

Flammable liquids control areas

A control area is a space within a building where the quantities of liquids stored do not exceed the maximum allowable quantities.

There are a maximum number of control areas allowed on any given floor of a building. For the area to comply as a control area, it will require walls, ceiling, doors, windows and floors to have a specified fire resistance.

DESIGN AND NUMBER OF CONTROL AREAS				
Floor level	Maximum allowable quantity per control area (percent)	Number of control areas per floor	Fire resistance rating for fire barriers (hours)	Fire door ratings (hours)
Greater than 9	5	1	2	1.5
7-9	5	2	2	1.5
4-6	12.5	2	2	1.5
3	50	2	1	.75
2	75	3	1	.75
1	100	4	1	.75
Below grade				
1	75	3	1	.75
2	50	2	1	.75
Lower than 2	Not allowed	Not allowed	Not allowed	Not allowed

Liquid storage and dispensing rooms are considered a control area.

For example: A 12,000 square-foot metal shop building without 1-hour fire-rated walls would be considered a control area and would be required to have no more than the maximum allowable quantity of flammable/combustible liquids in that area. The quantity can be increased 100% if all flammable/combustible liquids are stored in approved flammable liquids cabinets or safety cans and that amount can be increased (100%) if the property is fully sprinkled.

MAQ OF FLAMMABLE AND COMBUSTIBLE LIQUIDS PER CONTROL AREA		
	Liquid classes	Gallons
Flammable liquids	1 A	30
	IB and IC	120
	IA, IB, and IC contained	120
Combustible liquids	II	120
	IIIA	330
	IIIB	13,200

This table is in relation to all storage, not just inside a flammable liquids cabinet.

The information in this document is based on NFPA 30 (2018); for further guidance on flammable liquids storage, refer to NFPA codes.

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Some occupancies have lower limits, including assembly, health care, residential educational, day care, detention, and business.

- Quantities can be increased by 100% when stored in flammable liquids cabinets or approved safety cans. (This should not apply if all storage in the area is not in cabinets or safety cans.)
- Quantities in a building can be increased by 100% if the building is protected by a properly installed and serviced sprinkler system.
- IA liquids should not exceed 30, 60, 120 based on exceptions above.
- Class IIIB liquids are not limited if the building is equipped throughout with an automatic sprinkler system.

Based on the allowances above, a maximum of 480 gallons of IB, IC, or II flammable combustible liquids in a single area may be allowed if stored in approved flammable liquids storage cabinets or in safety cans, and if the building is equipped throughout with an automatic sprinkler system. This can be applied accumulatively where both are present. (IA liquids allow 30 gallons, 60 gallons in a single control area if in listed cabinets or containers, and 120 gallons if the entire building is sprinklered.)

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