

SPRAY BOOTHS AND SPRAY COATING PROCESSES

The National Fire Code – 2023 Alberta Edition (NFC(AE)) regulates spray-coating processes that involve the use of flammable and combustible liquids. The NFC(AE) further states the design, operation and maintenance requirements relating to spray coating processes must conform to the National Fire Protection Association (NFPA) 33 standard, which is the “Standard for Spray Application Using Flammable or Combustible Materials.”

NFPA 33 states that this standard must apply to the spray application of flammable or combustible materials continuously or intermittently by any of the following methods:

- Compressed air atomization,
- Airless or hydraulic atomization,
- Electrostatic application methods,
- Other means of atomized application.

The standard must also apply to spray application of water-borne, water-based, and water-reducible materials that contain flammable or combustible liquids or that produce combustible deposits or residues. If the paint contains a flammable sign then the standard applies.

The standard must apply to spray application processes or operations that are conducted both indoors and outdoors within temporary membrane enclosures.

NFPA 33 does not apply to:

- spray operations that use less than 1 L (33.8 fl oz.) of flammable or combustible liquid in any 8-hour period,
- spray application processes or operations that are conducted outdoors,
- the use of portable spraying equipment that is not used repeatedly in the same location,
- the use of aerosol products in containers up to and including 1 L (33.8 oz.) capacity that are not used repeatedly in the same location,
- the spray application of non-combustible materials.

Spray application operations and processes must be confined to spray booths, spray rooms, or spray areas, as defined in NFPA 33. **This document only pertains to spray booths or spray rooms.**



SAFETY TIPS

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A **Spray booth** is defined as:

A power-ventilated enclosure for a spray application operation or process that confines and limits the escape of the material being sprayed, including vapors, mists, dusts, and residues that are produced by the spraying operation and conducts or directs these materials to an exhaust system. Spray booths are manufactured in a variety of forms, including automotive refinishing, downdraft, open-face, traveling, tunnel, and updraft booths. This definition is not intended to limit the term spray booth to any particular design. The entire spray booth is part of the spray area. A spray booth is not a spray room.

A **spray room** is defined as:

A power-ventilated fully enclosed room used exclusively for open spraying of flammable or combustible materials. The entire spray room is considered part of the spray area. A spray booth is not a spray room.

In almost every circumstance, a spray booth and a spray room require a building permit. Please contact the local authority having jurisdiction (AHJ) - building and fire officials for clarifications on their permit process and NFC(AE) requirements. They will also assist you to determine whether your operation will require a fire suppression system.

NFPA 33 is available for viewing on www.nfpa.org.

Contact

Please contact your local fire department for any questions regarding this Safety Tip.

