



# NIH Division of the Fire Marshal

## Administrative Interpretation 17-7 Portable Space Heaters

**Code reference:** NFPA 1 (2015) and NFPA 101A (2016)

**Background:** NFPA 1 allows AHJs to prohibit sources of ignition under conditions deemed to be hazardous. An NFPA 101A Fire Safety Evaluation for Health and Ambulatory Care areas at NIH (current Joint Commission equivalency) precludes the use of space heaters. A written Federal OSHA interpretation also addresses space heater power supply.

### Interpretation:

1. Electric space heaters (not fuel-fired) may be used, subject to the following limitations:
  - Not permitted, under any circumstances, in laboratories, patient care units, or clinics
  - Never operated when the immediate area is unattended/unoccupied
  - Located and operated in accordance with manufacturer's recommendations
  - Placed on a level floor
  - Located at least three feet away from any combustible materials
  - The power cord must not be covered by carpeting or other unapproved materials
  - Must be directly connected to wall outlets with no extension cords or power strips
  - Electric loads and capacities must be verified prior to use by the Office of Research Facilities (see your Facility Manager)
2. Space heaters (preferably convection type) must have the following features:
  - An automatic, multi-directional tip-over shutoff switch
  - An automatic overheat shutoff sensor
  - An on/off switch with indicator light
  - Cool to the touch (maximum 175° F during operation), with guards over the heat coils
  - No exposed glowing elements
  - Listed (UL, FM, etc.) and remain in good working condition (includes cords)

**Supersedes:** N/A

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**Date Issued** 12/12/17 **Fire Marshal** J. P. Mc Cabe

## **NFPA and OSHA excerpts provided for convenience**

### **(Highlights by DFM)**

**NFPA 1, 10.1.6** The AHJ shall have the authority to prohibit any or all open flames or other sources of ignition where circumstances make such conditions hazardous.

**NFPA 1, 34.4.2.4** The clearance between stored materials and unit heaters, radiant space heaters, duct furnaces, and flues shall not be less than 3 ft (0.9 m) in all directions or shall be in accordance with the clearances shown on the approval agency label.

**NFPA 101A, Health Care Fire Safety Evaluation System, Worksheet 4.7.10 excerpt:**

D. Fuel-burning space heaters and portable electrical space heaters are not used

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Excerpt of November 18, 2002 OSHA interpretation response to Wade R. Abnett with Middle River Aircraft Systems:

**Question:** What is the current compliance status on the use of "power strips"?

**Reply:** OSHA's standard at 29 CFR §1910.303(b)(2), Installation and use, requires that *"Listed or labeled equipment shall be installed and used in accordance with any instructions included in the listing or labeling."* Manufacturers and nationally recognized testing laboratories determine the proper uses for power strips. For example, the UL Directory contains instructions that require UL-listed RPTs to be directly connected to a permanently installed branch circuit receptacle; they are not to be series-connected to other RPTs or connected to extension cords. UL also specifies that RPTs are not intended for use at construction sites and similar locations.

Power strips are designed for use with a number of low-powered loads, such as computers, peripherals, or audio/video components. Power loads are addressed by 29 CFR §1910.304(b)(2), *Outlet devices: "Outlet devices shall have an ampere rating not less than the load to be served."* Power strips are not designed for high power loads such as space heaters, refrigerators and microwave ovens, which can easily exceed the recommended ampere ratings on many power strips. They must also meet the requirements of §1910.305(g)(1), *Use of flexible cords and cables*. For example, the flexible power cord is not to be routed through walls, windows, ceilings, floors, or similar openings.