



**INFORMATION TO BE FURNISHED TO THE FIRE DEPARTMENT**  
**WHEN REQUESTING PERMISSION TO USE IN A **NEW** REFRIGERATING**  
**SYSTEM A REFRIGERANT OF A TYPE NOT SPECIFIED IN § 27-4115 OF THE**  
**ADMINISTRATIVE CODE**

1. Occupant, premises and Fire Department account number for the proposed system.
2. Refrigerant number and chemical name of the refrigerant and its ASHRAE 15 of 2001 classification (A1, B1, A2, B2, etc).
3. Manufacturer, model number, horsepower, tonnage and means of motive power (electric, steam turbine or engine driven) for the refrigerating system.
4. Identify whether the system is a direct or indirect refrigerating system.
5. The quantity (pounds) of refrigerant in the system.
6. The location of the refrigerating system's machinery within the building and the occupancy classification of the building or space. Machinery refers to all refrigerating equipment forming a part of the refrigerating system including, but not limited to, the compressor(s), condenser(s), liquid receiver(s), evaporator(s) and connecting refrigerant piping.
7. Confirm whether or not all system components containing refrigerant are required to be located in a machinery room in accordance with § 7.4 of ASHRAE 15 of 2001. Provide details to support your position.
8. If the refrigerating system is required to be installed in a machinery room confirm that the machinery room design and installation complies with the applicable requirements of § 8.11 of ASHRAE 15 of 2001 including but not limited to:
  - (a) The installation of a refrigerant detector that will actuate emergency ventilation and audible and visible alarms inside the room and outside each entrance to the room.
  - (b) The capacity of the emergency ventilation fans as required by § 8.11.5 of ASHRAE 15 of 2001. Such ventilation rate is determined from the refrigerating system in the machinery room that contains the largest quantity (pounds) of refrigerant. Indicate the total pounds of refrigerant in the largest system within the machinery room.

- (c) Emergency remote controls properly labeled and located immediately outside the machinery room door(s) to independently start the mechanical ventilation and stop the compressors.
  - (d) Machinery room door(s) are tight-fitting, opening outward and self-closing if they open into the building.
9. Propose site specific language for a warning sign to be located outside each machinery room entrance meeting the intent of §11.2.4 of ASHRAE 15 of 2001.
  10. Confirm that the system pressure relief valves and purge discharges vent as required in §9.7.8 of ASHRAE 15 of 2001. For systems required to vent to atmosphere, confirm that such discharge location is at least 15 feet above adjoining ground level and not less than 20 feet from any window, ventilation opening, or exit in any building.
  11. Provide a copy of Buildings Department Equipment Use Permit or other documentation indicating that the Department of Buildings has no objection to the installation of the refrigerating system.

Complete information should be submitted to:

New York City Fire Department  
Bureau of Fire Prevention  
9 MetroTech Center  
Brooklyn, NY 11201-3857

Attn: Technology Management Unit

A separate application must be submitted for each refrigerating system. Any questions regarding this matter should be directed to John Macek, P. E. who can be reached at (718) 999-1506.

*TM Refrig 2R (9/03)*



**INFORMATION TO BE FURNISHED TO THE FIRE DEPARTMENT  
WHEN REQUESTING PERMISSION TO SUBSTITUTE THE TYPE OF  
REFRIGERANT IN AN **EXISTING** REFRIGERATING SYSTEM TO A TYPE NOT  
SPECIFIED IN § 27-4115 OF THE ADMINISTRATIVE CODE**

1. Occupant, premises and Fire Department account number for the system where substitute refrigerant is proposed.
2. Refrigerant number and chemical name of the substitute refrigerant and its ASHRAE 15 of 2001 classification (A1, B1, A2, B2, etc); refrigerant number and chemical name of the replaced refrigerant.
3. Manufacturer, model number, horsepower, tonnage and means of motive power (electric, steam turbine or engine driven) for the refrigerating system.
4. Identify whether the system is a direct or indirect refrigerating system.
5. The quantity (pounds) of the substitute and replaced refrigerant in the system.
6. High and low side operating conditions (pressure and temperature) of the refrigerating system with (i) the substitute refrigerant, and (ii) the replaced refrigerant.
7. The ratings (design pressure and temperature) of the refrigerating system.
8. The location of the refrigerating system's machinery within the building and the occupancy classification of the building or space. Machinery refers to all refrigerating equipment forming a part of the refrigerating system including, but not limited to, the compressor(s), condenser(s), liquid receiver(s), evaporator(s) and connecting refrigerant piping.
9. Confirm whether or not all system components containing refrigerant are required to be located in a machinery room in accordance with § 7.4 of ASHRAE 15 of 2001. Provide details to support your position.

10. If the refrigerating system is required to be installed in a machinery room confirm that the machinery room design and installation complies with the applicable requirements of § 8.11 of ASHRAE 15 of 2001 including but not limited to:
  - (a) The installation of a refrigerant detector that will actuate emergency ventilation and audible and visible alarms inside the room and outside each entrance to the room.
  - (b) The capacity of the emergency ventilation fans as required by § 8.11.5 of ASHRAE 15 of 2001. Such ventilation rate is determined from the refrigerating system in the machinery room that contains the largest quantity (pounds) of refrigerant. Indicate the total pounds of refrigerant in the largest system within the machinery room.
  - (c) Emergency remote controls properly labeled and located immediately outside the machinery room door(s) to independently start the mechanical ventilation and stop the compressors.
  - (d) Machinery room door(s) are tight-fitting, opening outward and self-closing if they open into the building.
11. Propose site specific language for a warning sign to be located outside each machinery room entrance meeting the intent of §11.2.4 of ASHRAE 15 of 2001.
12. Confirm that the system pressure relief valves and purge discharges vent as required in §9.7.8 of ASHRAE 15 of 2001. For systems required to vent to atmosphere, confirm that such discharge location is at least 15 feet above adjoining ground level and not less than 20 feet from any window, ventilation opening, or exit in any building.
13. Submit authorization from the manufacturer of the original refrigerating system equipment for use with the substitute refrigerant.
14. Submit confirmation from the company responsible for the retrofit indicating that the installation conforms to all applicable requirements of ASHRAE 15 of 2001 and UL Standards 2170, 2171 and 2172.
15. Submit confirmation from the company responsible for the retrofit indicating that the following safety considerations have been evaluated and found satisfactory:
  - (a) The effects of the substituted refrigerant on materials in the system.
  - (b) The liquid receiver shall not be more than eighty percent full of liquid.
  - (c) The proper size of controls.
  - (d) The effect on the operation and setting of safety devices.

- (e) No hazards created by the mixture of the original with the substitute refrigerant within the equipment.
- 16. Provide a copy of Buildings Department Equipment Use Permit or other documentation indicating that the Department of Buildings has no objection to the use of the substitute refrigerant in the system.
- 17. Indicate the age of the refrigerating system and the most recent eddy-current test conducted for the condenser and evaporator tubes of such equipment. Indicate results and actions taken consistent with such test results.
- 18. Indicate if any of the system's pressure limiting device settings were increased. If such settings were increased, submit evidence that the system has successfully passed a field test consistent with same and that the system will not be operated above the design pressures.

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Brooklyn, NY 11201-3857

Attn: Technology Management Unit

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# INSTRUCTION FOR DOCUMENT

**FORM NAME:** REFRIGERATING SYSTEMS USING ALTERNATE REFRIGERANTS

**FORM NUMBER:** INTDOC - 1/03

**PURPOSE OF FORM:**

PROVIDE INSTRUCTIONS FOR BUILDING OWNERS INTENDING TO INSTALL OR RETROFIT REFRIGERATING SYSTEMS WITH ALTERNATE (ENVIRONMENTAL FRIENDLY) REFRIGERANTS.

**WHO SHOULD USE THIS DOCUMENT?**

AFFECTED BUILDING OWNERS USING ALTERNATE REFRIGERANTS IN REFRIGERATING SYSTEMS

**AFTER COMPLETION, THE FORM SHOULD BE MAILED TO:**

**New York City Fire Department**  
Bureau of Fire Prevention  
9 MetroTech Center  
Brooklyn, New York 11201  
**ATTN: TECHNOLOGY MANAGEMENT**

**PAYMENT INFORMATION**

**IS PAYMENT REQUIRED? NO**  
**IF SO, WHEN?**

**NEW YORK CITY FIRE DEPARTMENT**

**DO NOT SEND CASH!!!!**

**SPECIAL INSTRUCTIONS**

**TWO FORMS ARE AVAILABLE FOR USE- NEW AND EXISTING SYSTEMS.**

**SELECT THE CORRECT DOCUMENT SINCE THE REQUIREMENTS & FORMS ARE DIFFERENT.**

**FOR FURTHER QUESTIONS, CONTACT:**

**New York City Fire Department**  
**Bureau of Fire Prevention**

**Attention:**

**JOHN MACEK, P.E.**  
**718-999-1506**

