



New York City Fire Department
Interim Guidance for COVID-19 Response

Storage, Handling and Use of Alcohol-Based Hand Rubs
New York City Fire Code Requirements

July 30, 2020

Storage, Handling and Use of Alcohol-Based Hand Rubs

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Storage, Handling and Use of Alcohol-Based Hand Rubs

Hand sanitizer has been used in healthcare settings for many years, typically in wall-mounted and table-top dispensers. However, due to the COVID-19 pandemic, ABHR use has expanded to many different settings. This interim guidance addresses the fire safety requirements associated with their storage, handling and use.

Questions about Fire Code requirements may be directed to the New York City Fire Department Customer Service Center by calling 311 during regular business hours (Monday-Friday, 9 am to 4 pm EST, except holidays; emailing FDNY.BusinessSupport@fdny.nyc.gov; or using the Fire Code public inquiry form on the Fire Department's website, www.nyc.gov/fdny ("Codes" tab to the "Questions and Feedback" page).

Alcohol-Based Hand Rubs

Hand sanitizer, or Alcohol-Based Hand Rubs (ABHR) as it is called in the New York City Fire Code, is regulated by the Fire Code because it contains alcohol as the active ingredient. ABHR commonly have an alcohol content of at least 60-70%, which makes ABHR a flammable liquid.

Flammable liquids generate vapors that are easily ignitable, and, under the right conditions, explosive. Flammable liquids also promote the burning of combustible materials, just as charcoal lighter (a flammable liquid) is used to speed the burning of charcoal.

Among the ways the Fire Code mitigates the potential fire hazards of ABHR is to restrict the amount allowed to be stored and to specify where and how it may be stored, handled and used.

ABHR Use During the COVID Emergency

New York State has mandated as part of the phased reopening in New York City that employers provide and maintain hand hygiene stations for their workers. In areas where hand washing with soap and water is not available or practical, businesses must provide hand sanitizer containing 60% or more alcohol.

The Fire Department recognizes that during the present COVID emergency, building and business owners will need to provide and store on-premises more substantial quantities of ABHR than in the past. As such, it would be impracticable and contrary to the interests of public safety in the present circumstances to strictly enforce certain Fire Code ABHR regulations. Accordingly, the Fire Department will exercise its enforcement discretion and modification authority to allow use of ABHR in accordance with this interim guidance.

ABHR Product Packaging and Safe Handling

As indicated above, flammable liquids such as ABHR present an enhanced fire safety risk because they release flammable vapors and promote the burning of combustible materials. In order to minimize the fire safety risks associated with increased ABHR storage, handling and use, the Fire Department encourages the use of ABHR in consumer-product (non-bulk) packaging.

Consumer-product (non-bulk) packaging typically takes the form of sealed, plastic, disposable table-top dispensers, or refillable wall-mounted dispensers that use sealed cartridges, with a maximum capacity of 68 fluid ounces. The key fire safety concerns associated with consumer-product (non-bulk) packaging are safe storage and installation (as discussed below) and the need to promptly clean up any spills, especially on carpeting or other combustible material. Generally, spills from consumer-product (non-bulk) packaging are limited because the containers are made of plastic and are small in size.

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Bulk packaging includes any container of ABHR with a capacity exceeding 68 fluid ounces and/or that requires handling of the ABHR contents. Storage and use of ABHR in bulk packaging is discouraged in most occupancies because of the fire safety risks associated with the handling of large containers and the pouring or pumping of their flammable contents, including spills and the release of flammable vapors.

ABHR Permit Requirements

Fire Code Section FC 105.6 requires a Fire Department (operational) permit for storage, handling, and use of Class I flammable liquid in quantities exceeding 5 gallons.

ABHR in bulk packaging is subject to this permit requirement.

The Fire Code does not specifically address permit requirements for ABHR in consumer-product (non-bulk) packaging. The Fire Department has determined that a Fire Department permit is required only if the total quantity of ABHR in consumer-product (non-bulk) packaging stored on the premises for use on the premises (excluding containers in actual use) exceeds **275 gallons**.

Each commercial tenant in a building with multiple commercial tenants shall separately comply with ABHR permit and supervision requirements, if applicable, but the total amount of ABHR stored may not exceed the Maximum Allowable Quantity the Fire Code allows on the floor, as explained below.

ABHR Supervision Requirements

Section FC 3401.6 requires that the storage of ABHR in excess of **275 gallons** be under the **general supervision** of a Fire Department Certificate of Fitness holder (C-92). This means that the Certificate of Fitness holder is responsible for ensuring the safe storage of the ABHR containers but does not have to be on the premises at all times.

Section FC3401.6 also requires that handling and use of ABHR (including pouring, pumping or other transfer of ABHR) be under the **personal supervision** of a Fire Department Certificate of Fitness holder (C-92) when the quantity of such liquids exceeds **275 gallons**. This means that the Certificate of Fitness holder is responsible for personally conducting or supervising the handling and use of the ABHR and must be present on the premises during such handling and use. (In this context, use does not include personal use of an ABHR dispenser for hand sanitizing.)

Personal supervision by a Fire Department Certificate of Fitness holder is required for handling and use of ABHR in bulk packaging.

Because consumer-product (non-bulk) packaging does not require the opening of ABHR containers or the handling of its contents (except for personal dispensing), the Fire Department has determined that personal supervision by a Certificate of Fitness holder is **not** required for ABHR in consumer-product (non-bulk) packaging. However, the general supervision requirement set forth above does apply to storage of ABHR in consumer-product (non-bulk) packaging.

The Certificate of Fitness holder is responsible for ensuring that the building or occupancy he or she supervises complies with all applicable Fire Code requirements. The Certificate of Fitness holder must maintain a daily record of the quantity of ABHR in storage in the building/occupancy and provide such information to the building owner or manager upon request.

Information about the applicable Certificate of Fitness (C-92) on the Fire Department's website, www.nyc.gov/fdny under the "Business" tab.

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Design and Installation Requirements for ABHR Dispensers

Section FC 3405.5 sets forth the following requirement for design, installation, handling and use of ABHR dispensers. Key requirements include:

- The capacity of the dispenser cannot exceed 68 ounces, with a maximum of 41 ounces in a corridor.
- Wall-mounted dispensers shall not exceed a maximum capacity of 10 gallons in a single control area (an area with fire-rated floor, ceiling and walls).
- Dispensers shall not be installed directly adjacent to, above or below any electrical receptacle, switch, appliance, device or another ignition source. The wall space between the dispenser and the floor shall remain clear and unobstructed.
- Dispensers shall be of the non-aerosol, disposable and non-refillable type (dispensers designed for use with replacement cartridges that do not require handling of the ABHR contents are acceptable).
- Wall-mounted dispensers shall be mounted a minimum of 42 inches and a maximum of 48 inches above the finished floor.
- Dispensers shall not release their contents except when the dispenser is manually activated (including activation of a “touchless” device).
- In occupancies with carpeted floors, dispensers may only be installed in corridors in a fire area or smoke compartment protected by a sprinkler system.

ABHR Storage Requirements

The Fire Code restricts the quantity and regulates the storage locations of ABHR.

ABHR is limited to the Maximum Allowable Quantity for flammable liquids set forth in FC Table 2703.1.1(1) (see below). Storage is prohibited in basements, cellars or other areas below grade. A substantial quantity (120 gallons in unsprinklered buildings, 240 gallons in sprinklered buildings) is allowed per control area (in up to four control areas) on the first floor (street level). The allowable amount decreases as one goes higher in the building.

On the 7th to 9th floors, storage of flammable liquids is restricted to 12 gallons per floor in an unsprinklered building and 24 gallons in a sprinklered building, and on the 10th floor and above 6 gallons per floor in an unsprinklered building and 12 gallons in a sprinklered building. (Additional amounts are allowed if stored in approved fire-resistant metal cabinets.)

These restrictions and location regulations are set forth in the following table extracted from FC Table 2703.1.1(1), “Maximum Allowable Quantity Per Control Area of Hazardous Materials Posing a Physical Hazard” (footnotes omitted):

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Floor Level	MAQ per Control Area (Liquid Gallons)			Number of Control Areas per Floor	Fire-Resistance Rating for Fire Barriers (Hrs.)
	MAQ per Control Area	In Buildings Protected by Sprinkler System or in Approved Storage Cabinet	In Buildings Protected by Sprinkler System and in Approved Storage Cabinet		
Below grade	Not Permitted				
1	120	240	480	4	1
2	90	180	360	3	1
3	45	90	180	2	1
4-6	15	30	60	2	2
7-9	6	12	24	2	2
Above 9	6	12	24	1	2

Building and business owners must comply with the Maximum Allowable Quantity amounts for ABHR in both bulk and consumer-product (non-bulk) packaging. However, if the quantity allowed on the seventh floor or above is not adequate during the present COVID emergency due to multi-tenant floors or the number of building occupants, the Fire Department will on a case-by-case basis allow the storage of ABHR in consumer-product (non-bulk) packaging up to the Maximum Allowable Quantity in each commercial tenant space. Application for a modification (variance) must be made in accordance with the procedures set forth below.

All buildings and business owners must comply with the storage requirements for flammable liquids set forth in Section FC 3404.3.3, including:

1. ABHR must be stored in a “control area,” a fully-enclosed fire-rated room or space. (See FC2703.8.3.4.) Ordinarily, this would be a fully-enclosed storage room with sheetrock walls from the floor slab below to floor slab above (not sheetrock partitions from finish floor to a drop ceiling) and a steel, fire-rated door. Alternatively, approved fire-resistant metal cabinets may be used.
2. All bulk ABHR must be stored in such a room or cabinet and any handling of ABHR from bulk containers (such as transferring it into dispensers) must be done in such a room. Bulk and ABHR shall not be stored in the same control area as consumer-product (non-bulk) ABHR.
3. Commercial tenants without a suitable storage room should request storage space from the building owner or manager.
4. ABHR must not be stored near or be allowed to obstruct physically the route of egress.
5. ABHR must be stored away from any heat source or other source of ignition (such as electrical or mechanical equipment).
6. Empty ABHR containers shall be properly disposed of on a daily basis.
7. If required by Section FC906, one or more portable fire extinguishers shall be provided and installed in accordance with that section.

ABHR Storage in Quantities Exceeding Maximum Allowable Quantities

If the quantities of hazardous materials exceed those allowed to be stored in control areas, Section FC 3404.3.4.3 requires them to be stored in liquid storage rooms or liquid storage warehouses.

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Section FC 105.4 requires that the design and installation document for liquid storage rooms or liquid storage warehouses to be submitted to the Fire Department for review and approval. Complete the Fire Department TM-1 application for such requests.

Applications for a Fire Code modification (variance) to allow excess storage of ABHR in office buildings and other commercial occupancies (or in any other facility that is not a liquid storage room or liquid storage warehouse) may be submitted to the Fire Department for review and approval. Complete the Fire Department BFP-MOD application for such requests.

All applications may be completed and electronically filed with the Fire Department on its website: <https://www1.nyc.gov/site/fdny/business/all-certifications/plan-tm.page>.

hand sanitizer guidance (7/30/20)