



**HOUSTON FIRE DEPARTMENT  
LIFE SAFETY BUREAU (LSB)**



**LSB STANDARD 01 REV. 05  
INSTALLATION AND MAINTENANCE OF  
PORTABLE FIRE EXTINGUISHERS**

**SUPERSEDES: LSB STANDARD 01 Rev. 04 (12/31/2010)**

**Note:** A vertical bar in the left-hand margin denoted revisions from the previous version.

**Effective Date: 5/01/2012**



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LSB Standards are established in accordance with provisions of the City of Houston Fire Code. They are subject to the administrative sections covering alternative materials and methods, modifications, and the Board of Appeals.

# TABLE OF CONTENTS

<b>SECTION 1.1 --- GENERAL .....</b>	<b>1</b>
1.1.1 Scope. ....	1
1.1.2 Purpose. ....	1
<b>SECTION 1.2 --- DEFINITIONS. ....</b>	<b>1</b>
1.2.1 Class A Rated Fire Extinguisher. ....	1
1.2.2 Class B Rated Fire Extinguisher. ....	1
1.2.3 Class C Rated Fire Extinguisher. ....	1
1.2.4 Class D Rated Fire Extinguisher. ....	1
1.2.5 Type “K” Fire Extinguisher. ....	1
1.2.6 Listed portable fire extinguishing equipment. ....	1
1.2.7 Occupancy. ....	1
<b>SECTION 1.3 --- GENERAL REQUIREMENTS .....</b>	<b>2</b>
1.3.1 Annual Maintenance. ....	2
1.3.2 Operable condition. ....	2
1.3.3 Conspicuously located. ....	2
1.3.4 Locked Cabinets. ....	2
1.3.5 Obstructions. ....	2
1.3.6 Installation. ....	2
1.3.7 Physical damage. ....	2
1.3.8 Mounting. ....	2
1.3.9 Marking. ....	3
<b>SECTION 1.4 --- SIZE AND PLACEMENT OF PORTABLE FIRE EXTINGUISHERS ...</b>	<b>3</b>
1.4.1 Minimum rating and placement. ....	3
1.4.2 Substituting portable fire extinguishers. ....	3
1.4.3 Occupancy Group requirements. ....	4
1.4.3.1 Assemblies –Group A Occupancies (with an occupant load of 50 or more). ....	4
1.4.3.2 Businesses – Group B Occupancies. ....	4
1.4.3.3 Educational – Group E Occupancies. ....	5
1.4.3.4 Factory and Industrial – Group F Occupancies. ....	5
1.4.3.5 Hazardous – Group H Occupancies. ....	5
1.4.3.6 Institutional – Group I Occupancies. ....	6
1.4.3.7 Mercantile – Group M Occupancies. ....	6
1.4.3.8 Residential – Group R Occupancies. ....	7
1.4.3.9 Storage – Group S Occupancies. ....	7
<b>Section 1.5 --- General area requirements. ....</b>	<b>8</b>
1.5.1 Commercial cooking operations. ....	8
1.5.2 Parade Floats. ....	8
1.5.3 Asphalt Kettles. ....	9
1.5.4 Powered Industrial Trucks. ....	9
1.5.5 Battery Charging. ....	9
1.5.6 Airport-towing vehicles. ....	9
1.5.7 Airport-welding apparatus. ....	9
1.5.8 Airport-aircraft fuel-servicing vehicles ( Aircraft Refuelers). ....	9
<b>APPENDIX – A .....</b>	<b>11</b>
CLASSIFICATION OF HAZARDS .....	11

Light Hazard.....	11
Ordinary Hazard.....	11
High hazard.....	11
<b>APPENDIX – B</b> .....	<b>12</b>
Class A Rated Fire Hazards.....	12
<b>APPENDIX - C</b> .....	<b>13</b>
Class B Rated ( Flammable and Combustible Liquids) Fire Hazards.....	13

**LSB STANDARD 01 REV 05  
INSTALLATION AND MAINTENANCE OF  
PORTABLE FIRE EXTINGUISHERS**

**SECTION 1.1 --- GENERAL**

**1.1.1 Scope.**

Listed portable fire extinguishers shall be installed in occupancies and locations as set forth in the City of Houston *Fire Code* and this standard.

When areas are not covered in this standard, listed portable fire extinguishers shall be in accordance with NFPA 10.

**1.1.2 Purpose.**

This standard is for the use and guidance of persons charged with selecting, purchasing, installing, approving, and maintaining listed portable fire extinguishing equipment.

**SECTION 1.2 --- DEFINITIONS.**

**1.2.1 Class A Rated Fire Extinguisher.**

Used for fires in ordinary combustible materials, such as wood, cloth, paper, rubber, and many plastics.

**1.2.2 Class B Rated Fire Extinguisher.**

Used for fires in flammable liquids, oils, greases, tars, oil-base paints, lacquers, and flammable gases.

**1.2.3 Class C Rated Fire Extinguisher.**

Used for fires that involve energized electrical equipment where the electrical non-conductivity of the extinguishing media is of importance. (When electrical equipment is de-energized, extinguishers for Class A or B fires may be used safely).

**1.2.4 Class D Rated Fire Extinguisher.**

Used for fires in combustible metals, such as magnesium, titanium, zirconium, sodium, lithium, and potassium.

**1.2.5 Type "K" Fire Extinguisher.**

Used for fires involving cooking media (grease, fats and oils) in commercial cooking appliances.

**1.2.6 Listed portable fire extinguishing equipment.**

All portable fire extinguishing equipment shall be listed for intended use.

**1.2.7 Occupancy.**

The purpose for which a building, or part thereof, is used or intended to be used. See current Fire Code.

## **SECTION 1.3 --- GENERAL REQUIREMENTS**

### **1.3.1 Annual Maintenance.**

All fire extinguishers shall have a current annual inspection tag by an approved licensed fire protection equipment company. All servicing, testing, maintenance and tagging of listed portable fire extinguishers shall be conducted annually by qualified personnel in accordance with LSB Standard 02, "Inspection and Testing of Fire Protection and Life-Safety Equipment".

**Exception:** Listed portable fire extinguishers that can not be serviced (disposable) or listed fire extinguishers that may be serviced only at the manufacturer.

### **1.3.2 Operable condition.**

Portable fire extinguishers shall be maintained in a fully charged and operable condition, and kept in their designated places at all times when they are not being used.

### **1.3.3 Conspicuously located.**

Portable fire extinguishers shall be conspicuously located where they will be readily accessible and immediately available in the event of fire. Preferably they shall be located along normal unobstructed paths of travel, including exits from areas.

### **1.3.4 Locked Cabinets.**

Cabinets housing portable fire extinguishers shall not be locked.

**Exception:** 1. Where extinguishers are subject to malicious use, locked cabinets may be used provided they include means of emergency access.

2. In Group I-3 occupancies and in mental health areas in Group I-2 occupancies, access to portable fire extinguishers shall be permitted to be locked or to be located in staff locations provided the staff has keys.

### **1.3.5 Obstructions.**

Portable fire extinguishers shall not be obstructed or obscured from view.

**Exception:** In large rooms, and in certain locations where visual obstruction cannot be completely avoided, means shall be provided to indicate the locations of the fire extinguishers.

### **1.3.6 Installation.**

Portable fire extinguishers shall be installed on the hangers or in the brackets supplied, mounted in cabinets, or set on shelves, unless the extinguisher is of the wheeled type.

### **1.3.7 Physical damage.**

Portable fire extinguishers installed under conditions where they are subject to physical damage shall be protected from impact.

### **1.3.8 Mounting.**

Portable fire extinguishers having a gross weight not exceeding 40 pounds shall be installed so that the top of the extinguisher is not more than 5 feet above the floor. Extinguishers having a gross weight greater than 40 pounds (except wheeled types)

shall be so installed that the top of the extinguisher is not more than 3 ½ feet above the floor. In no case shall the clearance between the bottom of the extinguisher and the floor be less than 4 inches.

### **1.3.9 Marking.**

Portable fire extinguishers mounted in cabinets or wall recesses or set on shelves shall be placed in a manner such that the extinguisher operating instructions face outward. The location of such extinguishers shall be marked conspicuously.

## **SECTION 1.4 --- SIZE AND PLACEMENT OF PORTABLE FIRE EXTINGUISHERS**

### **1.4.1 Minimum rating and placement.**

The minimum rating for a listed portable fire extinguisher for any type occupancy, area or location shall be one 2-A, 10-B:C portable fire extinguisher for every 6000 square feet or fraction thereof. (Example – 6500 square feet – two portable fire extinguishers will be required).

The maximum travel distance to a Class A rated portable fire extinguisher shall be 75 feet by an unobstructed path of travel. The maximum travel distance to a Class B rated portable fire extinguisher shall be 50 feet by an unobstructed path of travel.

Upon inspection of certain occupancies, hazardous operations, or locations, the rating of a portable fire extinguisher and the travel distance may be increased or decreased by the code official per Appendix A, B and C. Where requirements of this standard are found to be in conflict with state and federal requirements, the more restrictive shall apply.

### **1.4.2 Substituting portable fire extinguishers.**

One 2½-gallon water listed portable fire extinguisher may replace the requirement of one Class 2-A rated listed portable fire extinguisher for existing extinguishers. When 2½-gallon water portable fire extinguishers are in need of replacement, they shall be replaced with one 2-A, 10-B:C portable fire extinguisher only.

Exception: In areas where water is needed for deep penetration such as woodworking and sawdust areas.

Two 2-A rated portable fire extinguishers may replace the requirement of one 4-A rated portable fire extinguisher provided the minimum required travel distance is maintained and the minimum required floor area is covered as per Appendix B and C.

One 4-A rated portable fire extinguisher may replace the requirement of two 2-A rated portable fire extinguishers provided the minimum required travel distance to a fire extinguisher is maintained and the minimum required floor area is covered as per Appendix B and C.

One 40-B rated portable fire extinguisher may replace the requirement of two 20-B rated portable fire extinguishers provided the minimum required travel distance to a fire

extinguisher is maintained and the minimum required floor area is covered as per Appendix B and C.

**Exceptions:**

Two 1-A rated portable fire extinguishers shall not substitute for a 2-A rated portable fire extinguisher.

Two portable fire extinguishers of lower B ratings shall not be used to fulfill the protection requirements when a higher B rated portable fire extinguisher is required. (Example - two 20-B rated portable fire extinguishers shall not replace the requirement of a 40-B rated portable fire extinguisher).

In sensitive areas such as telephone rooms, electrical rooms and computer rooms, fire extinguishers such as Clean Agents and CO<sub>2</sub> of the same required rating may substitute for a dry chemical fire extinguisher.

**1.4.3 Occupancy Group requirements.**

Portable fire extinguishers shall be installed in all occupancies. See the current Fire Code for Occupancy Group Classifications.

**1.4.3.1 Assemblies –Group A Occupancies (with an occupant load of 50 or more).**

Assemblies shall be classified as **ordinary hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Assemblies with stages shall have a minimum rated 2-A, 10-B:C fire extinguisher mounted on each side of the stage.

**1.4.3.2 Businesses – Group B Occupancies.**

Business offices and professional services shall be classified as **light hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 6000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Business with eating and dining (occupant load less than 50), small businesses not classified as H Occupancies, shall be classified as **ordinary hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Business labs, print shops, using flammable and combustible liquids (not classified as Group H occupancies as per the current Fire Code) shall be classified as **ordinary hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 20-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable

fire extinguishers shall be so located that no point in the building is located more than 50 feet, by an unobstructed path of travel, from a portable fire extinguisher.

#### **1.4.3.3 Educational – Group E Occupancies.**

Educational offices and classrooms shall be classified as **light hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 6000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Educational labs and shops shall be classified as **high hazard**. At least one portable fire extinguisher with a minimum rating of 2-A, 40-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 30 feet, by an unobstructed path of travel, from a portable fire extinguisher

Day Cares facilities shall be classified as **ordinary hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

#### **1.4.3.4 Factory and Industrial – Group F Occupancies.**

Factory and industrial occupancies with the use and manufacturing of combustible commodities shall be classified as **ordinary hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Factory and industrial occupancies with the use and manufacturing of noncombustible commodities shall be classified as **light hazards**. At least one portable fire extinguisher with a minimum rating of 2-A:10-B:C shall be provided for each 6000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Factory and industrial occupancies with the use of flammable and combustible liquids (not classified as Group H occupancies as per the current Fire Code) shall be classified as **ordinary hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 20-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 50 feet, by an unobstructed path of travel, from an extinguisher.

#### **1.4.3.5 Hazardous – Group H Occupancies.**

Group H Occupancies shall be classified as **high hazard**. At least one portable fire extinguisher with a minimum rating of 4-A, 40-B:C shall be provided for each 4000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so



located so that no point in the building is located more than 30 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Repair garages classified as Group H Occupancies shall have at least one portable fire extinguisher with a minimum rating of 2A, 40-B:C provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 30 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Woodworking classified as Group H Occupancies shall have at least one portable fire extinguisher with a minimum rating of 4-A, provided for each 1000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located so that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Wood working classified as a hazardous occupancy involving flammable and combustible liquids shall have at least one portable fire extinguisher with a minimum rating of 4-A, 40-B:C provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 30 feet, by an unobstructed path of travel, from a portable fire extinguisher.

#### **1.4.3.6 Institutional – Group I Occupancies.**

Institutional occupancies shall be classified as **ordinary hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Institutional maintenance shops and labs using flammable and combustible liquids (not classified as Group H occupancies as per the current Fire Code) shall be classified as **ordinary hazard**. At least one portable fire extinguisher with a minimum rating of 2-A, 20-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 50 feet, by an unobstructed path of travel, from a portable fire extinguisher.

#### **1.4.3.7 Mercantile – Group M Occupancies.**

Mercantile shall be classified as **ordinary hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Group M motor vehicle service stations dispensing fuel shall be classified as **ordinary hazards**. At least two portable fire extinguishers with a minimum rating of 2-A, 10-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 50 feet, by an unobstructed path of travel, from a portable fire extinguisher.

#### 1.4.3.8 Residential – Group R Occupancies.

Group R - Residential occupancies shall be classified as **ordinary hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

#### EXCEPTION:

1) R-2 Apartment occupancies shall be provided with at least one portable fire extinguisher. Such extinguisher shall have a gauge showing the charge and a minimum rating of 1-A, 10-B:C. A fire extinguisher shall be provided for and properly placed within each occupied apartment unit. Location and placement of the fire extinguisher shall be placed in accordance with the manufactures guidelines or Section 1.3.8, near the kitchen entryway, accessible and no closer than 5 feet from the cooking appliance. The extinguisher shall be placed so that the top of the extinguisher is not more than five feet above floor and the clearance between the bottom of the extinguisher and the floor is not less than 4 inches. The fire extinguisher may be placed within an unlocked pantry or cabinet. Fire extinguishers shall comply with Section 1.3.1 for annual maintenance and tagging. Fire extinguishers that are not serviceable, such as an extinguisher with a 1A, 10B:C rating, should be visually inspected at least monthly for loss of pressure (as indicated on the extinguisher's gauge) or for other damage to the fire extinguisher that might affect its performance.

2) R-2 Apartment (Garden-Type) properties equipped with automatic fire protection sprinkler systems may also exclude the portable extinguishers with a minimum rating of 2A, 10BC, required above and the extinguisher with a minimum rating of 1A, 10BC, referenced in Exception 1 above.

R-2 Residential occupancy offices, game rooms, physical fitness areas, storage rooms, maintenance shops, boiler rooms, laundry facilities, mail rooms, club houses, commons, and public assembly areas shall be classified as ordinary hazards. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the room or area is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

#### 1.4.3.9 Storage – Group S Occupancies.

High-hazard storage, Group S-1 occupancies considered **extra hazard** occupancies shall have at least one portable fire extinguisher with a minimum rating of 4-A, 40-B:C provided for each 4000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located so that no point in the building is located more than 30 feet, by an unobstructed path of travel, from a portable fire extinguisher. (Includes warehousing of or in-process storage of Class III, IV and high-hazard commodities)

Moderate-hazard storage, Group S-1 occupancies with combustible storage not classified as H occupancy, shall be classified as **ordinary hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher. (Includes warehousing of or in-process storage of Class I and II commodities)

Low-hazard storage, Group S-2 occupancies with noncombustible storage shall be classified as **light hazard**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 6000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher. (Includes warehousing of or in-process storage of Class I commodities only when located in Group S-2)

Group S-1 Repair garages (limited to the exchange of parts) shall be classified as **ordinary occupancies**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Group S-2 open parking garages shall be classified as **ordinary hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 10-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 75 feet, by an unobstructed path of travel, from a portable fire extinguisher.

Group S-1 aircraft hangars (limited to exchange of parts) shall be classified as **ordinary hazards**. At least one portable fire extinguisher with a minimum rating of 2-A, 20-B:C shall be provided for each 3000 square feet of floor space, or fraction thereof. Portable fire extinguishers shall be so located that no point in the building is located more than 50 feet, by an unobstructed path of travel, from a portable fire extinguisher.

## **Section 1.5 --- General area requirements.**

### **1.5.1 Commercial cooking operations.**

A listed Type "K" portable fire extinguisher shall be provided where cooking equipment involves the use of vegetable or animal oils and fats for deep frying. The fire extinguisher shall be installed within 30 feet of commercial food heat-processing equipment, as measured along an unobstructed path of travel.

### **1.5.2 Parade Floats.**

Motorized parade floats and towing apparatus shall be provided with a minimum 2-A, 10-B:C portable fire extinguisher readily accessible to the operator.

### **1.5.3 Asphalt Kettles.**

A minimum 40-B:C-rated portable fire extinguisher shall be located within 25 feet of each asphalt kettle when the heat source is operating. A minimum 40-B:C-rated portable fire extinguisher shall also be located on roofs during asphalt coating operations. Also see Houston Fire Department LSB Standard 11, "Roofing Operations".

### **1.5.4 Powered Industrial Trucks.**

Vehicle fire extinguishers shall be provided for each liquid-fuel or LP-gas powered industrial truck and be of a minimum rating of 10-B:C.

### **1.5.5 Battery Charging.**

Battery-charging areas shall be provided with a fire extinguisher having a minimum rating of 4-A, 20-B:C within 20 feet of the battery charger.

### **1.5.6 Airport-towing vehicles.**

Vehicles used for towing aircraft shall be equipped with at least one listed fire extinguisher having a minimum rating of 20-B:C.

### **1.5.7 Airport-welding apparatus.**

Welding apparatus shall be equipped with at least one listed fire extinguisher having a minimum rating of 2-A, 10-B:C.

### **1.5.8 Airport-aircraft fuel-servicing vehicles ( Aircraft Refuelers).**

Aircraft fuel-servicing vehicles shall be equipped with at least two listed fire extinguishers, each having a minimum rating of 20-B:C. A fire extinguisher shall be readily accessible from either side of the vehicle.

**1.5.9 On hydrant fuel-servicing vehicles. Hydrant fuel-servicing vehicles shall be** equipped with a minimum of one listed portable fire extinguisher complying with Section 906, and having a minimum rating of 20-B:C.

### **1.5.10 Aircraft motor vehicle fuel dispensing stations.**

Portable fire extinguishers at fuel-dispensing stations shall be located such that pumps and dispensers are not more than 75 feet from one such extinguisher. Fire extinguishers shall be provide as followed

When the open-hose discharge capacity of the fueling system is no more than 200 gallons per minute, at least two listed portable fire extinguishers having a minimum rating of 20-B:C shall be provided.

When the open-hose discharge capacity of the fueling system is more than 200 gallons per minute but not over 350 gallons per minute, at least one listed wheeled extinguisher having a minimum rating of 80-B:C and having a capacity of 125 pounds of agent, shall be provided.

When the open-hose discharge capacity of the fueling system is more than 350 gallons per minute, at least two listed wheeled extinguishers, having a minimum rating of 80-B:C each and having a capacity of 125 pounds of agent of each, shall be provided.

### **1.5.11 Heliports.**

At least one fire extinguisher having a minimum 80-B:C rating shall be provided for each permanent take-off and landing area and for aircraft parking areas.

### **1.5.12 Tents.**

Portable fire extinguishers and other fire-protection appliances shall be provided in every tent, canopy, and temporary membrane structure as follows:

200-500 square feet of floor area: One 2-A:10-B:C rated portable fire extinguisher.

501-1000 square feet of floor area: Two 2-A:10-B:C rated portable fire extinguishers.

Each additional 2000 square feet of floor area or fraction thereof: One 2-A:10-B:C rated portable fire extinguisher.

At least one 40-B:C rated portable fire extinguisher shall be provided for each kitchen, mess hall, power generator or transformer and at locations where flammable and combustible liquids are used, stored or dispensed, and as required by the code official.

### **1.5.13 Automobile wrecking yards.**

Offices, storage buildings and vehicles used for site operations shall each be provided with at least one portable fire extinguisher with a rating of not less than 4-A, 40-B:C. When required by the code official, additional portable fire extinguishers shall be required in specific use areas.

### **1.5.14 Magnesium.**

A supply of approved extinguishing materials in a substantial container with a hand scoop or shovel for applying material on magnesium fires or an approved portable fire extinguisher designed for use with such material shall be kept within easy reach of every operator performing a machining, grinding, or other processing operation on magnesium.

### **1.5.15 Cutting and Welding-torch and flame producing devices.**

A minimum 2-A, 20-B:C-rated fire extinguisher or a charged water hose equipped with a nozzle shall be located within 30 feet of the location where hot works is in progress and shall be accessible without climbing stairs or ladders.

### **1.5.16 LP-Gas and Open Flame Cooking.**

For compliance see Houston Fire Department LSB Standard 10, "LP-Gas Storage and Use".

## APPENDIX – A

### CLASSIFICATION OF HAZARDS

#### **Light Hazard.**

Light hazard occupancies are locations where the total amounts of Class A combustible materials, including furnishings, decorations, and contents, is of minor quantity. This classification anticipates that the majority of content items are either noncombustible or so arranged that a fire is not likely to spread rapidly. Small amounts of Class B flammables used for duplicating machines, art departments, etc., are included provided that they are kept in closed containers and safely stored.

#### **Ordinary Hazard.**

Ordinary hazard occupancies are locations where the total amount of Class A combustibles and Class B flammables are present in greater amounts than expected under light hazard occupancies. These occupancies could consist of dining areas, mercantile shops and allied storage, light manufacturing, research operations, auto showrooms, parking garages, workshop or support service areas of light hazard occupancies, and warehouses containing Class I or Class II commodities as defined by NFPA 231, "Standard for General Storage".

#### **High hazard.**

High hazard occupancies are locations where the total amount of Class A combustible and Class B flammables present, in storage, production use, and/or finished product is over and above those expected and classed as ordinary hazards. These occupancies could consist of woodworking, vehicle repair, aircraft repair and boat servicing, cooking areas, individual product display showrooms, product convention center displays, and storage and manufacturing processes such as painting, dipping, coating, including flammable liquid handling. Also included is warehousing of or in-process storage of other Class I and Class II commodities.

## APPENDIX – B

### Class A Rated Fire Hazards

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<b>Light Hazard Occupancy</b>	<b>Ordinary Hazard Occupancy</b>	<b>High Occupancy</b>	<b>Hazard</b>
Minimum rated Single Extinguisher	2-A <sup>c</sup>	2-A	4-A <sup>a</sup>
Maximum floor Area per Unit of A	3000 sq. ft.	1500 sq. ft.	1000 sq. ft.
Maximum floor Area for Extinguisher <sup>b</sup>	11,250 sq. ft.	11,250 sq. ft.	11,250 sq. ft.
Maximum travel Distance to Extinguisher	75 ft.	75 ft.	75 ft.

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a. Two 2 ½ gallon (9.46-L) water-type extinguishers can be used to fulfill the requirements of one 4-A rated extinguisher.

b. Refer to NFPA 10, Appendix E-3-3 for more details concerning maximum floor area criteria.

c. Two water-type extinguishers each with a 1-A rating shall be deemed the equivalent of one 2-A extinguisher for Light (Low) Hazard Occupancies, only where there are ordinary combustible materials and no electrical hazards exist.

## APPENDIX - C

### Class B Rated ( Flammable and Combustible Liquids) Fire Hazards

Type of Hazard	Basic Minimum Extinguisher Rating	Maximum Travel Distance to Extinguishers (feet)
Light (Low)	5-B	30
	10-B	50
Ordinary (Moderate)	10-B	30
	20-B	50
Extra (High)	40-B	30
	80-B	50

NOTE 1: The specified ratings do not imply that fires of magnitudes indicated by these ratings will occur, but rather to give the operators more time and agent to handle difficult spill fires that occur.

NOTE 2: For requirements on water-soluble flammable liquid and alternative sizing criteria, refer to NFPA 10, Sections 3-3 and 3-4.



## References

1. City of Houston *Fire Code*, International Fire Code, 2006 edition, as amended.
2. City of Houston *Building Code*, International Building Code, 2006 edition, as amended.
3. National Fire Protection Association (NFPA) Standard 10, "Portable Fire Extinguishers".
4. HFD LSB Standard 02, "Inspection and Testing of Fire Protection and Life-safety Equipment".
5. HFD LSB Standard 10, "LP-Gas Storage and Use".
6. HFD LSB Standard 11, "Roofing Operations".