (cancer causing), teratogenicity (causing congenital defects), and mutagenicity (induce genetic mutations) as well as blood dyscrasias (such as anemia), chronic bronchitis and liver atrophy.
- Must be **communicated by words, pictures, symbols** in addition to NFPA or HMIS system.

Stationary Process Containers & GHS

1910.1200(f)(7)

- Signs, placards, process sheets, batch tickets, operating procedures, or other written materials in lieu of affixing labels to individual stationary process containers.
- Identifies the containers and conveys the information for “workplace labels” to be on a label.
- Written materials must be readily accessible to the employees.



Tank Sign Examples



Combustible Dust & GHS

- Forms combustible dust when processed.
- No pictogram.
- Signal word: WARNING
- Hazard statement: “May form combustible dust concentrations in air”
- Precautionary statement: None req’d.
- Responsible parties may add their own precautionary statements to Section 2 so long as they are relevant and do not contradict or cast doubt on the validity of the other information in the SDS.



Labs – 2 types

Laboratories – Research & Academic

- Workplace where relatively small amounts of chemicals are used on a **non-production basis**)
- Follow 1910.1450 Laboratory Standard

Laboratories – Production / QA

- Produce commercial quantities of material
- Quality control of a production process
- Formulators & mixers e.g. coatings, sealants, cleaners etc.
- Follow Hazcom / GHS 1910.1200 (workplace and shipped labels).



GHS

Questions & Scenarios

- SDS Sheets
- Labels

Safety Data Sheets



Are hard copies of SDS sheets required?

From OSHA Brief 3696 Steps to Effective Hazard Communication...

- **Electronic copies are permitted**, however...
- **Must have back-up system** in event of power failure and/or equipment failure of primary system
- Employees **must be trained** on how to use system and obtain hard copies if needed
- In **medical emergency**, **hard copy SDS's** must be immediately available to emergency personnel



Safety Data Sheets



If the SDS sheets include the hazard pictograms, are they required to have the red diamond border?

Pictograms/symbols

- Appendix D of the HCS, section 2, states, “Hazard symbols may be provided as graphical reproductions in black and white or the name of the symbol, e.g., flame, skull and crossbones.”
- The hazard symbol is the symbol inside the frame of the pictogram. Therefore, just the symbol can be used or the name of the symbol can be used.
- If the pictogram is used, it may be printed in black and white.

Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier
Product Name • Used Oil
Synonyms • Recycled Oil; Spent Oil

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified use(s) • Oil recovered from process machinery

1.3 Details of the supplier of the safety data sheet
Manufacturer • KapStone Paper and Packaging Corporation
1101 Skokie Blvd
Suite 300 Northbrook, IL 60062-4124
United States
www.kapstonepaper.com
Telephone (General) • 847-239-8800

1.4 Emergency telephone number
Manufacturer • 1-800-424-9300 - CHEMTREC (Within USA & Canada)

Section 2: Hazards Identification

United States (US)
According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture
OSHA HCS 2012 • Aspiration 1
Skin Irritation 2
Eye Irritation 2

2.2 Label elements
OSHA HCS 2012

DANGER

Hazard statements • May be fatal if swallowed and enters airways
Causes skin irritation
Causes serious eye irritation

Precautionary statements

Safety Data Sheets



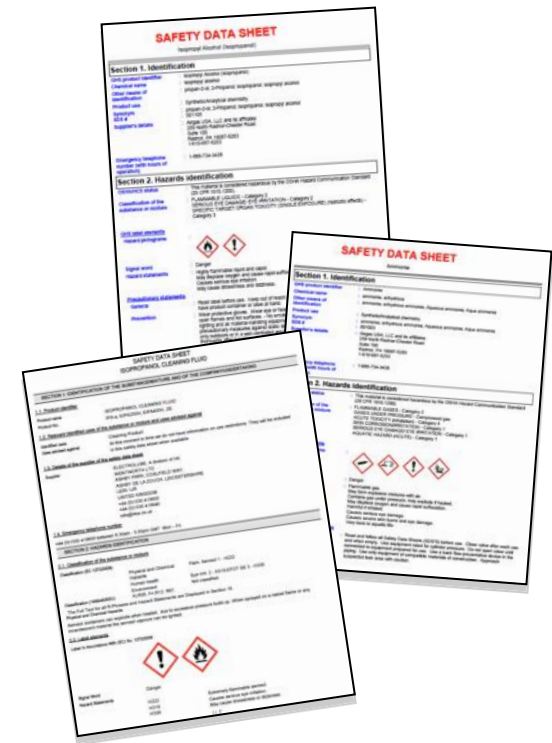
When is an employer required to replace their MSDS with revised SDSs?



Would OSHA cite employers who only have an MSDS available?

From July, 2014 OSHA Letter of Interpretation...

- Manufacturers (chemical), importers, and distributors must be providing SDSs by June 1, 2015
- All employers must have, maintain, and make available to employees the most recent MSDS or SDS received.
- OSHA would not issue citations for maintenance of MSDSs when SDSs have not been received. As OSHA explained in a January 2013 letter employers may, but are not required to, contact manufacturers or distributors of products they have previously ordered to request new SDSs. The SDSs must be provided



Safety Data Sheets



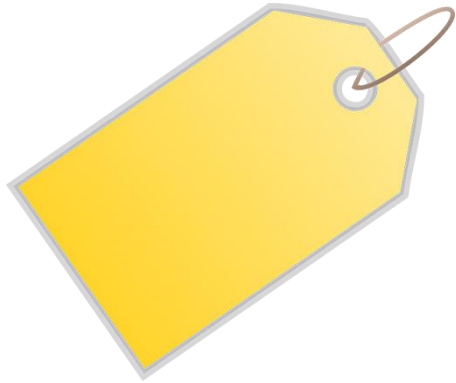
Where should SDS information be stored when on a remote (e.g. construction) site?

SDS for Remote Worksites

- May be stored at primary workplace.
- Employer must ensure no delay in worker receiving SDS information.
- May be accomplished by having designated employee always available at primary workplace to provide info (via smartphone, tablet, etc.)
- Must be defined in written hazcom plan.



Labels - Do I need to re-label my chemicals?



“The **employer is not responsible** for updating labels on **shipped** containers, even if the shipped containers are labeled under HazCom 1994.

The employer **must re-label** items if the labels are **removed or defaced**.

However, if the employer is aware of **newly-identified hazards** that are not disclosed on the label, the employer must ensure that the workers are aware of the hazards as discussed under workplace labels.”

- OSHA Brief Hazard Communication Standard: Labels & Pictograms

Labels - What about Small Containers?

Small Primary “Shipped” Containers (syringes, tubes, ampoules):

- Fold back labels, pull-out labels, tags

OSHA’s Practical Accommodation (at a Minimum):

- **Product Identifier**
- **Pictograms**
- **Manufacturer’s Name/Phone**
- **Signal Word**
- **Statement indicating full label info is on outside of package**
- The outer package
 - Outside package label meets 1910.1200(f)(1)
 - Informs users that small containers must be stored in the outer container bearing full GHS information
 - Cannot conflict with any other standards



Labels



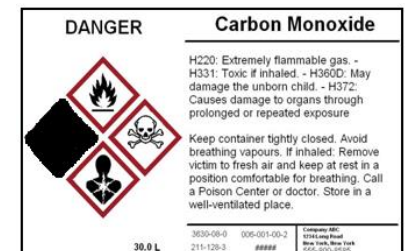
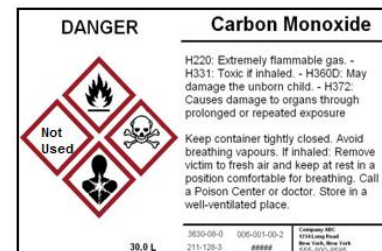
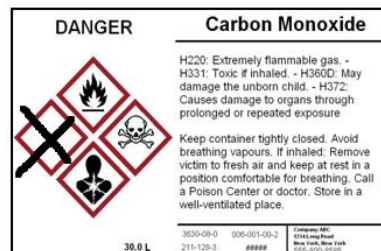
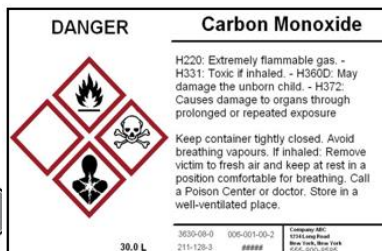
We purchase preprinted labels with 4 blank diamonds. Can we black-out the ones we don't use?



Are pictogram labels with adhesive backing compliant under Appendix C, 29CFR1910-1200?

From Dec, 2012 OSHA Letter to Intercontinental Chemical Corporation...

- A blank square red frame set on point is not a pictogram and is not permissible under HCS2012
- Black-out option is compliant
- Red frame must be fully covered



Labels



Can we continue to use NFPA diamond or HMIS system for our “Workplace Labels”

- YES IF it conveys ALL the physical and health hazards of the chemical.
- Must use words, pictures, symbols and/or text to convey the physical and health hazards.
- NO IF the hazard includes a chronic health condition – carcinogen (cancer causing), congenital birth or gene defects, or blood dyscrasias – anemia, chronic bronchitis, liver disease etc.
 - You must include those hazards on the label as well.
 - Found in section 2 of SDS



CHLORINE	
DANGER POISON!	PRIMARY IRRITANT OF THE RESPIRATORY TRACT. SEVERE EXPOSURE CAN BE FATAL. LIQUID CAN CAUSE BURNS ON CONTACT.
TARGET ORGANS	LUNGS, TEETH, THROAT, EYES, SKIN.
DO NOT STORE OR MIX WITH:	ACETYLENE, COMBUSTIBLES AND HIGH HEAT SOURCES.
APPEARANCE/ODOR	YELLOWISH LIQUID / BLEACH ODOR.
REQUIRED PROTECTIVE EQUIPMENT	
CHEMICAL GOGGLES	NEOPRENE GLOVES
VENTILATION	APRON
S.C.B.A. / GAS RESPIRATOR	EYE WASH / SHOWER
FIRST AID	
EYES:	FLUSH IMMEDIATELY WITH WATER FOR AT LEAST 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION.
SKIN:	REMOVE CONTAMINATED CLOTHING. FLUSH AFFECTED AREA WITH WATER FOR AT LEAST 15 MINUTES.
INGESTION:	DO NOT INDUCE VOMITING. IF CONSCIOUS, GIVE WATER OR MILK TO DILUTE. GET IMMEDIATE MEDICAL ATTENTION.
INHALATION:	REMOVE TO FRESH AIR. GIVE OXYGEN OR ARTIFICIAL RESPIRATION AS NEEDED.
REPORT ALL INJURIES TO YOUR SUPERVISOR	
CONSULT MSDS FOR FURTHER INFORMATION	
CONFINED SPACE ENTRY PERMIT REQUIRED	
FIRE CONDITIONS	
HEALTH HAZARD	FIRE HAZARD
4 - DEADLY 3 - EXTREME DANGER 2 - DANGEROUS 1 - SLIGHTLY DANGEROUS 0 - NORMAL MATERIAL	FLASH POINT 4 - BELOW 100°F 3 - BELOW 100°F 2 - BELOW 100°F 1 - ABOVE 100°F 0 - WILL NOT BURN
SPECIFIC HAZARD	INSTABILITY
OXIDIZER _____ OXY ACID _____ ACID ALKALI _____ ALK CORROSIVE _____ COR USE NO WATER _____ W RADIATION HAZARD _____ Y	4 - MAY DETONATE 3 - SHOCK AND HEAT MAY DETONATE 2 - VIOLENT 1 - UNSTABLE IF HEATED 0 - STABLE
DOT CLASS: POISON GAS MEDICAL EMERGENCY 384-6111	XYZ Company DOT ID NO. UN 1017 FIRE AND SPILL 384-6714

What about Transportation DOT Labels?

When the **primary container is** also the **shipping container**:

- OSHA picto's do not replace diamond shaped labels for DOT
- DOT harmonized with GHS in 2008
- OK to **have both**
- Still needs to meet DOT requirements of 49 CFR 172 (E)



OSHA Statement:

If a label has a DOT transport pictogram, Appendix C.2.3.3 states that the corresponding HCS pictogram shall not appear. However, DOT does not view the HCS pictogram as a conflict and for some international trade both pictograms may need to be present on the label. Therefore, OSHA intends to revise C.2.3.3. In the meantime, the agency will allow both DOT and HCS pictograms for the same hazard on a label.

Labels



A hazardous bulk chemical is shipped by rail car to a customer? The rail car sits on the tracks at the customer's facility (weeks). The customer draws the bulk chemical from the rail car in their processing operation. What signage is required?

From p.49 OSHA Hazcom/GHS Directive 7/9/2015...

- Requires a DOT label for transport.
- Considered a “stationary process container”.
- The requirement of HCS (f)(7) apply - signs, placards, process sheets, batch tickets, operating procedures, or other such written materials in lieu of affixing labels.



- Conveys info required by (f)(6).
- Readily accessible to employees.

Labels - Research Lab



*A lab on a campus of 6 buildings mixes chemicals and walks them over to another campus building for storage and use. What type of GHS label is required – a **shipped** label or a **workplace** label?*



What GHS label do I need to put on the byproduct waste (hazardous) from the lab?

From Dept. of Labor...

- All containers moved from one facility to another (unless its immediately used by the person performing the transfer) must be labeled in accordance with (f)(1) – full 6 label elements
- Hazardous Waste labeling is not covered by HCS2012. It's covered by the EPA under the RCRA Act (Resource Conservation and Recovery Act)



Simplify Labeling: What Are My Labeling Options?

Pre-Printed Labels

- Low & high volume
- Not time sensitive



vs.

Print-Your-Own Labels

- Medium volume
- Time critical



4"x 6" Vinyl Label Example

Print-Your-Own

- Medium volume
- Medium print speed
- Flexibility to print other labels, text
- Immediate (no lead time)
- Templates & stored data

Pre-Printed

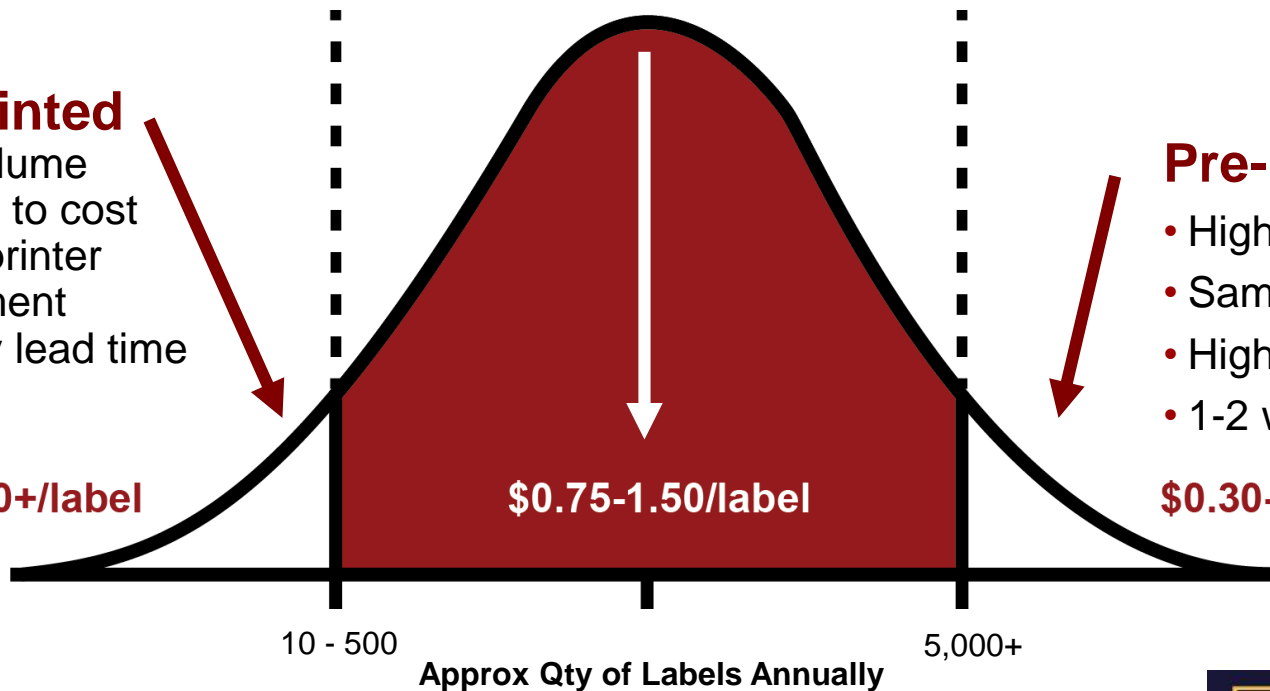
- Low volume
- Difficult to cost justify printer investment
- 2-4 day lead time

\$1.50-3.00+/label

Pre-Printed

- High volume
- Same text
- High print speed
- 1-2 week lead time

\$0.30-0.75/label



Print Your Own Solutions:

- Review the software
- Minimize typing
- Ability to store frequently printed labels
- Multi-color vs. one-color print



GHS Software

BACK TO Home

Manage Data

Create Labels

Import Data

Open

Save

Save As

Print

Help

About


GHS Labels

Product Information

GHS Required Information

Product Name:
RYDLYME

Signal Word:
WARNING

Pictograms:


Hazard Statements:

+ Add Statements

H303 X H316 X H320 X

H303:May be harmful if swallowed. H316:Causes mild skin irritation . H320:Causes eye irritation.

Precautionary Statements:

+ Add Statements

P280 X P281 X P302 X P305 X P313 X P321

Data Translations

Select Hazard Phrases

Find by code or phrase

Physical Hazards

☐ H200: Unstable explosives.

☐ H201: Explosive; mass explosion hazard.

☐ H202: Explosive, severe projection hazard.

☐ H203: Explosive; fire, blast or projection hazard.

☐ H204: Fire or projection hazard.

☐ H205: May mass explode in fire.

☐ H220: Extremely flammable gas.

☐ H221: Flammable gas.

☒ H222: Extremely flammable aerosol.

☐ H223: Flammable aerosol.

☐ H224: Extremely flammable liquid and vapour.

☐ H225: Highly flammable liquid and vapour.

☐ H226: Flammable liquid and vapour.

☐ H227: Combustible liquid.

☐ H228: Flammable solid.

☐ H240: Heating may cause an explosion.

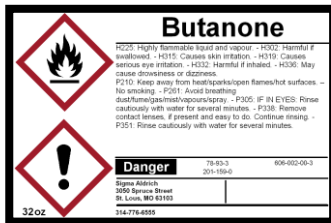
☐ H241: Heating may cause a fire or explosion.

PPSA
PULP & PAPER SAFETY ASSOCIATION
BRINGING THE INDUSTRY HOME SAFE

**SAFETY & HEALTH
CONFERENCE**
NEXT GENERATION SAFETY: MEETING THE CHALLENGE OF CHANGE

Multi-Color Print

- Higher cost
- Greater flexibility
- No separate stock of label templates



	Chemical name	Butanone	
	Common name	Methyl ethyl ketone MEK	
	Manufacturer	Signa Altech	Date 02/06/2013
	Consult MSDS for further hazard information and instructions.		

One-Color Print

- Lower cost
- Stock preprinted label rolls (for shipped labels)
- Less flexibility



Or Use Existing B/W Printer

- No GHS software
- Create your own label / template
- Add preprinted pictos
- Lots of typing



GHS Label Questions...



Can I use a handwritten label in a pinch if I need to identify it immediately?

- Handwritten labels are permissible.
- Needs to be legible, durable
- In English
- Preprinted pictograms



Labeling – Best Practice

- Base the solution on your anticipated label volume & overall facility needs.
- Have your “Workplace labels” contain same info as “Shipped Labels”.
- Assign person responsible for GHS label implementation.
- Don’t wait for final deadline.



5 Key Questions to Ask

- How many different chemicals do we use in our facility(s)?
- Do we use secondary containers for our chemicals?
- Have I estimated the annual quantity of labels we'll need?
 - GHS
 - Non-GHS safety labels
- What's my current labeling solution? Is it effective?
Can it print in color?
- Do I need to print labels right away or can I wait a few days?

GHS Checklist –

These are your To-Do's

- Reinforce training from 18 mo's ago.
- Document any supplier deviations (inability to provide SDS's).
- Assign personnel responsible for labeling.
- Review label printing systems (if needed) or pre-printed labels from suppliers.
- Audit & stress test hazcom plan and compliance.
- Update written hazard communication plan.

GHS Implementation

Thank You!



Thomas Smith - Product Manager