University of California Davis Health – Office of the Fire Marshal

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Hazardous Material Inventory Statement (HMIS) and Form

Laboratories, clinics, and other medical buildings typically use or store Hazardous Materials as part of their normal operations. Hazardous materials are substances or chemicals that pose a health hazard, a physical hazard, or harm to the environment. Hazardous materials are defined and regulated by the U.S. Environmental Protection Agency (EPA) and in California, CalEPA. As part of those regulations, under authority granted to the Campus Fire Marshal in accordance with The California Health and Safety Code (HSC), and California Codes of Regulation (CCR) Titles 17, 19, 22, 24, and 26; UC Davis Health - Fire Marshal's Office (UCDH-FMO) helps ensure each building and area maintains a Hazardous Materials Inventory Statement (HMIS).

The HMIS communicates to building and area users, regulatory bodies, first responders, and in some cases the public, all types and quantities of hazardous materials, substances, and/or chemicals used and/or stored; or, in the case of new buildings, the types and quantities of hazardous materials, substances, and/or chemicals which will be used and/or stored.

During the planning and design phase of new buildings and/or projects, information derived from an HMIS assists design teams in determining correct building occupancy classification; methods and locations of storage; design criteria for spill and secondary containment; General construction requirements; and ventilation needs.

Even if the possibility exists of hazardous materials being located inside the building or as part of a process within the building, UC Davis Health FMO is provided an HMIS and in some cases, a copy of the CalEPA required hazardous materials management plan (HMMP). A HMMP describes ways to reduce, minimize, and/or eliminate the quantity and toxicity of hazardous materials that are used, stored, or otherwise disposed. More about HMMP's is available at https://calepa.ca.gov/cupa/lawsregs/hazardous-materials-business-plan-program/.

Provided below is guidance and examples of the information required to be stated. When completing the HMIS be sure to provide accurate and complete information. Double check chemical and compound isomers.

1. **Hazard Class:** Class 1-Explosives; Class 2 – Gasses; Class 3 – Flammable and Combustible Liquids; Class 4 – Flammable solids (Substances likely to spontaneously combust / Substances which emit flammable gasses upon contact with water; Class 5 – Oxidizing substances and Organo Peroxides. Column 1 is often not completed correctly. Many chemicals are multi-hazard class chemicals, and every hazard class must be provided. For example, Trimethyl Phosphite is not just a corrosive acid, but also a combustible liquid II, other health hazards, and a class 1 water-reactive. Include all classes for each chemical on the HMIS.
2. **Trade Name:** The name by which the substance is known by its trademarked or common market name. For example, Clorox™ Bleach is a brand name of Sodium Hypochlorite.
3. **Chemical Name:** The actual name of the material/substance not the formula. For Example, Methylpropane and Butane have the same chemical formula however the formulae are much different. Additionally, the concentration or percentage should be provided.
4. **CAS, or Chemical Abstract Service Number:** A CAS Registry Number, also referred to as CAS-RN or informally CAS Number, is a unique numerical identifier assigned by the Chemical Abstracts Service. The registry can be found here: https://www.cas.org/support/documentation/chemical-substances/faqs
5. **Material State:** Pure, Mixture, Gas, Liquid, Solid
6. **Type of system or use; OPEN:** is the use of a solid or liquid hazardous material in a vessel or system that is continuously open to the atmosphere during normal operations and where vapors are liberated, or the product is exposed to the atmosphere during normal operations. Examples of open systems for solids and liquids include dispensing from or into open beakers or containers and dip tanks and plating operations.
7. Open to atmosphere

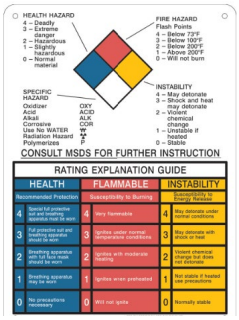
   Type of system or use; CLOSED: is the use of a solid or liquid hazardous material in a closed vessel or

system that remains closed during normal operations where vapors emitted by the product are not liberated outside of the vessel or system and the product is not exposed to the atmosphere during normal operations. All compressed gases meet these criteria. Examples of closed systems for solids and liquids include reaction process operations and products conveyed through a piping system into a closed vessel, system, or piece of equipment.

8. **Quantity:** Total quantity on site (or expected on site). Includes in-storage and in-use daily
9. **Unit:** Pounds or Gallons (May be reflected in metric quantities also but MUST be shown in Gallons and/or Pounds)
10. **Storage Type:**

TYPE	PRESSURE
A = ABOVEGROUND TANK B = BELOWGROUND TANK C = TANK INSIDE BUILDING D = STEEL DRUM E = PLASTIC OR NONMETALLIC DRUM F = CAN G = CARBOY H = SILO I = FIBER DRUM J = BAG K = BOX L = CLYLINDER M = GLASS BOTTLE OR JUG N = PLASTIC BOTTLES OR JUGS O = TOTE BIN P = TANK WAGON Q = RAIL CAR R = OTHER	1 = AMBIENT (ATMOSPHERIC) 2 = GREATER THAN AMBIENT 3 = LESS THAN AMBIENT
	TEMPERATURE
	4 = AMBIENT 5 = GREATER THAN AMOUNT 6 = LESS THAN AMBIENT – BUT NOT CRYOGENIC LESS THAN –150°F) 7 = CRYOGENIC CONDITIONS (LESS THAN – 150°)

11. **National Fire Protection Association (NFPA) 704:**



12. Location on the property and/or in the building: All places used and stored (Room number, name, storage facility number name, and/or Lat and Long or UTM for unnamed/unnumbered areas). The HMIS must be formatted to reflect separate chemical information and totals for each area or room, not a consolidated report. Additionally, for each storage or use area or room, provide accumulative totals for each hazard class and for each respective chemical state solid, liquid, and gas.

Location: Room 275 EXAMPLE HMIS **USE: Storage for laboratory operations**

1	2	3	4	5	6	7	8	9	10	11	12
Hazard Class	Trade Name	Chem Name, & %	CAS, Abstract No.	State (G,S, or L)	Open	Closed	Quan-tity	Unit (lbs or gal)	Store Type	NFPA	Location of Chem in Bldg
Flam. Liq 1B, Irritant	Isopro panol	Isopropal Alco. 99%	67-63-0	PL	X		300	GA	L-1-4	1-3-0	
Flam Liq 1B, OHH, WR-2	TMB	Trimethyl Borate 100%	121-43-7	PL		X	30	GA	L-2-4	2-3-1-WR	
Totals											
Flam Liq 1B							330				
Irritant							300				
OHH							30				
WR-2							30				

Using provided instructions, complete the HMIS on page three (3) and return to HS-fireprevention@ucdavis.edu. HMIS shall be provided annually and/or within 30 days of process or management change (2019 CFC H101.1 Part A)

Building Name: _____ **HMIS Report** **Sprinklered: Y N**

Occupancy Classification/s: _____

Lab/Building Contact Individual: _____ **Phone:** _____ **E-mail:** _____

Lab Location: _____ **Report Prepared By:** _____ **Phone:** _____

Note: Specific chemical quantities may require a Hazardous Materials Storage (HMS) permit. You will be contacted if your business meets the permit criteria. This form is also used when completing the application for the HMS permit.

1	2	3	4	5	6	7	8	9	10	11	12
CFC Hazard Class	Trade Name	Chem Name, & %	CAS; Abstract No.	State	Open Use	Closed Use	Quantity	Unit	Storage Code	NFPA	Location of Chemical in the Building
Totals Below (for each separate hazard class)											