The Globally Harmonized System of Classification and Labeling Chemicals (GHS)
Hazard Communication (29 CFR 1910.1200)

- Written program
- Chemical inventory
- Labeling
- MSDS
- Training
HazCom Revisions

- **Major changes:**
  - Classification of chemical hazards
  - Labeling
  - Safety Data Sheets (SDS)

- **First compliance date:** 12/1/13
  - Employee training
“The Purple Book”
(Globally Harmonized System of Classification and Labelling of Chemicals (GHS) UN 2011)
GHS

**Regulatory building blocks:**

- Defining hazards
- Classifying hazards based on available data
- Communicating hazards/protective measures
  - Labels
  - Safety Data Sheets (SDS)
Hazard Classification

- Specific criteria: Physical & Health hazards
- Detailed instructions for hazard evaluation
- Hazard classes/categories for most effects
- Appendixes A & B
Criteria for Health Hazards (Appendix A)

1. Acute toxicity
2. Skin corrosion/irritation
3. Serious eye damage/eye irritation
4. Respiratory or skin sensitization
5. Germ cell mutagenicity
6. Carcinogenicity
7. Reproductive toxicity
8. Specific target organ toxicity single exposure
9. Specific target organ toxicity repeated or prolonged exposure
10. Aspiration hazard
## Criteria for Physical Hazards (Appendix B)

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<table>
<thead>
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<tbody>
<tr>
<td>1.</td>
<td>Explosives</td>
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<td>2.</td>
<td>Flammable gases</td>
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<td>3.</td>
<td>Flammable aerosols</td>
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<td>4.</td>
<td>Oxidizing gases</td>
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<td>5.</td>
<td>Gases under pressure</td>
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<td>6.</td>
<td>Flammable liquids</td>
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<td>7.</td>
<td>Flammable solids</td>
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<td>8.</td>
<td>Self-reactive chemicals</td>
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<td>9.</td>
<td>Pyrophoric liquids</td>
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<td>10.</td>
<td>Pyrophoric solids</td>
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<td>11.</td>
<td>Self-heating chemicals</td>
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<td>12.</td>
<td>Chemicals which, in contact with water, emit flammable gases</td>
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<td>13.</td>
<td>Oxidizing liquids</td>
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<tr>
<td>14.</td>
<td>Oxidizing solids</td>
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<td>15.</td>
<td>Organic peroxides</td>
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<tr>
<td>16.</td>
<td>Corrosive to metals</td>
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Labeling (Appendix C)

- Pictograms: Symbol & graphic elements
- Signal Words: Severity levels of hazards
- Hazard Statement: Hazard description
- Precautionary Statement: Protective measures
HCS Labeling Requirements: Pictogram

Symbol, plus,
• Red border
• White background
• Based on hazard class
Required Pictograms (8)

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

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

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

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

Skull and Crossbones
- Acute Toxicity (fatal or toxic)

Exploding Bomb
- Explosives
- Self-Reactives
- Organic Peroxides

Flame Over Circle
- Oxidizers

Gas Cylinder
- Gases Under Pressure
Non-Mandatory Pictogram
HCS Labeling Requirements: Signal Words

Danger

Warning
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.

In Case of Fire: use dry chemical (BC) or Carbon Dioxide (CO₂) fire extinguisher to extinguish.

First Aid
If exposed call Poison Center. If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.
Hazard Pictograms

Signal Word
Danger

Highly flammable liquid and vapor. May cause liver and kidney damage.

Precautionary Statements

Supplemental Information

Directions for Use

First Aid
If exposed call Poison Center.
If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.

Fill weight: Lot Number:
Gross weight: Fill Date:
Expiration Date:
Hazard Pictograms

Signal Word

Danger

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.

In Case of Fire: use dry chemical (BC) or Carbon Dioxide (CO₂) fire extinguisher to extinguish.

First Aid
If exposed call Poison Center. If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.

Supplemental Information
Directions for Use

Fill weight:______ Lot Number:______
Gross weight:______ Fill Date:______
Expiration Date:______
Hazard Pictograms

Signal Word: Danger

Hazard Statements:
- Highly flammable liquid and vapor.
- May cause liver and kidney damage.

Precautionary Statements:
- 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.

In Case of Fire:
- Use dry chemical (BC) or Carbon Dioxide (CO₂) fire extinguisher to extinguish.

First Aid:
- If exposed call Poison Center.
- If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.
Product J (abc chemical)

Danger
Fatal if swallowed
Causes skin irritation

Precautions:
- Wear protective gloves.
- Take off contaminated clothing and wash before reuse.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Store locked up.
- Dispose of contents/containers in accordance with local regulations.

IF ON SKIN: Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water.
IF SWALLOWED: Immediately call a Poison Center or doctor/physician. Do not induce vomiting.

ABC Chemical Co., 123 Anywhere St., (123) 456-7890
See the SDS for more information
Safety Data Sheet (Appendix D)

Specific format is required

- Sixteen sections (ANSI Z400.1-1993)

Contents same as current HCS
SDS Format: 16 Sections

1. Identification
2. Hazard(s) identification
3. Composition/information on ingredient
4. First-Aid measures
5. Fire-fighting 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 information
12. Ecological information*
13. Disposal considerations*
14. Transport information*
15. Regulatory information*
16. Other information, including date of preparation or last revision

* Sections 12-15 are not required by OSHA.
Key Compliance Dates

December 1, 2013
- Train employees on new label elements & SDS format

June 1, 2016
- Update labels and HCS program elements
- Provide additional training for new hazards
Need help?

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