

Portable Fans

University of Tennessee Safety Guide GS-035

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Purpose

This guide is intended to provide information for the proper selection and safe use of portable fans used for comfort, to provide temporary ventilation, to circulate air, or provide cooling.

Scope and Applicability

This guideline shall apply to all portable fans used for comfort, to provide temporary ventilation, to circulate air, or provide cooling. This standard does not apply to fan used to ventilate buildings or local exhaust ventilation.

Guidance

Selection of Fans

1. Only fans that bear the label of Underwriter's Laboratory (UL) are acceptable. Note other labels are accepted, provided the equipment has been tested by a nationally recognized testing laboratory.
2. Fans must be approved for the location where they will be used. Domestic-type fans should not be used in areas:
 - a. Containing flammable liquids
 - b. Combustible dusts
 - c. Highly corrosive atmosphere
 - d. Wet location
3. All portable fans must be properly guarded. In general, the guard should not allow the passage of a sphere larger than ½ inch.
4. Care must be taken to ensure that the use of portable fans does not interfere with air flow in rooms or spaces that are designed for negative pressure.

Fan Use

1. Portable fans must not be modified and any repairs must be performed by qualified personnel.
2. Fans must not be used in areas where they can affect the air flow of chemical fume hoods, biosafety cabinets, clean benches and other forms of local exhaust ventilation.
3. Fans that have been damaged or are malfunctioning must be taken out of service.
4. Fans must be placed on stable, level surface.
5. Fans should be placed in areas away from general traffic patterns.

Electrical Safety

1. The power cord and any associated extension cord for the fan must be in good condition with no signs of damage. The power or extension cord should not:
 - a. create a trip hazard
 - b. be subject to excessive friction, crushing or wear

- c. run through a doorway, window, or under a carpet/rug
 - d. looped over a nail or other sharp surfaces
 - e. placed in standing water
 - a. subject to hazardous chemicals (acids, bases, solvents) that could degrade the insulation
2. The power cord should be inspected periodically for damage to its insulation by the department that owns the fan. Note that Environmental Health and Safety checks (visual inspection) during routine hazard surveillance rounds.
3. The power cord should be plugged directly into a wall outlet. If an extension cord is used, ensure it is UL listed.
4. The use of multiple extension cords to supply power to portable fans is discouraged.

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