Effectively Using GHS to Assist with California Fire Code Compliance and Other State Rules

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Agenda

- Reviewing of Key California Fire Code HazMat Inventory Requirements
- Assessing San Diego Fire Department FBP500 Elements
- Comparing Fire Code Definitions with Those from Globally Harmonized System
- Other State Rules in Which GHS Can Be Helpful
- Upcoming Changes to Federal OSHA Hazard Communication

Objectives

- Recognizing the goal of California Fire Code (CFC) inventory requirements.
  - Determining the correct fire code hazard class.
  - Calculating Maximum Allowable Quantities per Control Zone.
- Utilizing information on labels and Safety Data Sheets (SDS) to classify chemicals according to CFC definitions.
- Taking advantage of GHS definitions to address compliance with other state regulations
  - California Proposition 65
  - Laboratory Standard (8 CCR 5191).
- Preparing for potential changes in Hazard Communication Standard regulations.

California Fire Code – Maximum Allowable Quantity

- Maximum allowable quantities (MAQs) are the maximum amounts of hazardous materials allowed to be stored or used within a control area in a building.
- These limits are established by the California Fire Code (CFC) and are broken down by hazard class (TABLE 5003.1.1).
- The MAQs are intended to ensure the quantities of hazardous materials in a building are within the safe operating levels for the fire and life safety elements to which the building is designed and operated.

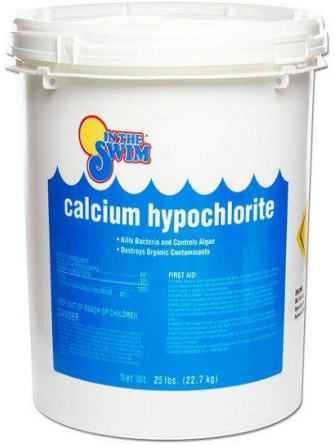
Determining MAQs

- Determining MAQs is complex and relies on several structural and operational factors.
- The most common factors that determine MAQs for most facilities
  - The floor on which an area is located.
  - Whether a fire sprinkler system is installed throughout the building.
  - Use of approved storage cabinets.

Example: Oxidizer, Solid, Class 2

- Refer to **TABLE 5003.1.1(1),** MAQ per Control Area.
  - **Control areas:** Areas within buildings that are separated from the rest of the building by fire-rated construction. This creates compartments that will resist the spread of fire to the rest of the structure.

- **EXAMPLE: Calcium Hypohlorite – 25%**
  - **Oxidizer, Solid, Class 2**.
  - Base Level: **250 pounds** in storage.
  - If a fire sprinkler system is installed throughout the building: **500 pounds** in storage.
  - If that laboratory is on 3rd floor: **250 pounds** in storage.
  - LINK: 5003.1.1 Maximum allowable quantity per control area.



MAQs are Essentially Fire Code Risk Assessments

Chemical risk assessment considers at three key elements:

- **Chemical**
- **Quantity**
- **Location**

The Fire Department inventory reporting requirements ensure companies keep their amount of chemical in each hazard class below the limits is essential for ensuring a building is safe for its occupants and first responders.

SDFD Hazardous Materials Inventory Reporting FPB-500

- The FPB-500 is a tabular report of the types and total (aggregate) amounts of hazardous materials (chemicals) in each Control Area or each H Occupancy.
- This form is how SDFD ascertains MAQ compliance.

EXAMPLE:

1. CHEMICAL NAME	2. CAS NUMBER	3. CONCEN-TRATION (%)	4. CLASSIFICATION CFC - APPENDIX E (I-B, COR, ETC)	5. QUANTITIES a. IN USE-OPEN SYSTEM	b. IN USE-CLOSED SYSTEM	c. STORAGE	6. LOCATION
Acetic Acid	64-19-7	100	CL-II, COR			35 gal	Hazmat cabinet in Shop
Isopropyl Alcohol	67-63-0	100	FL-IB	10 gal		110 gal	In use in Lab 2, Storage outside

California Fire Code – Definitions

H Occupancy: High-hazard Group H occupancy is a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard in quantities in excess of those allowed in control areas.

- **H-1 to H-5**, assigned depending on the nature of the physical hazard (e.g., detonation, deflagration, flammability), if it is a health hazard, and if it is used in R&D or semiconductor operations.

QUANTITIES:

- **IN USE OPEN:** Process or use with vapors escaping to the atmosphere during normal operations.
- **IN USE CLOSED:** No vapors escaping to the atmosphere during normal operations.
- **STORAGE:** Stored only in closed containers (not IN USE OPEN or IN USE CLOSED).

FPB-500 As Excel Spreadsheet

- Note than an alternate format (i.e., Excel spreadsheet) can be submitted in lieu of completing the Table provided by the SDFD.
- These elements must be included in spreadsheet submitted:
  - **CHEMICAL NAME**
  - **C.A.S. NUMBER**
  - **CONCENTRATION**
  - **HAZARD CLASSIFICATION**
  - **QUANTITIES:**
    - IN USE OPEN
    - IN USE CLOSED
    - STORAGE
  - **LOCATION**

Example of FPB-500 Excel Spreadsheet Format

PRO TIP 1: It is helpful if the specific control zone is specified here if there is more than one.

PRO TIP 2: The concentration MUST BE ADDED. If pure, 100%

	A	B	C	D	E	F	G
1	Control Area*	Specific Location (Room) (optional)	Manufacturer (optional)	Product Code (optional)	Material Name, including gases and wastes (If waste, state WASTE: identity)*	CAS Number (number, mixture or none)*	Concentration*
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							

Concentrations are Important

- Chemicals tend to become substantially less hazardous when diluted.
- The **concentration will be critical** in assessing how hazardous the material is, especially with:
  - ACIDS and BASES
  - OXIDIZERS
  - WATER REACTIVES

- Example:

Nitric Acid:

>86% = Class 3 Oxidizer
40-85% = Class 2 Oxidizer
Less than 40% = Class 1 Oxidizer

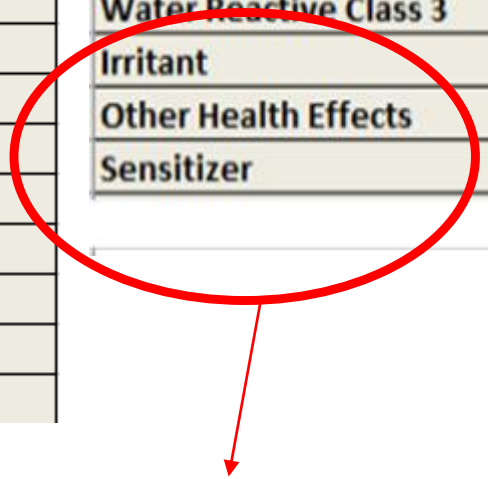
(per CAFC2022P3-Pt07-AppxE-SecE102.1.7)

THESE ARE THE POSSIBLE CFC CLASSIFICATIONS

Classification - Not Applicable
Combustible Liquid II
Combustible Liquid IIIA
Combustible Liquid IIIB
Corrosive
Cryogenics
Flammable Gas
Flammable Liquid IA
Flammable Liquid IB
Flammable Liquid IC
Flammable Solid

Highly Toxic
Inert Gas
Organic Peroxide Class I
Organic Peroxide Class II
Organic Peroxide Class III
Organic Peroxide Class IV
Organic Peroxide Class V
Oxidizer 1
Oxidizer 2
Oxidizer 3
Oxidizer 4
Oxidizing Gas
Pyrophoric
Toxic
Toxic Gas

Unstable Reactive Class 1
Unstable Reactive Class 2
Unstable Reactive Class 3
Unstable Reactive Class 4
Water Reactive Class 1
Water Reactive Class 2
Water Reactive Class 3
Irritant
Other Health Effects
Sensitizer



PRO TIP: These classes are retired, but useful in complying with other California regulations. Therefore, they remain a useful category in spreadsheet development.

GHS has defined Hazard Classes!

PHYSICAL HAZARDS

Explosives
Flammable Gases
Aerosols
Oxidizing Gases
Gases Under Pressure
Flammable Liquids
Flammable Solids
Self-Reactive Substances
Pyrophoric Liquids
Pyrophoric Solids
Self-Heating Substances
Substances which, in contact w/ water emit flammable gases
Oxidizing Liquids
Oxidizing Solids
Organic Peroxides
Corrosive to Metals

HEALTH HAZARDS

Acute Toxicity (Oral/Dermal/Inhalation)
Skin Corrosion/Irritation
Serious Eye Damage/Eye Irritation
Respiratory or Skin Sensitization
Germ Cell Mutagenicity
Carcinogenicity
Reproductive Toxicology
Target Organ Systemic Toxicity – Single Exposure
Target Organ Systemic Toxicity – Repeated Exposure
Aspiration Toxicity

Utilizing GHS for CFC Code Compliance

THE GHS DEFINITIONS PROVIDE INFORMATION THAT CAN HELP PLACE THE CHEMICAL OR MIXTURE INTO CFC HAZARD CLASS.

- GHS Hazard Classes are subdivided into Hazard Categories.
- GHS Hazard Category for a chemical provides useful information for determining CFC classification.
- SDSs/labels provide additional information that can also be used to determine the CFC classification for the fire department inventory.
- **PRO TIP:** Have copies of 8 CCR 5194 Appendix A (Health Hazards) and Appendix B (Physical Hazards) as well as CFC Hazard Class definitions readily available when working on an inventory.

CFC Definition of Combustible and Flammable Liquids

COMBUSTIBLE LIQUIDS

- **Class II**: Flash point >100°F and <140°F.
- **Class III-A**: Flash point ≥140°F and <200°F.
- **Class III-B**: Flash point ≥200°F.

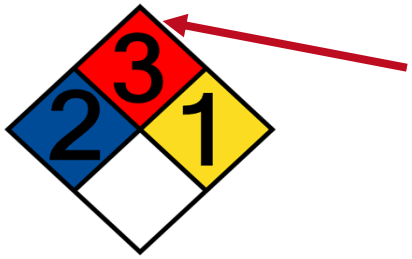
FLAMMABLE LIQUIDS

- **Class I-A**: Flash Point <73°F & Boiling Point <100°F.
- **Class I-B**: Flash Point <73°F & Boiling Point ≥100° F.
- **Class I-C**: Flash point ≥73°F and <100°F.

CFC vs GHS Assessments of Flammable and Combustible Liquids

GHS Category	GHS Criteria	Equivalent CFC
1	Flash point < 23°C (73.4°F) and initial boiling point ≤ 35°C (95°F)	Class IA Flammable
2	Flash point < 23°C (73.4°F) and initial boiling point > 35°C (95°F)	Class IB Flammable
3	Flash point ≥ 23°C (73.4°F) and ≤ 60°C (140°F)	Class IC Flammable or Class II Combustible
4	Flash point > 60°C (140°F) and ≤ 93°C (199.4°F)	Class IIIA Combustible

- Class IIIB Combustible = Organic liquid with a flash point > 93°C (200°F)
- NFPA 704 Diamond information can support classification as well.



The number assigned in the RED Section is also determined by flash point and boiling point information.

Dilution of Flammable Liquids

- It is important to note that when a flammable liquid is diluted with water, or another non-flammable liquid, the flash point will decrease.
- Available research on flash points for such solutions is a valuable resource for classifying such solutions accurately.
- **PRO TIP:** Preparing in-house SDS items for the solutions routinely used in-house with the appropriate CFC classification is extremely helpful in FBP500 preparation and keeping accurate inventory levels.

Flash Points of Ethanol based Water Solutions

The flash point of a chemical is the lowest temperature where it will evaporate enough fluid to form a combustible concentration of gas. The flash point is an indication of how easy a chemical may burn.

		Flash Point										
Ethanol Concentration *(% by weight)*		**5**	**10**	**20**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**96**
Temperature	*(°F)*	144	120	97	84	79	75	72	70	68	63	63
	(°C)	62	49	36	29	26	24	22	21	20	17	17

CFC Definition of Corrosives

- A corrosive is a chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of contact.
- A chemical is considered to be corrosive if, when tested on **the intact skin** of albino rabbits destroys or changes irreversibly the structure of the tissue at the site of contact following an exposure period of four hours.
- **This term does not refer to action on inanimate surfaces.**

Import Consideration in CFC Corrosive Classification

Fire-fighters are in turn-out gear for their responses. exposures related to contact are different than that of employees.

Comparing GHS and CFC Corrosives

- **The SKIN** must be a target organ and corrosively damaged for the Fire Department to be concerned.
- **GHS Classification of Skin Corrosion Category 1A, 1B, 1C** would qualify chemical/mixture to be a CFC Corrosive.
- GHS Eye Damage (Category 1) only, by itself, would drop classification down to an irritant.

Table A.2.1: Skin Corrosion Category and Sub-Categories

Category 1: Corrosive, Corrosive Sub-Categories	Corrosive in ≥ 1 of 3 Animals	
	Exposure	Observation
1A	**≤3 minutes**	**≤1 hour**
1B	**>3 minutes ≤ 1 hour**	**≤14 days**
1C	**>1 ≤ 4 hour**	**≤14 days**

CFC Definition of Highly Toxic Materials

HIGHLY TOXIC MATERIALS

Highly toxic material is a material which produces a lethal dose or lethal concentration which falls within any of the following categories:

- LD50 (oral, rat): **50 mg/kg or less**
- LD50 (dermal, rabbit): **200 mg/kg or less**
- LC50 (inhalation, rat):
  - **200 ppm pr less by volume or less of gas or vapor, or**
  - **2 mg/L per liter or less of mist, fume or dust**

TOXIC MATERIALS

Toxic material is a material which produces a lethal does or a lethal concentration within any of the following categories:

- LD50 (oral, rat) > **50 mg/kg** and ≤ **500 mg/kg**
- LD50 (dermal, rabbit) > **200 mg/kg** and ≤ **1000 mg/kg**
- LC50 (inhalation rat)
  - > **200 ppm** and ≤ **2000** ppm by volume of gas or vapor, or
  - > **2 mg/L** and ≤ **20 mg/L**, of mist, fume, or dust

Caffeine:
LD50 (oral, rat) = 367 mg/kg

Using Converted Toxicity Estimates

- If the only information you have is the GHS Hazard Class and Category of Acute Toxicity, then use The Converted Acute Toxicity Point Estimates for LD50/LC50 Determination.
- Found in Hazard Communication Standard Appendix A (Table A.1.2).
- Excerpt for Acute Toxicity (Oral)

GHS Category	Range	Converted Acute Toxicity Point Estimate
1	0 < LD50 ≤ 5 mg/kg	0.5 mg/kg
2	5 < LD50 ≤ 50 mg/kg	5 mg/kg
3	50 < LD50 ≤ 300 mg/kg	100 mg/kg
4	300 < LD50 ≤ 2000 mg/kg	500 mg/kg

CFC OXIDIZER DEFINTION (Liquid and Solid)

Class 4 – An oxidizer that can undergo an explosive reaction due to contamination or exposure to thermal or physical shock.

Class 3 – An oxidizer that will cause a severe increase in the burning rate of combustible materials with which it comes in contact or that will undergo vigorous, self-sustained decomposition due to contamination or exposure to heat.

Class 2 – An oxidizer that will cause a moderate increase in the burning rate or that may cause spontaneous ignition of combustible materials with which it comes in contact.

Class 1 – An oxidizer whose primary hazard is that it slightly increases the burning rate but does not cause spontaneous ignition when it comes into contact with combustible materials.

Oxidizing Liquid and Solid Examples for CFC Appendix E

Class	EXAMPLES
4	Hydrogen Peroxide Solutions more than 91 percent by weight
3	Hydrogen Peroxide Solutions (> 52% and ≤91%), Nitric Acid (fuming—more than 86%)
2	Hydrogen Peroxide Solutions (> 27.5% and ≤ 52), Nitric Acid (> 40% concentration and ≤ 85%)
1	Hydrogen Peroxide Solutions (> 8% and ≤ 27.5%), Nitric Acid (≤ 40% concentration)

LINK: E102.1.7.1 Examples of liquid and solid oxidizers according to hazard.

GHS Definition of Oxidizing Liquids and Solids

- The GHS Definitions for these hazard classes are found in Appendix B of The Hazard Communication Standard.
- The classification is based on specific test parameters.
  - **GHS OXIDIZING LIQUIDS:** Comparing the oxidization of a cellulose cube with solutions of extremely oxidizing 50% perchloric acid solution, very oxidizing 40% sodium chlorate solution, or a moderately oxidizing 65% nitric acid solution.
  - **GHS OXIDIZING SOLID:** Comparing the oxidizing time of cellulose with various ratios of potassium bromate to cellulose.

Comparing GHS and CFC Oxidizing Liquid Classifications

Hydrogen Peroxide Concentration	GHS Oxidizing Liquid Category*	CFC Oxidizer Class
≥ 91%	Category 1	4
91 > H_2O_2 ≥ 70%	Category 1	3
70 > H_2O_2 ≥ 50%	Category 2	2 (Up to 52%)
50 > H_2O_2 ≥ 27.5%	Category 3	2
27.5 > H_2O_2 ≥ 8%	Category 3	1
Below 8%	Not oxidizing	Not classified as oxidizing liquid

**** From European Chemicals Agency Classification and Labelling Specific Concentration Limits*** C&L Inventory (europa.eu)

Applying GHS to CFC Classification of Oxidizers

1. Use the CFC Examples as a reference, considering chemical family, chemical structure, and hazard class.
2. The GHS Hazard Class and Category can be a helpful guide to assessing how vigorous the oxidizing reaction will be.
3. Both the examples and the GHS Hazard Category should be used together to determine the appropriate CFC Hazard Class.
4. **PRO TIP:** This same approach can be used for the CFC Physical Hazards Related to Reactivity (e.g., Pyrophoric, Unstable Reactive, Water Reactive).

NFPA Yellow Section Useful for Physical Hazards

NFPA RATING	DEFINITION	EXAMPLE
0	Very stable, even during fires. Does not react with water.	Helium
1	Usually stable but can become unstable at high temperatures.	Magnesium
2	Can react violently with water or form explosive mixtures with water.	Sodium
3	Can explode if heated or shocked; or explodes when it touches water.	Ammonium Nitrate
4	Can spontaneously explode at normal temperatures.	Nitroglycerin

PRO TIP: Look on the SDS for a **704 Yellow/Reactivity Rating** for Physical Hazard Classification.

Comparing NFPA Yellow Rating to CFC Class

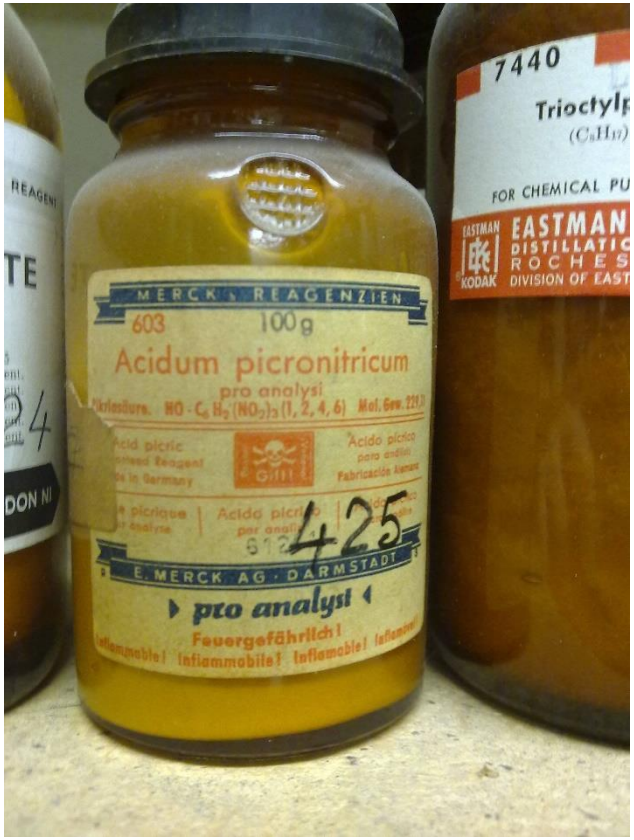
Hydrogen Peroxide Concentration	NFPA RATING*	CFC Oxidizer Class
≥ 91%		4
91 > H_2O_2 ≥ 70%		3
70 > H_2O_2 ≥ 50%		2 (Up to 52%)
50 > H_2O_2 ≥ 27.5%		2
27.5 > H_2O_2 ≥ 8%		1
Below 8%		Not classified as oxidizing liquid

CFC Pyrophoric Definition

- CFC: Pyrophoric is a material that will spontaneously ignite in air at or below a temperature of 130°F.
- GHS: Liquid/solid ignites within 5 minutes of coming into contact with air.
- Assignment into this GHS class means it's a CFC pyrophoric compound.
- Examples
  - **Gases** – Silane.
  - **Liquids** – Diethyl zinc and may other organometallic compounds.
  - **Solids** – White or yellow phosphorus.

CFC Unstable Reactive Definition

- **Class 4** – Readily capable of detonation or explosive decomposition at normal temperatures and pressures.
- **Class 3** – Capable of detonation or explosive decomposition or explosive reaction but require a strong initiating source or must be heated under confinement.
- **Class 2** – Undergo violent chemical change at elevated temperatures and pressures.
- **Class 1** – Normally stable, but that can become unstable at elevated temperatures and pressures.



Unstable Reactive Examples in CFC Appendix

Class	EXAMPLES
4	Picric acid (dry)
3	Hydrogen Peroxide Solutions (> 52%)
2	Hydrazine
1	Hydrogen Peroxide Solutions (35% -52%)

LINK: E102.1.10 Unstable (reactive) materials.

Unstable Reactives CFC Assignment using GHS

- There is no equivalent class in GHS.
- Assignment in the "Self Reactive" or "Self Heating" GHS Class suggest the CFC definitions for this class should be considered.
- The SDS should be reviewed in Sections 5 and 10.
  - **PRO TIP 1:** Terms like "explodes if heated" "undergoes hazardous polymerization" or "forms peroxides" in the SDS are clues that this is the category to apply.
  - **PRO TIP 2:** If the documentation for the compound provides an NFPA 704 Diamond, and there is any number other than "O" in the YELLOW reactivity section, then evaluate the information against the CFC definition for Unstable Reactives.

CFC vs GHS Organic Peroxide Definition

Class I: Class I organic peroxides are capable of deflagration, but not detonation. These organic peroxides present a high explosion hazard through rapid decomposition.

Class II: Class II organic peroxides burn very rapidly and present a severe reactivity hazard.

Class III: Class III organic peroxides burn rapidly and present a moderate reactivity hazard.

Class IV: Class IV organic peroxides burn in the same manner as ordinary combustibles and present a minimum reactivity hazard.

Class V: Class V organic peroxides burn with less intensity than ordinary combustibles or do not sustain combustion and do not present a reactivity hazard.

The GHS Definitions of Organic Peroxides assign categories A through G based on explosive potential and burn intensity. Compare GHS category to CFC definition to assign.

ORGANIC PERIXOIDE EXAMPLES FROM CFC APPENDIX

Class	EXAMPLE	GHS ASSIGNMENT
I	Benzoyl Peroxide (> 98%)	Type A/B (can explode)
II	t-Butyl Hydroperoxide (70%, with DTBP and t-BuOH diluents)	Type C (won't explode, but consist of compounds that can)
III	Benzoyl Peroxide (78%), Benzoyl Peroxide Paste (55%)	Types D/E (limited reactivity hazard)
IV	Benzoyl Peroxide (70%), Benzoyl peroxide slurry	Type F (low reactivity hazard)
V	Benzoyl Peroxide (35%)	Type G (no reactivity hazard)

LINK: E102.1.8.1 Classification of organic peroxides according to hazard.

CFC AND GHS Water Reactive Definition

CFC: Water reactive materials are classified as follows.

- **Class 3 – React explosively w/ water** with no heat or confinement.
  - Examples: Many organometallic compounds.
- **Class 2 – Form potentially explosive mixtures with water.**
  - Examples: Alkaline and alkaline-earth metals (e.g., sodium), hydrides.
- **Class 1 – Materials which may react with water** w/ some release of energy, but not violently.
  - Example: Sodium hydroxide.

GHS: "Chemicals Which upon Contact with Water Emit Flammable Gas" Class is based on how much gas is generated per volume of water.

- Evaluate CFC Class based on information in **Sections 5, 10 and 14 of SDS** and **NFPA 704 Diamond/Yellow.**
- **PRO TIP:** Cameo Chemicals Database can be very helpful here: **CAMEO Chemicals | NOAA**

Other California Regulations for Which GHS Can Be Useful

Any regulation requiring the classification of chemicals by hazard will be made easier by utilizing GHS Hazard Categories with their associated definitions.

- Occupational Exposures to Hazardous Substances in Laboratories (8 CCR 5191).
- Proposition 65: Listing Substances that cause Cancer, Birth Defects, and Other Reproductive Harm.
- Retaining the "Retired" Classifications from CFC permits identification of regulated material to address compliance requirements.

PHS Under GHS Health Hazard Definitions

CARCINOGENS

- GHS Carcinogenicity Category 1A or 1B, or,
- GHS Category 2 AND IARC Group 2 (Probable Carcinogens, Type A or B), AND NTP Reasonably Anticipated to be Human Carcinogens

REPRODUCTIVE TOXINS

- GHS Category 1A or 1B for reproductive toxicity

HIGH DEGREE OF ACUTE TOXICITY

- GHS Category 1 or 2 Acute Toxicity by Inhalation, Dermal, or Oral Exposure
- GHS Category 1 Specific Target Organ Toxicity - Single Exposure
- GHS Category 1A Skin or Respiratory Sensitizer

Precautions for PHS Use, Storage, Disposal

1. Establishment of a designated area.

- The current laboratory location is that designated area.
- Depending on chemical, extra signage should be considered.
- Additional protections (e.g., barriers, advanced notification) may be considered.

2. Use of containment devices (i.e., fume hoods).

- Fume hoods will be used for all procedures.

3. Procedures for safe removal of contaminated waste.

- Place waste in designated containers, and close containers promptly.

4. Decontamination procedures.

- Wipe down laboratory area after procedures have concluded.
- Remember chemical hygiene – wash exposed skin after use.
- Clean up all spills promptly.

Using GHS for Proposition 65 Compliance

Some important aspects to understanding Proposition 65 List:

1) Not every chemical on the list is identified by a Chemical Abstract Service Number (CAS Number).
2) Many chemical groups are listed.
3) There isn't an exact correspondence between GHS Carcinogen and Reproductive Toxicity Hazard Classes/Categories.
   - A GHS-classified Carcinogen or Reproductive should always be evaluated for its status on the Proposition 65 list – especially under a chemical groups.
4) **PRO TIP:** Have the most current Proposition 65 list available each time a CFC-required information is completed.

Comparing GHS with Proposition 65 Listing

Compound	GHS Hazard Class/Category	Proposition 65 Listing
Chromium (VI) Oxide CAS = 1333-82-0	Carcinogenicity (Category 1A) Reproductive Toxicity (Category 2)	Chromium (hexavalent compounds); Cancer, Developmental, Male, Female
Conjugated Estrogens CAS = 12126-59-9	Carcinogenicity (Category 1A) Reproductive Toxicity (Category 1A)	Conjugated estrogens Cancer, Developmental
Nickel Chloride Hexahydrate CAS = 7791-20-0	Carcinogenicity, Inhalation (Category 1A) Reproductive toxicity (Category 1B)	Nickel compounds Cancer Nickel, soluble compounds, Developmental

Align with GHS Revision 7

- **Appendix A (health hazards): mostly editorial**
  - Revised health hazard definitions
  - Updated Skin corrosion/irritation and Serious eye damage/eye irritation chapters
  - General updates to hazard classes
- **Appendix B (physical hazards):**
  - Flammable gases – expanding hazard categories
  - Desensitized explosives – Aerosols – including additional hazard category
- **Appendix C (label elements)**
  - New or updated hazards, updated guidance, and precautionary statements
- **Appendix D (SDS)** – Updates to SDS Sections 9, 11

Small Container Labelling under Updated Hazard Communication

- The proposed final rule also calls for changes that would reduce labeling on small-containers.

- Under the rule, containers less than or equal to 100 milliliters would now only need to include the product identifier, pictograms, signal word, and then the chemical manufacturer's name and phone number—the full list of hazard statements and precautionary statements would be omitted.

- Additionally, for containers with a three-milliliter capacity, the container would only need to bear the product identifier if the manufacturer can "demonstrate that a label would interfere with a normal use of the container."

The final rule was submitted for OMB approval on October 11th, 2023 and is expected to be finalized this year.

In Conclusion

- Reviewed of Key California Fire Code HazMat Inventory Requirements
- Assessed San Diego Fire Department FBP500 Elements
- Used Definitions from Globally Harmonized System to Determine CFC Hazard Classification
- Looked at Lab Standard and Proposition 65 Compliance, in Which GHS Can Be Helpful
- Noted Upcoming Changes to Federal OSHA Hazard Communication

Thank you attending!

A pdf of the slide deck will be sent, if a Zoubek Consulting Team Member received your business card!

We also have a handout summarizing HazCom changes.

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