



# A2L Cylinder Storage Options

## A2L Refrigerant Indoor Storage

### Cylinders



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For information purposes only. Always check with local building authorities regarding cylinder storage requirements.

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CHARACTERISTIC	SHELF STORAGE	RACK STORAGE	SOLID-PILE
Storage design	Shelf cannot exceed 30" from front to back	Each level designed to hold pallet loads	Pallets stacked one upon another
Construction materials	Steel shelves	Steel rack	N/A
Storage height	Maximum 6' to top of product	Can exceed 6' limited by sprinkler design	Can exceed 6' limited by sprinkler design
Sprinkler system design	Ordinary Hazard Group 2	Extras Hazard Group 1	Extras Hazard Group 1
Separation from flammable liquids	Required	Required	Required
Storage of other flammable or combustible products above A2L refrigerants	Prohibited	Prohibited	Prohibited
Storage of other flammable liquids adjacent to A2L refrigerants	20' separation	20' separation	20' separation
Storage of flammable liquids with secondary containment adjacent to A2L refrigerants	10' separation to containment area	10' separation to containment area	10' separation to containment area

The 2024 National Fire Protection Association (NFPA) codes & standards were recently updated to account for the storage of A2L refrigerants. These standards are referenced in the National Fire Code of Canada. Fire marshals & building officials use the maximum allowable quantities (MAQ) contained in NFPA 1 and NFPA 55 to provide A2L storage guidance.

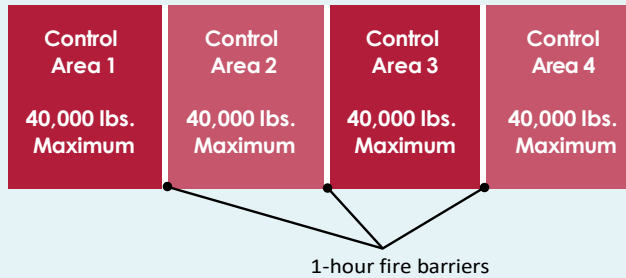
The MAQ for A2L refrigerant storage is based on the type of occupancy and the number of



control areas in the building. Each building can have up to four control areas, increasing the total amount of refrigerant that can be stored in the building. 2024 codes have been revised & the table shows maximum quantities in each control area for common occupancies.



A warehouse protected with fire sprinklers can include 1-hour fire-resistance-rated walls to create 4 separate control areas. Each control area can store up to 40,000 lbs. of liquefied A2L refrigerants. See graphic for control areas.



Construction of a 1-hour fire barrier can be as simple as a wood stud wall covered with fire-resistant gypsum board. All entrances through the 1-hour fire barriers must be protected with a fire-rated device, such as roll-down shutters or fire doors.

The code will classify the storage method as either:

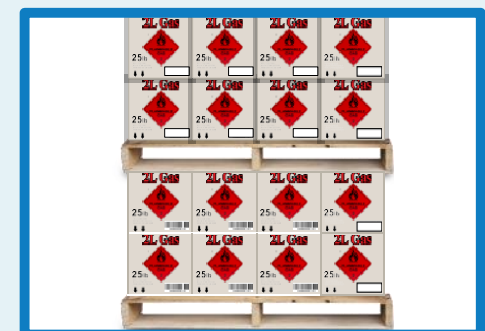
1) Shelf Storage



2) Rack Storage



3) Solid Pile



MAXIMUM ALLOWABLE QUANTITY (MAQ) IN A SINGLE CONTROL AREA		
Occupancy Classification	Non-sprinklered liquefied gas in cylinders	Sprinklered liquefied gas in cylinders
M – mercantile	20,000 lbs.	40,000 lbs.
S – storage/warehouse	20,000 lbs.	40,000 lbs.
F – factory/filling facility	10,000 lbs.	20,000 lbs.