

SECTION 508 - SPRAY COATING OPERATIONS

508.1 PURPOSE

This section of the NWCAA Regulation establishes a program of work practice standards and controls for spray coating operations in order to reduce particulate emissions from coating overspray, lessen public exposure to toxic air pollutants, decrease emissions of precursors to the formation of tropospheric ozone, and encourage pollution prevention.

508.2 APPLICABILITY

- (A) This section applies to spray coating operations at a source and at portable spray coating operations except as provided in NWCAA 508.2(B).
- (B) This section does not apply to spray application of:
 - (1) Architectural or maintenance coatings to stationary structures (e.g., bridges, water towers, buildings, stationary machinery, mobile homes, pavement/curbs, or similar structures).
 - (2) Maintenance coatings to farm equipment and mining equipment for which it is not practical or feasible to move to a dedicated spray coating facility.
 - (3) Asphaltic or plastic liners including undercoating, sound deadening coating, and spray-on truck bed liners.
 - (4) Fiberglass resin and gel coat.

508.3 DEFINITIONS

Unless a different meaning is clearly required by context, words and phrases used in this section shall have the following meaning:

AIRLESS or AIR-ASSISTED AIRLESS SPRAY EQUIPMENT - Any paint spray technology that relies solely on the fluid pressure of the paint to create an atomized paint spray pattern and does not apply any atomizing compressed air to the paint before it leaves the paint nozzle. Air-assisted airless spray uses compressed air to shape and distribute the fan of atomized paint, but still uses fluid pressure to create the atomized paint.

COATING - A material or formulation of materials that is applied to or impregnated into a surface in order to beautify, protect, enhance the function, or otherwise cover the surface.

CONTAINER - An individual receptacle that holds a coating or coating component for storage or distribution.

ELECTROSTATIC APPLICATION - Application of coatings where an electrostatic potential is created between the part to be coated and the paint particles.

ENCLOSED SPRAY AREA – An enclosed area used for spray coating including, but not limited to, spray booth, preparation station, or portable enclosure.

HIGH VOLUME, LOW PRESSURE (HVLP) SPRAY EQUIPMENT - Equipment used to apply coatings by means of a spray gun that is designed and operated between 0.1 and 10.0 pounds per square inch gauge air pressure measured at the nozzle.

MOBILE EQUIPMENT - Any device that may be drawn and/or driven on a roadway including, but not limited to, heavy-duty trucks, truck trailers, fleet delivery trucks, buses, mobile cranes, bulldozers, street cleaners, agriculture equipment, motor homes, and other recreational vehicles (including camping trailers and fifth wheels).

OTHER SPRAY COATING – Spray coating of items other than complete motor vehicles and complete mobile equipment.

SPRAY COATING OPERATION – Application of coatings using a hand-held device that creates an atomized mist of coating and deposits the coating on a substrate. For the purposes of this section, a spray coating operation does not include the following materials or activities:

- (A) Use of air-brush spray equipment with a maximum cup capacity of 3 fluid ounces.
- (B) Use of aerosol spray cans.
- (C) Surface coating application using powder coating or non-atomizing application technology, including, but not limited to, paint brushes, rollers, hand wiping, flow coating, dip coating, electrodeposition coating, web coating, coil coating, touch-up markers, or marking pens.
- (D) Thermal spray operations (also known as metallizing, flame spray, plasma arc spray, and electric arc spray, among other names) in which solid metallic or non-metallic material is heated to a molten or semi-molten state and propelled to the work piece or substrate by compressed air or other gas, where a bond is produced upon impact.

508.4 GENERAL REQUIREMENTS FOR SPRAY COATING OPERATIONS

- (A) Except as in NWCAA 508.4(B), it shall be unlawful for any person subject to this section to cause or allow spray coating unless all of the following requirements are met as applicable:
 - (1) Enclosures. Except as in NWCAA 508.4(A)(1)(d) & (f), spray coating shall take place inside an enclosed spray area that is capable of capturing all visible paint overspray.

- (a) Refinishing Complete Motor Vehicles and Complete Mobile Equipment. An enclosed spray area for refinishing complete motor vehicles and complete mobile equipment shall be one of the following:
 - (i) A negative pressure enclosure equipped with a full roof and four complete walls or complete side curtains and ventilated at a negative pressure so that air is drawn into any openings in the enclosed spray area, or
 - (ii) A positive pressure enclosure equipped with seals on all doors and other openings and an automatic pressure balancing system. The pressure balancing system shall be operated at a pressure not more than 0.05 inches water gauge positive pressure as measured by a functioning gauge that displays the pressure to the nearest 0.01 inches water column.
- (b) Other Spray Coating. Except as in NWCAA 508.4(A)(1)(c) through (f), an enclosed spray area for other spray coating shall be equipped with a full roof, at least three complete walls or complete side curtains, and shall be ventilated at a negative pressure so that air is drawn into the enclosed spray area. The enclosed spray area may have openings, if needed, to allow for conveyors and parts to pass through the enclosed spray area during the spray coating process.
- (c) Other Spray Coating in an Existing Enclosed Spray Area Located Outdoors. Enclosed spray areas used for other spray coating with complete three-walled/curtain and a full roof located outdoors that are not equipped with a negative pressure ventilation system as of April 20, 2018 are not required to install such system provided the spray coating operation does not create a nuisance.
- (d) Other Spray Coating of Large Objects. Conducting other spray coating of large objects outside an enclosed spray area is allowed when it is impractical to totally enclose the large object, provided that reasonable precautions are employed to enclose the object to the extent practicable and to avoid creating a nuisance.
- (e) Portable Other Spray Coating Operations. An enclosed spray area for a portable other spray coating operation shall be equipped with a frame-and-fabric shelter consisting of a fabric roof and three fabric sides or similar shelter.

- (f) Inside Exhaust. An enclosed spray area is not required if the Department of Labor & Industries and fire protection agency with jurisdiction approve inside exhaust of spray coating operations.
- (2) Filtration. Except as in NWCAA 508.4(A)(1)(c) & (e), all enclosed spray areas shall employ either:
 - (a) Water-wash curtains with a continuous water curtain to control the overspray or
 - (b) Properly-seated filter(s) that have a capture efficiency of at least 98 percent as described in NWCAA 508.4(A)(8)(c). A gauge shall be installed, operated, and maintained that displays the pressure drop across the filter(s). The acceptable pressure drop range shall be clearly marked on the gauge or posted next to the gauge. The enclosed spray area shall be operated such that the pressure drop across the filter(s) is within the acceptable range and the filter(s) are properly seated with no holes or tears.
 - (3) Spray Application Methods. The spray application methods in NWCAA 508.4(A)(3)(a) shall be used for spray coating unless the exemption in NWCAA 508.4(A)(3)(b) applies.
 - (a) Required Spray Application Methods.
 - (i) HVLP spray equipment;
 - (ii) Airless or air-assisted airless spray equipment;
 - (iii) Electrostatic application; or
 - (iv) A method that has a transfer efficiency of 65% or higher using ASTM Standard D 5327-92 or a test method approved in writing by the NWCAA.
 - (b) If the required spray application methods under NWCAA 508.4(A)(3)(a) cannot be used in a certain situation, the situation is exempt from using a required spray application method provided that the facility maintains appropriate records (e.g., manufacturing specifications) to demonstrate that the required spray application methods cannot be used.
 - (4) Vertical Unobstructed Exhaust Vent. Except as provided in NWCAA 508.4(A)(1)(c) & (e), emissions from an enclosed spray area shall be vented to the atmosphere through an unobstructed vertical exhaust vent. If the exhaust vent exits horizontally out of the side of the building, then the exhaust vent shall bend to vent vertically above the eave of the roof. There shall be no flow obstructions that will impede upward vertical flow of the exhaust.

- (5) Visible Emissions. Visible emissions from an enclosed spray area exhaust vent shall not exceed 0% opacity for more than an aggregate of 3 minutes in any consecutive 60-minute period as determined by Ecology Method 9A.
- (6) Equipment Cleanup. Spray guns shall be cleaned in an enclosed cleaning device or disassembled and cleaned in a container. Each gun cleaning device and container shall be kept closed when not in use. Guns and spray equipment must not atomize solvent into the air during cleanup.
- (7) Storage and Disposal. VOC-containing materials shall be kept in closed containers except when materials are actively being added or removed. Rags and paper towels contaminated with VOC-containing materials shall be collected immediately after use and kept in closed containers. Empty containers as defined in WAC 173-303-160 are exempt from this requirement.
- (8) Recordkeeping. All records required by this section shall be maintained onsite for at least 3 years from the date of generation and made available to NWCAA personnel upon request. Maintain the following records as applicable:
 - (a) Data Sheets. Environmental data sheets (EDS) or other data sheets that clearly indicate the contents of the spray coatings and solvents used.
 - (b) Usages. Records of total coating and solvent purchases or usages for the calendar year.
 - (c) Filter Efficiency. For those facilities utilizing filter(s) pursuant to NWCAA 508.4(A)(2)(b), documentation that demonstrates the filter(s) being used have a capture efficiency of at least 98 percent. The procedure used to demonstrate filter efficiency must be consistent with the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.1, Method 52.2, or an alternate test method approved by the NWCAA in writing. Published filter efficiency data provided by filter vendors may be used to demonstrate compliance with this requirement.
 - (d) Filter Condition. For those facilities utilizing filter(s) pursuant to NWCAA 508.4(A)(2)(b), weekly observations of the filter(s) including: date, time, confirmation that filters are properly seated and in good condition, any corrective actions taken, and initials of person making the record. Weekly observations are not required for weeks that the enclosed spray area was not operated. Instead,

the record must reflect the enclosed spray area was not in operation that week.

- (e) Pressure Drop. For those facilities utilizing a pressure gauge pursuant to NWCAA 508.4(A)(1)(a)(ii) and/or NWCAA 508.4(A)(2)(b), weekly observations of pressure drop readings while operating including: date, time, pressure drop value, corrective action taken if the pressure drop is outside of the normal range (e.g., filter change), and initials of person making the record. Weekly observations are not required for weeks that the enclosed spray area was not operated. Instead, the record must reflect the enclosed spray area was not in operation that week.
 - (f) Disposal. Disposal records of waste materials, including volumes of waste solvents and coatings transferred to authorized waste haulers.
- (B) Compliance Date. Subject sources shall be in compliance with NWCAA 508.4(A)(1)(a) & (b), (A)(2), and (A)(4) by no later than October 12, 2020.

PASSED: September 13, 2018