Lake Havasu City Fire Department
Fire Prevention Division
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OVERVIEW

Hazardous materials (HAZMAT) are prevalent within Lake Havasu City and have the potential to pose serious health and safety risks if not stored, dispensed, used, handled, or disposed properly. The LHCFD strives to identify all occupancies, which store, use, and handle HAZMAT to ensure that these businesses operate in a safe, legal, and approved manner.

PURPOSE

To provide laws, standards, regulations and best practices when it comes to storing, dispensing, using, handling and disposing of HAZMAT in a safe and reasonable manner.

SCOPE

This specification is intended to provide information relating to all regulated HAZMAT within Lake Havasu City. Prevention, control, and mitigation of dangerous conditions related to storage, dispensing, use, handling, and disposal of HAZMAT shall be in accordance with this specification and the requirements contained within the *International Fire Code* (IFC).

DEFINITIONS

1. **Boiling Point** - The temperature at which the vapor pressure of a liquid equals the atmospheric pressure of 14.7 pounds per square inch absolute (psia).
2. **Combustible Liquid (CL)** - A liquid having a closed cup flash point at or above 100°F. Combustible liquids shall be subdivided as follows:
   - **Class II**. Liquids having a closed cup flash point at or above 100°F and below 140°F.
   - **Class Ill-A**. Liquids having a closed cup flash point at or above 140°F and below 200°F.
   - **Class III-B**. Liquids having closed cup flash points at or above 200°F.
3. **Container** - A vessel of 60 gallons or less in capacity used for transporting or storing hazardous materials.
4. **Control Area**: Spaces within a building where quantities of HAZMAT not exceeding the maximum allowable quantities per control area are stored, dispensed, used, or handled not exceeding the MAQ in IFC Table 5003.1.1(1) or Table 5003.1.1(2). See also the definition of "Outdoor Control Area." The maximum amount of control areas within a building are four (4) separated by at least one-hour construction.
5. **Flammable Liquid (FL)** - A liquid having a closed cup flash point below I00°F. Flammable liquids are further categorized into a group known as Class I liquids. The Class I category is subdivided as follows:
   - **Class l-A**. Liquids having a flash point below 73°F and having a *boiling point* below 100°F.

- **Class I-B**. Liquids having a *flash point* below 73°F and having a *boiling point* at or above 100°F.
- **Class IC**. Liquids having a *flash point* at or above 73°F and below 100°F.

6. **Flash Point** - The minimum temperature in degrees Fahrenheit at which a liquid will give off sufficient vapors to form an ignitable mixture with air near the surface or in the container, but will not sustain combustion.
7. **Hazardous Materials (HAZMAT)** - Those chemicals or substances which are *physical hazards* or *health hazards* as defined and classified in IFC Chapter 50, whether the materials are in usable or waste condition.
8. **Hazardous Waste** - Waste that has substantial or potential threats to public health or the environment that are known or tested to exhibit one or more of the following hazardous traits including Ignitability, Reactivity, Corrosivity and Toxicity.
9. **Health Hazard** - A classification of a chemical for which there is statistically significant evidence that acute or chronic health effects are capable of occurring in exposed persons. The term "health hazard" includes chemicals that are toxic, highly toxic, and *corrosive.*
10. **Household Hazardous Waste** - Post-consumer waste which qualifies as hazardous waste when discarded.
11. **Maximum Allowable Quantity (MAQ) per Control Area** - The maximum amount of a HAZMAT allowed to be stored or used within a control area inside a building or an outdoor control area. The maximum allowable quantity per control area is based on the material state (solid, liquid or gas) and the material storage or use conditions Per IFC §5003.1. https://archive.org/details/gov.law.icc.ifc.2012/page/n325/mode/2up/search/Chapter+50
12. **Outdoor Control Area**: An outdoor area that contains HAZMAT in amounts not exceeding the maximum allowable quantities of IFC Table 5003.1.1(3) or Table 5003.1.1(4).

    See also the definition of "Control Area."
    https://archive.org/details/gov.law.icc.ifc.2012/page/n329/mode/2up/search/Chapter+50
13. **Physical Hazard** - A chemical for which there is evidence that it is a combustible liquid, cryogenic fluid, explosive, flammable (solid, liquid or gas), organic peroxide (solid or liquid), oxidizer (solid or liquid), oxidizing gas, pyrophoric (solid, liquid or gas), unstable (reactive) material (solid, liquid or gas) or water-reactive material (solid or liquid).
14. **Safety Data Sheet / Material Safety Data Sheet** (**SDS/MSDS**) - Safety documents which list information relating to occupational safety and health for the use of various materials as required by the Occupational Safety and Health Administration (OSHA), that contain data about the physical properties of particular hazardous substances, in order to convey chemical safety and hazard information to employees who are exposed to hazardous chemicals, firefighters, HAZMAT crews, and other first responders.
15. **Tank -** A vessel containing more than 60 gallons.
16. **Tank, Protected Above Ground** - A tank listed in accordance with *UL 2085* consisting of a primary tank provided with protection from physical damage and fire-resistive protection from a high-intensity liquid pool fire exposure.

PERMITS

1. A **HAZMAT Construction Permit** is required to install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a storage facility or other area regulated by IFC Ch. 50 when the HAZMAT in use or storage exceed the amounts listed in IFC Table 105.6.20.
2. A **Flammable/Combustible Liquid Construction Permit** is required:
   a. To install, repair or modify a pipeline for the transportation of FL/CL.
   b. To install, equipment, tanks, plants, terminals, wells, fuel- dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used.
   c. To install, alter, remove, abandon, or dispose of a FL/CL liquid tank.

REQUIREMENTS

1. **ARIZONA TIER TWO CHEMICAL REPORTING:** Emergency Planning and Community Right-to-Know Act (EPCRA) Hazardous Chemical Inventory Reporting Requirements per EPCRA §311-312.

Facilities with chemicals in quantities that equal or exceed the following thresholds must report:

☐ For **Gasoline** (all grades combined) at a retail gas station, the threshold level is **75,000** gallons, if the tank(s) was stored entirely underground and was in compliance at all times during the preceding calendar year with all applicable Underground Storage Tank (UST) requirements at 40 CFR part 280 or requirements of the State UST program approved by the Agency under 40 CFR part 281.

☐ For **Diesel Fuel** (all grades combined) at a retail gas station, the threshold level is **100,000 gallons**, if the tank(s) was stored entirely underground and the tank(s) was in compliance at all times during the preceding calendar year with all applicable UST requirements at 40 Code of Federal Regulations (CFR) part 280 or requirements of the State UST program approved by the Agency under 40 CFR part 281.

☐ For **Extremely Hazardous Substances** (EHSs) [40 CFR part 355 Appendix A and Appendix B (PDF)], either 500 pounds or the Threshold Planning Quantity (TPQ), whichever is lower.

☐ For **All Other Hazardous Chemicals**: 10,000 pounds (Approximately 1,000 gallons)

2. **National Fire Protection Association (NFPA) 704 Standard System for the Identification of the Hazards of Materials for Emergency Response: NFPA 704 Signage Requirements** See **NFPA 704 FAQ** (online)

IFC §5003.5.1 NFPA 704 Markings. Individual containers, cartons, or packages shall be conspicuously marked or labeled in an approved manner. Rooms or cabinets containing compressed gases shall be conspicuously labeled: *COMPRESSED GAS*.

IFC §5003.6 NFPA 704 Signs. Required signs and markings shall not be obscured or removed, shall be in English or in symbols allowed by the IFC, shall be durable, and the size, color, and lettering shall be approved. See **LHCFD NFPA 704 Signage Requirements by Type of Hazardous Material** (online).

Refer to your **MSDS/SDS** for the specific hazard ratings for the HAZMAT requiring NFPA 704 Hazard Identification. See **NFPA 704 Warning Placard Requirements** (online)

The size of the placard or label is dependent on the distance at which the hazard ratings must be legible. A LHCFD Fire Code Official will provide guidance on both the size of the hazard ratings, relative to the size of the placard/label, based on the distance at which the ratings are legible. For minimum standards, see below:

Distance at which hazard ratings are legible (size)	Minimum size of hazard ratings numbers required
Indoor Labels & Placards 8" x 8" minimum diamond	Use 3 inch Black numbers
Building Placards 15"x15" minimum diamond	Use 6 inch Black numbers

3. **Storage, Use and Handling of Hazardous Materials**
   a. The storage, use and handling of all HAZMAT shall be in accordance with IFC §5003.1.
   b. The MAQ per Control Area shall be as specified in IFC Tables 5003.1.1(1) through 5003.1.1 (4).
   c. For Retail and Wholesale storage and display in **Group M** (Mercantile) occupancies and **Group S** (Storage), see IFC §5003.11.

PROCEDURES

1. Identify and inventory your onsite supply of HAZMAT.
2. Ensure that all chemicals in your inventory of HAZMAT are below the MAQs per control area for storage and use (open and closed) on the premises. If your building is constructed and recognized as a **Group H** *High Hazard* occupancy, then MAQs may be exceeded. If in doubt, contact the LHCFD Fire Prevention Bureau.
3. Gather MSDS/SDS documents for all onsite HAZMAT and keep them in a notebook or file folder, which is readily accessible for fire service personnel to review. Review with employees.
4. Review all HAZMAT related resources on the LHCFD webpage.
5. Determine if you have a quantity of a particular HAZMAT, which requires NFPA 704 Hazard Identification signs/labels compliance per the online document, ***LHCFD NFPA 704 Signage Requirements by Type of Hazardous Material***. If so, construct authorized signs and/or labels and affix them to walls or doors in approved locations per the online document ***NFPA 704 Warning Placard Requirements***.
6. If you have general questions about the NFPA 704 Standard, view the online document, **NFPA 704 FAQ**, or visit https://www.nfpa.org/Assets/files/AboutTheCodes/704/704_FAQs.pdf.
7. If you have general questions about hazardous waste disposal, visit the Lake Havasu City Household Hazardous Waste Disposal information webpage: https://www.lhcaz.gov/fire-department/household-hazardous-waste.

8. Determine if you have a quantity of HAZMAT, which needs to be reported to the ***Arizona State Emergency Response Commission***.
9. Store, dispense, use and handle HAZMAT per the requirements of the *International Fire Code* and its Referenced Standards.

REFERENCES

2018 International Fire Code Ch. 2 *Definitions*; Ch. 50 *Hazardous Materials*; Ch. 57 *Flammable & Combustible Liquids*; Chapters 51-56 & 58-67.

2018 NFPA 30 *Flammable & Combustible Liquids Code*

2017 NFPA 704 *Identification of the Hazards of Materials for Emergency Response*

Arizona Department of Environmental Quality: Arizona State Emergency Response Commission https://azdeq.gov/AZSERC/HelpCenter

Lake Havasu City Household Hazardous Waste Disposal: Information Webpage: https://www.lhcaz.gov/fire-department/household-hazardous-waste

Note: This FD Specification is intended to be a reference guide only. For complete information, refer to the references above. Where conflicts exist between this document and the applicable codes and standards, the above references must supersede.

APPROVED:_____ DATE: 09/01/2021

Scott Hartman, Fire Marshal