

# The Value of the MSDS

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# What The !@#\$%^&\* Is A MSDS?

How to Read and Interpret a Material  
Safety Data Sheet!

# What The !@#\$%^&\* Is A MSDS?

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# OSHA Hazard Communication Standard Changes\*

- What: Changes to (some) chemical product labels and ~~Material~~ Safety Data Sheets
- Why:
  - Be consistent with the U.N.'s Global Harmonization System (GHS) re: classification and labeling of chemicals in the workplace
  - Improve worker comprehension

# Overview: 2012 HCS changes

- Final Rule published March 26, 2012
- Effective May 25, 2012
- Employee training by December 1, 2013
- Changes in place by June 1, 2015
  - Workplace labels (for products other than pesticides)
  - SDSs




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**E** Hazard Communication

The table below summarizes the phase-in dates required under the revised Hazard Communication Standard (HCS):

Effective Completion Date	Requirement(s)	Who
December 1, 2013	Train employees on the new label elements and safety data sheet (SDS) format.	Employers
June 1, 2015 December 1, 2015	Compliance with all modified provisions of this final rule, except: The Distributor shall not ship containers labeled by the chemical manufacturer or importer unless it is a GHS label	Chemical manufacturers, importers, distributors and employers
June 1, 2016	Update alternative workplace labeling and hazard communication program as necessary, and provide additional employee training for newly identified physical or health hazards.	Employers
Transition Period to the effective completion dates noted above	May comply with either 29 CFR 1910.1200 (the final standard), or the current standard, or both	Chemical manufacturers, importers, distributors, and employers


# HCS Product Label Requirements

- 1.) Product identifier
- 2.) Signal word
- 3.) Hazard statement
- 4.) Pictogram(s)
- 5.) Precautionary statement(s)
- 6.) Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party



# HCS Label Requirements (cont.)

**SAMPLE LABEL**

<p>CODE _____ Product Name _____</p>	}	<p><b>Product Identifier</b></p>	<p><b>Hazard Pictograms</b></p> 
<p>Company Name _____ Street Address _____ City _____ State _____ Postal Code _____ Country _____ Emergency Phone Number _____</p>	}	<p><b>Supplier Identification</b></p>	<p><b>Signal Word</b> <b>Danger</b></p>
<p>Keep container tightly closed. Store in a cool, well-ventilated place that is locked. Keep away from heat/sparks/open flame. No smoking. Only use non-sparking tools. Use explosion-proof electrical equipment. Take precautionary measures against static discharge. Ground and bond container and receiving equipment. Do not breathe vapors. Wear protective gloves. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Dispose of in accordance with local, regional, national, international regulations as specified.</p> <p><b>In Case of Fire:</b> use dry chemical (BC) or Carbon Dioxide (CO<sub>2</sub>) fire extinguisher to extinguish.</p> <p><b>First Aid</b> If exposed call Poison Center. If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.</p>			<p><b>Precautionary Statements</b></p>
			<p><b>Hazard Statements</b></p> <p>Highly flammable liquid and vapor. May cause liver and kidney damage.</p>
			<p><b>Supplemental Information</b></p> <p><b>Directions for Use</b></p> <p>_____ _____ _____</p> <p>Fill weight: _____ Lot Number: _____ Gross weight: _____ Fill Date: _____ Expiration Date: _____</p>

OSHA 3492-02 2012

## HCS Label Requirements (cont.)

- For now, *pesticide* product labels in the U.S. will *not* change due to GHS.
- However, there might be questions about pictograms:
  - What they mean
  - Why they don't appear on pesticide products

# SDS Requirements

- Name change (SDS, not MSDS)
- 16 sections
- Hazard Identification section
  - Hazards “classified” (vs. “identified”); SDS hazard information (based on OSHA criteria)
  - Pictograms
  - Signal Words
- Regulatory Information section
  - Added information for pesticide products to address discrepancies

# Relevant SDS changes










- Hazards Section:
  - *Hazard Classification*
  - *Hazard Statements and Descriptions; Precautionary Statements*
  - **Signal Word**
  - **Pictograms**
- Regulatory Information Section
  - Pesticide product label-mandated Signal Word and Precautionary Statement information

# SDS Pictograms

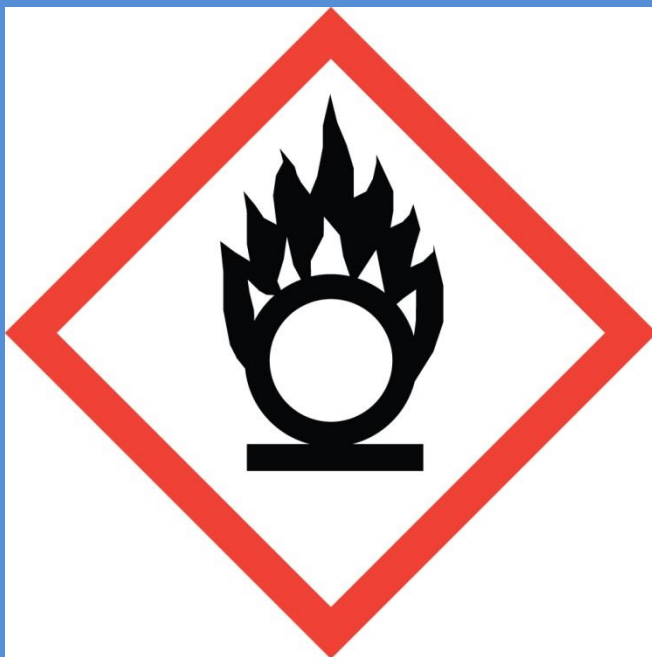
## Hazard Communication Standard Pictogram

As of June 1, 2015, the Hazard Communication Standard (HCS) will require pictograms on labels to alert users of the chemical hazards to which they may be exposed. Each pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the label is determined by the chemical hazard classification.

### HCS Pictograms and Hazards

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

# Flame Over Circle



- Oxidizers

# Flame



- Flammables
- Pyrophorics
- Self-Heating
- Emits Flammable Gas
- Self-Reactives
- Organic Peroxides

# Exploding Bomb



- Explosives
- Self-Reactives
- Organic Peroxides



# Skull and Crossbones



- Acute Toxicity (fatal or toxic)

# Corrosion



- Skin Corrosion/Burns
- Eye Damage
- Corrosive to Metals

# Gas Cylinder



- Gases Under Pressure

# Health Hazard



- Carcinogen
- Mutagenicity
- Reproductive Toxicity
- Respiratory Sensitizer
- Target Organ Toxicity
- Aspiration Toxicity

# Environment (Non-Mandatory)



- Aquatic Toxicity

# Exclamation Mark



- Irritant (skin and eye)
- Skin Sensitizer
- Acute Toxicity
- Narcotic Effects
- Respiratory Tract Irritant
- Hazardous to Ozone Layer (Non-Mandatory)

# SDS Signal Words

- Indicate relative hazard level
- Two (vs. three) options:
  - Danger (more severe)
  - Warning (less severe)
- Only one SW per SDS...if one hazard warrants “Danger” and another “Warning,” only “Danger” will appear.

# Issues: SDSs vs. Pesticide Labels

- Differences in hazard information (ex. **Signal Word**) on a pesticide label and the SDS for the same product may cause confusion:
  - CAUTION signal word is not an option for SDSs.
  - FIFRA and OSHA use different criteria to describe and classify hazards.
- Pictograms on SDSs for pesticide products will be new to applicators / end users



# 16-Section Safety Data Sheet

1. Identification of the substance or mixture and of the supplier
2. Hazards identification
3. Composition/information on ingredients Substance/Mixture
4. First aid measures
5. Firefighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure controls/personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological
12. *Ecological information\**
13. *Disposal considerations\**
14. *Transport information\**
15. *Regulatory information\**
16. Other information including information on preparation and revision of the SDS



# The Worker Protection Standard



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# Worker Protection Standard (WPS)



40 CFR Part 170

# §170.1 Scope and purpose

- This part contains a standard designed to reduce the risks of illness or injury resulting from workers' and handlers' occupational exposures to pesticides used in the production of agricultural plants on farms or in nurseries, greenhouses, and forests and also from the accidental exposure of workers and other persons to such pesticides. It requires workplace practices designed to reduce or eliminate exposure to pesticides and establishes procedures for responding to exposure-related emergencies.

# Who has to comply with WPS?

## Agricultural Establishments

# Who has to comply with WPS?

- Farms
- Forests
- Nurseries
- Greenhouses



# WPS: Pesticide Safety Training

Proposed	Current
Train workers and handlers every year.	Train workers and handlers every 5 years.
Expand training content to include information on reducing take-home exposure.	No training provided on reducing take-home exposure.
Reduce “grace period” to 2 days	Grace period is 5 days
Require recordkeeping of training for 2 years.	Record keeping of training is not required.



# WPS: Mandatory Posting of No Entry Signs

Proposed	Current
Require posting of treated areas when REI is greater than 48 hours.	Either oral or posted notification is acceptable for REIs of any length, unless the pesticide labeling requires both.

# WPS: Minimum Age

Proposed	Current
Required pesticide handlers and early-entry workers to be 16 years old.	No minimum age.
Members of owner's immediate family are exempt from this (and most other) requirements of the WPS.	No minimum age requirement.

# WPS: No Entry Buffer Areas Adjacent to Areas being treated on Farms & Forests

Proposed	Current
Prohibit entry into 25-100 foot buffer areas around the field during pesticide application on farms, forests, nurseries, and greenhouses	Applies only in nurseries and greenhouses.

# WPS: PPE—Respirators and Closed Systems

Proposed	Current
Adopt the OSHA standard for respirators: fit test, medical evaluation, and training.	Employer must provide the respirator listed on the pesticide labeling and ensure it fits. No recordkeeping.

# WPS: Minimum Age

Proposed	Current
<p>Require employer to maintain and make available to workers, handlers, or their authorized representatives application-specific information, labeling and SDS. Retain this information for 2 years.</p> <p>Remove burdensome requirement to post application-specific information at central display.</p>	<p>No requirement to make safety information available to authorized representative.</p> <p>Record keeping is not required, except, application-specific information must be posted at a central display until 30 days after the REI expires.</p>
<p>Require recordkeeping for 3 years of the notifications that are provided to early-entry workers.</p>	<p>Recordkeeping is not required.</p>

# Where are we going?



# Questions?

