

	FLAMMABLE & COMBUSTIBLE LIQUIDS	Doc No:	5101 - 5013
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<i>SAFETY OPERATING PROCEDURE (SOP)</i>		Page 1 of 6	
OPR:	Approval:	DEPARTMENT: RISK MANAGEMENT	
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1.0 PURPOSE

- 1.1 To establish requirements for the proper storage, transfer, and final use of flammable and combustible liquids used by Okaloosa County BOCC employees. The use of underground and above ground storage tanks, flammable and/or combustible liquids, storage, and use over exempt amounts are also covered in this policy.

2.0 DEFINITIONS

- **Closed Container:** sealed by means of a lid or other device that neither liquid nor vapor will escape from it at ordinary temperatures.
- **Combustible Liquid:** having a flash point at or above 100 Degrees Fahrenheit (100° F), subdivided as follows:
 - **Class II Liquids:** having closed cup flash point at or above 100° F and below 140° F.
 - **Class III-A Liquids:** having closed cup flash points at or above 140° F and below 200° F.
 - **Class III-B Liquids:** having a closed cup flash point at or above 200° F.
- **Flammable Liquid:** having a closed cup flash point below 100° F. Flammable liquids are further categorized into a group known as Class I liquids, subdivided as follows.
 - **Class I-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 I-C Liquids:** having a flash point at or above 73° F but below 100° F.
- **Flash Point (FP):** minimum temperature of a liquid at which sufficient vapor is given off to form an ignitable mixture with the air, near the surface of the liquid or within the vessel used.
- **Safety Can:** approved container, of not more than 5.3 gallons capacity, having a screen or strainer in each fill and pour opening and having a spring-closing

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lid and spout cover designed to safely relieve internal pressure when exposed to fire exposure.

3.0 RESPONSIBILITIES

- 3.1 Only approved containers and portable tanks will be used for storage and handling of flammable liquids. Approved metal safety cans will be used for the handling and use of flammable liquids in quantities greater than one gallon, except when applied to those that are very thick and extremely hard to pour, which may be used and handled in original shipping containers. For quantities of one gallon or less, only the original container or approved metal safety cans will be used for storage, use, and handling of flammable liquids.
- 3.2 Flammable or combustible liquids will not be stored in areas used for exits, stairways, or normally used for safe passage of people.
- 3.3 All flammable and combustible containers will be labeled with the name of the liquid and hazard warning at a minimum.
- 3.4 All flammable and combustible containers and tanks will be protected against collision.

4.0 INTERIOR STORAGE

- 4.1 Not more than 25 gallons of flammable or combustible liquids may be stored in a room outside of an approved storage cabinet.
- 4.2 Not more than 60 gallons of flammable (flashpoint below 140° F) or 120 gallons of combustible (flashpoint at or above 140° F) may be stored in any one storage cabinet.
- 4.3 Not more than 3 storage cabinets may be present in a single storage area.
- 4.4 Every inside storage room shall be provided with either a gravity or a mechanical exhaust ventilation system. Such system shall be designed to provide for a complete change of air within the room at least six times per hour. If a mechanical exhaust system is used, it shall be controlled by a switch located outside of the door. The ventilating equipment and any lighting fixtures shall be operated by the same switch. A pilot light shall be installed adjacent to the switch if Class I flammable liquids are dispensed within the room. Where gravity ventilation is provided, the fresh air intake, as well as the exhaust outlet from the room shall be on the exterior of the building in which the room is located.

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4.5 Flammable and combustible liquids shall be stored in the prescribed containers in accordance with the following table:

Container Type	Class 1A	Class 1B	Class 1C	Class II	Class IIIA
Glass	1 pt	1 qt	1.3 gal	1.3 gal	5.3 gal
Metal or Approved Plastic	1.3 gal	5.3 gal	5.3 gal	5.3 gal	5.3 gal
Safety Cans	2.6 gal	5.3 gal	5.3 gal	5.3 gal	5.3 gal
Metal Drums	119 gal	119 gal	119 gal	119 gal	119 gal
Approved Metal Portable Tanks	660 gal	660 gal	660 gal	660 gal	660 gal

FIGURE 4.5: STORAGE CONTAINERS

- 4.6 Flammable liquids will be kept in closed containers when not being used.
- 4.7 Leakage or spillage of flammable or combustible liquids will be cleaned up and disposed of promptly and safely.
- 4.8 Flammable liquids may be used only where there are no open flames or other sources of ignition within 50 feet of the operation, unless conditions warrant greater clearance.
- 4.9 A minimum of 1 portable fire extinguisher shall be located within 30 feet of a storage flammable / combustible storage location as provided in accordance with NFPA 30 & 10.
- 4.10 For individual storage containers exceeding 10 gallons, a spill response/control plan with a spill kit shall be in place.

5.0 EXTERIOR STORAGE

5.1 Applicability

- 5.1.1 Drums or other containers that do not exceed 119 gallons individual capacity.
- 5.1.2 Portable tanks that do not exceed 660 gallons individual capacity.
- 5.1.3 Intermediate bulk containers that do not exceed 793 gallons individual capacity.

5.2 Exterior Storage of Flammable and Combustible Liquids shall be in accordance with the following table:

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Class	Containers		Portable Tanks & Metal IBC's		Rigid Plastic & Composite IBC's		Minimum Separation Distance		
	Max Qty per Pile (gal)	Max Storage Height (ft)	Max Qty per Pile (gal)	Max Storage Height (ft)	Max Qty per Pile (gal)	Max Storage Height (ft)	Between Piles or Racks (ft)	To Property Line that Can/Is Built Upon (ft)	To Street, Alley, or Public Way (ft)
IA	1,100	10	2,200	7	NP	NP	5	50	10
IB	2,200	12	4,400	14	NP	NP	5	50	10
IC	4,400	12	8,800	14	NP	NP	5	50	10
II	8,800	12	17,600	14	8,800	14	5	25	5
III	22,000	18	44,000	14	22,000	18	5	10	5

FIGURE 5.2: EXTERIOR STORAGE

Note: NP: Not Permitted

- 5.3 When 2 or more categories of classes of liquids are stored in a single pile, the maximum quantity permitted in that pile shall be that of the most hazardous class of liquid present.
- 5.4 At least 1 portable fire extinguishers shall be located within 30 feet of a storage location as provided in accordance with NFPA 30 & 10.
- 5.5 For individual storage containers exceeding 10 gallons, a spill response/control plan with a spill kit shall be in place.

6.0 TRAINING

- 6.1 Employees will be trained on proper storage, transfer, and final use of flammable and combustible liquids.

7.0 RECORD KEEPING

- 7.1 Training records shall be maintained at the department in which the employee is working and a copy of the training certificate will be sent to Human Resources for their permanent file.

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8.0 ABBREVIATIONS

ABBREVIATION	DESCRIPTION
BOCC	Board of County Commissioners
f	Fahrenheit
ft	Feet
gal	Gallon
IBC	Intermediate Bulk Container
NFPA	National Fire Protection Association
NP	Not Permitted
pt	Pint

9.0 DOCUMENT HISTORY

DATE	TYPE	DESCRIPTION OF CHANGE
19 Jun 2023	Initial	New Document
	Revision 1	

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