

326 IAC 8-2-9 Miscellaneous metal and plastic parts coating operations

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 9. (a) This section is applicable to surface coating as follows:

(1) Sources located in any county except Lake County or Porter County shall comply with subsections (b), (c), (e), and (f) for the metal surface coating of the following:

(A) Large and small farm machinery.

(B) Small household appliances.

(C) Office equipment.

(D) Commercial and industrial machinery and equipment.

(E) Any other industrial category that coats metal parts or products under the Standard Industrial Classification Code of major groups #33, #34, #35, #36, #37, #38, and #39.

(2) Sources located in Lake County or Porter County shall comply with subsections (d) and (f) for the metal and plastic surface coating of the following:

(A) Large and small farm machinery.

(B) Small household appliances.

(C) Office equipment.

(D) Commercial and industrial machinery and equipment.

(E) Any other industrial category that coats metal parts or products under the Standard Industrial Classification Code of major groups #33, #34, #35, #36, #37, #38, and #39.

(F) Fabricated metal products.

(G) Molded plastic parts.

(H) Automotive or transportation equipment.

(I) Interior or exterior automotive parts.

(J) Construction equipment.

(K) Motor vehicle accessories.

(L) Bicycles and sporting goods.

(M) Toys.

(N) Recreational vehicles.

(O) Pleasure craft (recreational boats).

(P) Extruded aluminum structural components.

(Q) Railroad cars.

(R) Heavier vehicles.

(S) Lawn and garden equipment.

(T) Business machines.

(U) Laboratory and medical equipment.

(V) Electronic equipment.

(W) Steel drums.

(X) Metal pipes.

(b) This section is not applicable to the surface coating of the following metal parts and products or to the following types of coating:

(1) Any metal parts or products limited by other sections of this rule.

(2) Exterior of airplanes.

(3) Automobile refinishing.

(4) Customized top coating of automobiles and trucks, if production is less than thirty-five (35) vehicles per day.

(5) Exterior of marine vessels.

(6) The application of coatings to burial caskets (Standard Industrial Classification Code 3995) if the source is not located in or adjacent to:

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- (A) a county designated as nonattainment for ozone; or
 - (B) Clark County or Floyd County.
- (c) No owner or operator of a facility engaged in the surface coating of miscellaneous metal parts and products may cause, allow, or permit the discharge into the atmosphere of any VOC in excess of the following:
- (1) Fifty-two hundredths (0.52) kilogram per liter (four and three-tenths (4.3) pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies clear coatings. A clear coating is a coating that:
 - (A) lacks color or opacity; and
 - (B) is transparent and uses the undercoat as a reflectant base or undertone color.
 - (2) Forty-two hundredths (0.42) kilogram per liter (three and five-tenths (3.5) pounds per gallon) of coating excluding water, delivered to a coating applicator in a coating application system that is air dried or forced warm air dried at temperatures up to ninety (90) degrees Celsius (one hundred ninety-four (194) degrees Fahrenheit).
 - (3) Forty-two hundredths (0.42) kilogram per liter (three and five-tenths (3.5) pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings. Extreme performance coatings are coatings designed for exposure to:
 - (A) temperatures consistently above ninety-five (95) degrees Celsius;
 - (B) detergents;
 - (C) abrasive or scouring agents;
 - (D) solvents;
 - (E) corrosive atmospheres;
 - (F) outdoor weather at all times; or
 - (G) similar environmental conditions.
 - (4) Thirty-six hundredths (0.36) kilogram per liter (three (3) pounds per gallon) of coating, excluding water, delivered to a coating applicator for all other coatings and coating application systems.
- (d) On and after April 1, 2011, the owner or operator engaged in the surface coating of miscellaneous metal or plastic parts and products in which the total actual VOC emissions from all miscellaneous metal or plastic parts or products coating operations, including related cleaning activities, are equal to or exceed fifteen (15) pounds per day, before add-on controls, located in Lake County or Porter County, shall comply with the following:
- (1) VOC limitations for surface coating of miscellaneous metal and plastic parts and products according to one (1) of the following:
 - (A) VOC limits based on low VOC coatings as follows:

Metal Parts and Products		
Coating Category	Maximum VOC Content	
	Air Dried	Baked
	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied
General, one component	0.34 (2.8)	0.28 (2.3)
General, multicomponent		
Military specification		
Drum coating, new, exterior		
Camouflage	0.42 (3.5)	0.42 (3.5)
Electric-insulating varnish		
Etching filler		
High temperature		
Metallic		
Mold-seal		
Pan backing		
Pretreatment coatings		
Silicone release		
Vacuum-metalizing		

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Drum coating, new, interior		
Drum coating, reconditioned, exterior		
Extreme high-gloss	0.42 (3.5)	0.36 (3.0)
Extreme performance		
Heat-resistant		
Repair and touch-up		
Solar-absorbent		
High performance architectural	0.74 (6.2)	0.74 (6.2)
Prefabricated architectural one or multicomponent	0.42 (3.5)	0.28 (2.3)
Drum coating, reconditioned, interior	0.50 (4.2)	0.50 (4.2)
Plastic Parts and Products		
Coating Category	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied	
General, one component	0.28 (2.3)	
General, multicomponent	0.42 (3.5)	
Electric dissipating coatings and shock free coatings	0.80 (6.7)	
Extreme performance	0.42 (3.5) (two-pack coatings)	
Metallic	0.42 (3.5)	
Military specification	0.34 (2.8) (one pack)	
	0.42 (3.5) (two pack)	
Mold seal	0.76 (6.3)	
Multicolored coatings	0.68 (5.7)	
Optical coatings	0.80 (6.7)	
Vacuum-metalizing	0.80 (6.7)	
Automotive and Transportation Plastic Parts Coatings*		
Coating Category	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied	
High bake coatings – interior and exterior parts		
Flexible primer	0.54 (4.5)	
Nonflexible primer	0.42 (3.5)	
Base coat	0.52 (4.3)	
Clear coat	0.48 (4.0)	
Nonbasecoat/clear coat	0.52 (4.3)	
Low bake/air dried coatings – exterior parts		
Primers	0.58 (4.8)	
Base coat	0.60 (5.0)	
Clear coat	0.54 (4.5)	
Nonbasecoat/clear coat	0.60 (5.0)	
Low bake/air dried coatings – interior parts		
Touch-up and repair coatings	0.62 (5.2)	
*For red, yellow, and black automotive coatings, except touch-up and repair coatings, the limit is determined by multiplying the appropriate limit in this table by 1.15		
Business Machine Plastic Parts Coatings		
Coating Category	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied	
Primers	0.35 (2.9)	
Topcoat	0.35 (2.9)	
Texture coat	0.35 (2.9)	

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Fog coat	0.26 (2.2)
Touch-up and repair	0.35 (2.9)
Pleasure Craft Surface Coating	
Coating Category	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied
Extreme high gloss topcoat	0.49 (4.1)
High gloss topcoat	0.42 (3.5)
Pretreatment wash primers	0.78 (6.5)
Finish primer surfacer	0.42 (3.5)
High build primer surfacer	0.34 (2.8)
Aluminum substrate antifoulant coating	0.56 (4.7)
Other substrate antifoulant coating	0.33 (2.8)
All other pleasure craft surface coatings for metal or plastic	0.42 (3.5)
Motor Vehicle Materials	
Coating Category	Kilograms/liter (pounds/gallon) of coating, excluding water, as applied
Motor vehicle cavity wax	0.65 (5.4)
Motor vehicle sealer	0.65 (5.4)
Motor vehicle deadener	0.65 (5.4)
Motor vehicle gasket/gasket sealing material	0.20 (1.7)
Motor vehicle underbody coating	0.65 (5.4)
Motor vehicle trunk interior coating	0.65 (5.4)
Motor vehicle bed liner	0.20 (1.7)
Motor vehicle lubricating wax/compound	0.70 (5.8)

(B) VOC limits based on low VOC coatings and add-on controls (VOC per volume solids), except for motor vehicle materials, as follows:

Metal Part and Products		
Coating Category	Maximum VOC Content	
	Air Dried	Baked
	Kilograms/liter (pounds/gallon) of solids, excluding water, as applied	Kilograms/liter (pounds/gallon) of solids, excluding water, as applied
General, one component	0.54 (4.52)	0.40 (3.35)
General, multicomponent		
Military specification		
Drum coating, new, exterior		
Camouflage	0.80 (6.67)	0.80 (6.67)
Electric-insulating varnish		
Etching filler		
High temperature		
Metallic		
Mold seal		
Pan backing		
Pretreatment coatings		
Silicone release		
Vacuum-metalizing		
Drum coating, new, interior		
Drum coating, reconditioned, exterior		

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Extreme high-gloss	0.80 (6.67)	0.61 (5.06)
Extreme performance		
Heat-resistant		
Solar-absorbent		
High performance architectural	4.56 (38.0)	4.56 (38.0)
Prefabricated architectural one or multicomponent	0.80 (6.67)	0.40 (3.35)
Drum coating, reconditioned, interior	1.17 (9.78)	1.17 (9.78)
Plastic Parts and Products		
Coating Category	Kilograms/liter (pounds/gallon) of solids, excluding water, as applied	
General, one component	0.40 (3.35)	
General, multicomponent	0.80 (6.67)	
Electric dissipating coatings and shock free coatings	8.96 (74.7)	
Extreme performance	0.80 (6.67) (two-pack coatings)	
Metallic	0.80 (6.67)	
Military specification	0.54 (4.52) (one pack)	
	0.80 (6.67) (two pack)	
Mold seal	5.24 (43.7)	
Multicolored coatings	3.04 (25.3)	
Optical coatings	8.96 (74.7)	
Vacuum-metalizing	8.96 (74.7)	
Automotive and Transportation Plastic Parts Coatings*		
Coating Category	Kilograms/liter (pounds/gallon) of solids, excluding water, as applied	
High bake coatings – interior and exterior parts		
Flexible primer	1.39 (11.58)	
Nonflexible primer	0.80 (6.67)	
Base coat	1.24 (10.34)	
Clear coat	1.05 (8.76)	
Nonbasecoat/clear coat	1.24 (10.34)	
Low bake/air dried coatings – exterior parts		
Primers	1.66 (13.80)	
Base coat	1.87 (15.59)	
Clear coat	1.39 (11.58)	
Nonbasecoat/clear coat	1.87 (15.59)	
Low bake/air dried coatings – interior parts		
	1.87 (15.59)	
Touch-up and repair coatings	2.13 (17.72)	
*For red, yellow, and black automotive coatings, except touch-up and repair coatings, the limit is determined by multiplying the appropriate limit in this table by 1.15		
Business Machine Plastic Parts Coatings		
Coating Category	Kilograms/liter (pounds/gallon) of solids, excluding water, as applied	
Primers	0.57 (4.80)	
Topcoat	0.57 (4.80)	
Texture coat	0.57 (4.80)	
Fog coat	0.38 (3.14)	
Touch-up and repair	0.57 (4.80)	
Pleasure Craft Surface Coating		

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Coating Category	Kilograms/liter (pounds/gallon) of solids, excluding water, as applied
Extreme high gloss topcoat	1.10 (9.2)
High gloss topcoat	0.80 (6.7)
Pretreatment wash primers	6.67 (55.6)
Finish primer surfacer	0.80 (6.7)
High build primer surfacer	0.55 (4.6)
Aluminum substrate antifoulant coating	1.53 (12.8)
Other substrate antifoulant coating	0.53 (4.4)
All other pleasure craft surface coatings for metal or plastic	0.80 (6.7)

(2) One (1) or a combination of the following equipment shall be used for coating application, unless achieving compliance using an add-on control device under subdivision (3) or exempt under subdivision (7):

- (A) Electrostatic equipment.
- (B) High volume low-pressure (HVLP) spray equipment.
- (C) Flow coating.
- (D) Roller coating.
- (E) Dip coating, including electrodeposition.
- (F) Airless spray.
- (G) Air-assisted airless spray.
- (H) Other coating application method capable of achieving a transfer efficiency equivalent or better than achieved by HVLP spraying.

(3) An owner or operator may achieve compliance with this subsection by using a capture and control device that achieves a minimum overall VOC control efficiency of ninety percent (90%) instead of using low VOC coatings and application methods under subdivision (2). The required overall add-on control efficiency, when combining add-on control with low VOC coatings, must be determined using 326 IAC 8-1-2(c).

(4) The following coating types are exempt from the metal parts coating VOC limits in this subsection:

- (A) Stencil coatings.
- (B) Safety-indicating coatings.
- (C) Solid film lubricants.
- (D) Electric-insulating and thermal-conducting coatings.
- (E) Magnetic data storage disk coatings.
- (F) Plastic extruded onto metal parts to form a coating.

(5) The following types of coatings and coating operations are exempt from the plastic parts VOC limits in this subsection:

- (A) Touch-up and repair coatings.
- (B) Stencil coatings applied on clear or transparent substrates.
- (C) Clear or translucent coatings.
- (D) Coatings applied at a paint manufacturing facility while conducting performance tests on the coatings.
- (E) Any individual coating category used in volumes less than fifty (50) gallons in any one (1) year, if substitute compliant coatings are not available, provided that the total usage of all such coatings does not exceed two hundred (200) gallons per year, per facility.
- (F) Reflective coating applied to highway cones.
- (G) Mask coatings that are less than five-tenths (0.5) millimeter thick (dried) and the area coated is less than twenty-five (25) square inches.
- (H) Electromagnetic interference or radio frequency interference (EMI or RFI) shielding coatings.
- (I) Heparin-benzalkonium chloride (HBAC) containing coatings applied to medical devices, provided that the total usage of all such coatings does not exceed one hundred (100) gallons per year, per plastic parts coating operation.

(6) The following types of coatings and operations are exempt from the automotive or transportation and business machine plastic part coating VOC limits:

- (A) Texture coatings.
- (B) Vacuum metalizing coatings.
- (C) Gloss reducers.

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- (D) Texture topcoats.
- (E) Adhesion primers.
- (F) Electrostatic preparation coatings.
- (G) Resist coatings.
- (H) Stencil coatings.

(7) The application method requirements in subdivision (2) do not apply to the following:

- (A) Metal parts touch-up coatings, repair coatings, and textured finishes.
- (B) Plastic parts airbrush operations using five (5) gallons or less per year of coating.
- (C) Extreme high gloss coatings are exempt from the pleasure craft VOC limits.

(e) If more than one (1) emission limitation in subsection (c) applies to a specific coating, then the least stringent emission limitation shall be applied.

(f) Work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not be limited to, the following:

- (1) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.
- (2) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.
- (3) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.
- (4) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.
- (5) Minimize VOC emissions from the cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

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