

Spray Finishing Using Flammable and Combustible Materials

Description:

Any area in which dangerous quantities of flammable vapors or mists, or combustible residues, dusts, or deposits are present due to the operation of spraying processes is defined under the OSHA standard as a “spray area,” and falls under the OSHA regulation. Spray booths and other equipment must meet the prescribed standards.

Regulatory Reference

29 CFR § 1910.107 Spray finishing using flammable and combustible materials.

Applies to:

The standard applies to the application of flammable and combustible coatings to cylinders or other objects using spraying methods. The standard does not apply to outdoor spray application of buildings, tanks, or other similar structures, or to small portable spraying apparatus not used repeatedly in the same location.

General Requirements:

- (1) Spray booths. Section (b) of the standard sets out standards for spray booth construction, airflow, handling of discarded filters and over-spray collection media, cleaning and illumination.
- (2) Section (c) gives minimum requirements for electrical wiring, ignition source control, lighting fixtures, and minimum separation distances from ignition sources.
- (3) Ventilation requirements and performance standards are set out in section (d).
- (4) Flammable and combustible liquids-storage and handling in connection with spraying operations is the subject of section (e). Maximum quantity limits, approved container types, procedures for transferring liquids, approved spraying equipment, air hoses, and related equipment standards are set out in the section as well.
- (5) Requirements for fire protection including sprinklers are given in section (f).
- (6) Operations and maintenance. Minimum standards are given in section (g) for cleaning, storage and handling of cleaning solvents, clothing, disposal of residues, prohibitions on mixing hazardous materials, and posting of “NO SMOKING” notices are the subject of section (g).
- (7) Fixed electrostatic spray systems are covered by section (h).

Training Requirements:

There are no training requirements for the standard.

Maintenance and Review

Common violations cited for spray booth operations include, inadequate ventilation or airflow, build up of residual over-spray on equipment and spray booth surfaces, failure to properly dispose of filtration materials, improper handling of solvents and spray equipment, and improper electrical wiring. Documented periodic inspection of any affected spraying operations and equipment is an important method for demonstrating compliance efforts.

Additional Information and Resources

NFPA 30, *Flammable and Combustible Liquids Code*, National Fire Protection Association, Quincy, MA

NFPA 33, *Spray Application Using Flammable or Combustible Materials*, National Fire Protection Association, Quincy, MA, Internet address www.nfpa.org

Also see Compliance Guide OSHA 33 *Ventilation (Including Spray Booths)* in this Propane Regulatory Compliance Guide.