



Hurst Fire Department

"Making the Difference"

Flammable and Combustible Finishes

SCOPE: The information provided herein serves as a planning tool for compliance. It does not remove the responsibility of the owner to comply with all laws applicable to flammable finishes. The contents of this document are intended to assist you in the preparation of sprinkler plan submittals and installation requirements. This document is not intended to be an all-inclusive listing of the flammable and combustible finish requirements in the City of Hurst. Please reference the 2015 International Fire Code, current adopted amendments, National Fire Protection Association Standards, and the State Fire Marshal's Office and Department of Insurance rules and regulations pertaining to flammable and combustible finishes.

Flammable Finishes

903.2.11.8 Spray Booths and Rooms. New and existing spray booths and spraying rooms shall be protected by an approved automatic fire-extinguishing system.

914.9 Application of flammable finishes. An *automatic sprinkler system* or fire-extinguishing system shall be provided in all spray, dip and immersing spaces and storage rooms, and shall be installed in accordance with Chapter 9.

2401.1 Scope. Chapter 24 of the IFC shall apply to locations or areas where any of the following activities are conducted:

1. The application of flammable finishes to articles or materials by means of spray apparatus.
2. The application of flammable finishes by dipping or immersing articles or materials into the contents of tanks, vats or containers of flammable or *combustible liquids* for coating, finishing, treatment or similar processes.
3. The application of flammable finishes by applying combustible powders to articles or materials utilizing powder spray guns, electrostatic powder spray guns, fluidized beds or electrostatic fluidized beds.
4. Floor surfacing or finishing operations using Class I or II liquids in areas exceeding 350 square feet (32.5 m²).
5. The application of flammable finishes consisting of dual-component coatings or Class I or II liquids when applied by brush or roller in quantities exceeding 1 gallon (4 L).

2401.2 Nonapplicability. This chapter shall not apply to spray finishing utilizing flammable or *combustible liquids* that do not sustain combustion, including:

1. Liquids that have no fire point when tested in accordance with ASTM D 92.
2. Liquids with a flashpoint greater than 95°F (35°C) in a water-miscible solution or dispersion with a water and inert (noncombustible) solids content of more than 80 percent by weight.

2404.1 General. The application of flammable or *combustible liquids* by means of spray apparatus in continuous or intermittent processes shall be in accordance with the requirements of the *International Fire Code Sections 2403 and 2404.2 through 2404.9.4*.

2404.2 Location of spray-finishing operations. Spray-finishing operations conducted in buildings used for Group A, E, I or R occupancies shall be located in a spray room protected with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1 and separated vertically and horizontally from other areas in accordance with the *International Building Code*. In other occupancies, spray-finishing operations shall be conducted in a spray room, spray booth or spraying space *approved* for such use.

Exceptions:

1. Automobile undercoating spray operations and spray-on automotive lining operations conducted in areas with *approved* natural or mechanical ventilation shall be exempt from the provisions of Section 2404 when *approved* and where utilizing Class IIIA or IIIB *combustible liquids*.
2. In buildings other than Group A, E, I or R occupancies, *approved* limited spraying space in accordance with Section 2404.9.
3. Resin application areas used for manufacturing of reinforced plastics complying with Section 2409 shall not be required to be located in a spray room, spray booth or spraying space.



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2404.9 Limited spraying spaces. Limited spraying spaces shall comply with Sections 2404.9.1 through 2404.9.4. Limited spraying spaces are to accommodate uses that are limited in their frequency and amounts of hazardous materials used. As mentioned previously, this operation is intended more for small touch-up work found in a maintenance shop.

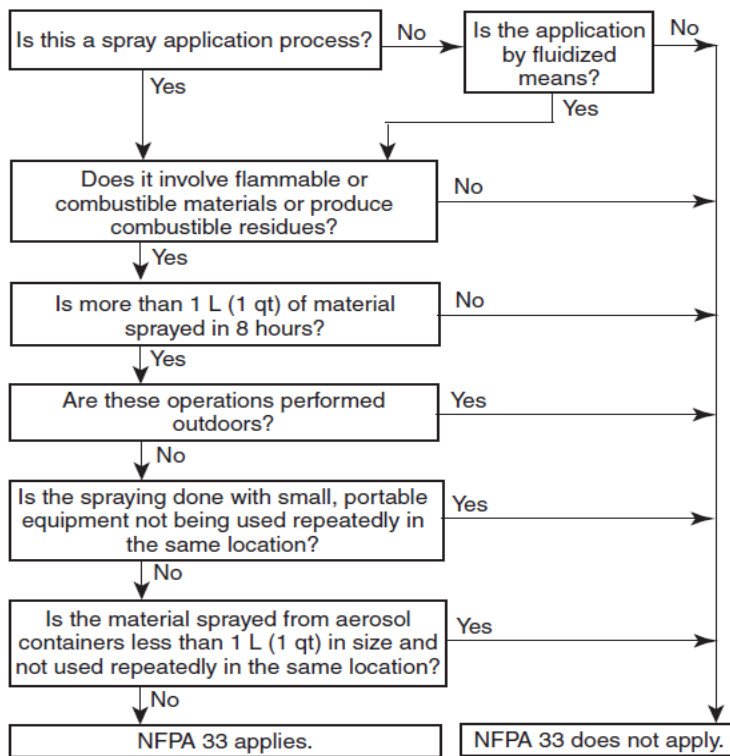
2404.9.1 Job size. The aggregate surface area to be sprayed shall not exceed 9 square feet (0.84 m²). **2404.9.2 Frequency.** Spraying operations shall not be of a continuous nature.

2404.9.3 Ventilation. Positive mechanical ventilation providing a minimum of six complete air changes per hour shall be installed. Such system shall meet the requirements of this code for handling flammable vapor areas. Explosion venting is not required.

2404.9.4 Electrical wiring. Electrical wiring within 10 feet (3048 mm) of the floor and 20 feet (6096 mm) horizontally of the limited spraying space shall be designed for Class I, Division 2 locations in accordance with NFPA 70.

NFPA 33

A.1.1.1 Refer to Figure A.1.1.1 for assistance in determining whether NFPA 33 applies to a particular spray application process.





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1.1.4* This standard shall 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.

A.1.1.4 There are many industrial applications that involve routine use of small quantities of flammable or combustible liquids (e.g., coatings, lubricants, adhesives) on a regular or periodic basis. An example would be touch-up of manufactured articles using aerosol containers or small, portable spray application equipment. The intent of this provision is to allow such use without having to comply with the requirements of NFPA 33.

1.1.6* This standard shall not apply to the use of portable spraying equipment that is not used repeatedly in the same location.

4.2 Locations in Other Occupancies. Spray application operations and processes shall not be conducted in any building that is classified as an assembly, educational, institutional, or residential occupancy, unless they are located in a room that is separated both vertically and horizontally from all surrounding areas by construction having a fire resistance rating of not less than 2 hours. The room shall be protected by an approved automatic sprinkler system designed and installed in accordance with NFPA 13, *Standard for the Installation of Sprinkler Systems*.

5.1.1 Air intake filters that are a part of a wall or ceiling assembly shall be listed as Class 1 or Class 2, in accordance with ANSI/UL 900, *Standard for Air Filter Units*.