

Risk Insights

Advice for you and your business

Spray Paint Booth Fire Suppression System



Spray paint booths have numerous safety features to help control ignition sources and to contain and remove flammable vapours.

Spray paint booths, including the exhaust system, mixing room and other areas are subject to substantial over-spray. They should be protected by an approved automatic fire suppression system. In the event that a fire occurs, the fire suppression system will help extinguish the fire and prevent extensive building damage.

The fire suppression system can either be an automatic sprinkler system or an alternate fire protection system.

● **Automatic sprinkler system:**

Some special requirements for spray booths include:

1. The sprinkler system should be wet pipe, deluge or pre-action, to ensure that water can be placed on the fire in the shortest possible amount of time
2. Water supply must be sufficient for all sprinklers that are likely to open during a fire incident
3. A separate control valve must control the sprinkler system
4. Sprinkler heads must be protected from over-spray residue by being covered with cellophane or thin paper bags

● **Alternate fire protection systems:**

Alternate fire protection systems should be capable of discharging contents into the entire protected area simultaneously and can be one of the following types:

1. Dry chemical extinguishing system
2. Carbon dioxide system
3. Gaseous agent extinguishing system
4. Foam water sprinkler system

*For more information on the requirements for the design and installation of automatic fire sprinkler systems in spray paint booths, please consult **The National Fire Protection Association (NFPA) 13 Standard for the Installation of Sprinkler Systems and NFPA 33 Standard for the Spray Application using Flammable and Combustible Materials.***

Spray Paint Booth Fire Suppression System *(continued)*

For both types of systems, activation of the fire suppression system should accomplish the following:

1. Activate a local alarm
2. Shut down the coating material delivery system
3. Terminate all spray application operations
4. Stop any conveyors into and out of the spray area

Air make-up and spray booth exhaust systems should not be interlocked with the fire alarm system and must remain functional during fire alarm conditions. The fire protection system should be equipped with a manual and emergency system shutdown station.

Reference material: NFPA 13 and NFPA 33.

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