

ORDER OF THE STATE OF WISCONSIN
NATURAL RESOURCES BOARD
RENUMBERING, AMENDING AND CREATING RULES

The Wisconsin Natural Resources Board adopts an order to **renumber** NR 422 Table 1, Table 2 and Table 3; to **amend** NR 422.02(5), (8) and (89), 422.04(1)(a), 422.095(4)(a), (b), (c) and (d), 422.135(2)(a) and (b) and 439.04(5)(a)(intro.); and to **create** NR 422.02(7v), (7y), (12m), (21m), (22m), (53e), (53s), (64m), (75g), (75r), (85m), (87s), (90m), (95m) and (106m) and 422.083, relating to reducing ambient ozone concentrations in southeastern Wisconsin by controlling volatile organic compound (VOC) emissions.

AM-43-00

Commented [RWP1]: Draft #7, 3/26/2001, as submitted with the adoption green sheet package and as adopted by the Board on 4/25/01. Note the change Grant wants to make in s. NR 422.02 (21m).

Analysis Prepared by the Department of Natural Resources

Authorizing statutes: ss. 227.11(2)(a) and 285.11(1) and (6), Stats.

Statutes interpreted: s. 285.11(6), Stats. The State Implementation Plan developed under that provision is revised.

The rule fulfills obligations to apply reasonably available control technology (RACT) to major VOC sources in southeastern Wisconsin. The rule includes provisions that are specifically required under the Clean Air Act and conforms to the Clean Air Act pursuant to 42 USC 7511a(b)(2)(C) which states that RACT emission limits for major stationary sources of VOCs in moderate or more extreme ozone nonattainment areas shall be established.

The order establishes RACT emission limits on VOC emissions from plastic parts coating operations at major sources. Major source status is determined by summing all VOC emissions from the source and subtracting any VOC emissions that are subject to existing RACT VOC emission limits from that source wide total. If the resulting difference equals or exceeds the major source threshold for the nonattainment area, the source is classified as major.

Recordkeeping requirements are the minimum necessary and are consistent with those specified for other coating operations addressed in ch. NR 422 that have been previously approved by the board.

SECTION 1. NR 422.02(5) is amended to read:

NR 422.02(5) "~~Antiglare/safety~~ Anti-glare safety coating" means a low gloss coating formulated to eliminate glare for safety purposes on interior surfaces of a vehicle, as specified under the U.S. department of transportation standard for reflecting surfaces in 49 CFR 571.107, as in effect on October 1, 1994.

SECTION 2. NR 422.02(7v) and (7y) are created to read:

NR 422.02(7v) "Automotive/transportation plastic parts" means the interior and exterior plastic components of automobiles, trucks, tractors, lawnmowers and mobile equipment intended for primary use on land.

(7y) "Baked coating" means any coating which is cured or dried in an oven where the temperature of the coated object exceeds 90°C (194°F), or any other coating which is not an air dried coating.

SECTION 3. NR 422.02(8) is amended to read:

NR 422.02(8) "Basecoat" means, ~~for one of the following:~~

(a) For the purpose of wood furniture coating, a coat of colored material, usually opaque, that is applied before other inks, coatings or opaque finishing materials and which usually has a topcoat subsequently applied for protection.

(b) For the purpose of plastic parts coating, a coating applied after the prime coat and prior to any other coatings.

SECTION 4. NR 422.02(12m), (21m), (22m) and Note, (53e), (53s), (64m), (75g), (75r), (85m) and (87s) are created to read:

NR 422.02(12m) "Business machine plastic parts" means the plastic housings and other exterior plastic components of electronic office equipment and of medical and musical equipment, including computers, monitors, printers and keyboards, facsimile machines, copiers, microfiche readers, cellular and standard phones, and pencil sharpeners. This definition excludes internal electrical components of business machines.

(21m) "Electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings" means coatings used on business machine plastic housings to attenuate electromagnetic and radio frequency interference signals that would otherwise pass through the plastic housing.

(22m) "Electrostatic prep coating" means a coating that is applied to a plastic part solely to provide conductivity in order to use electrostatic application methods for coatings.

Note: An electrostatic prep coating usually is clearly identified as an electrostatic prep coating on its accompanying material safety data sheet.

(53e) "Mask coating" means a strippable coating used as a mask during the coating of a part or surface.

(53s) "Mobile equipment" means any equipment which may be drawn or is capable of being driven on a roadway, other than motor vehicles, including truck or automobile trailers, farm machinery, construction equipment, street cleaners and golf carts.

(61m) "Pad printing" means, for the purpose of plastic parts coating, a type of printing used on irregularly shaped substrates, in which the image is transferred from a metal or plastic photoengraved or intaglio plate called a cliché, to an intermediate silicon rubber pad and, ultimately, to the substrate. Ink is supplied to the engraved portions of the cliché after each impression.

(64m) "Plastic part" means a piece made from a substance that has been formed from resin through application of pressure or heat or both.

(75g) "Reflective argente coating" means a silver-colored coating that will reflect light.

(75r) "Resist coating" means a coating that is applied to a plastic part before metallic plating to prevent deposits of metal on portions of the plastic part.

(85m) "Sensitizer coating" means a coating that is applied to a plastic part before metallic plating to promote deposits of metal on portions of the plastic part.

Commented [RWP2]: In response to a Clearinghouse comment, coating definitions were made singular, but this plural was overlooked. It should be: "Electromagnetic interference/radio frequency interference (EMI/RFI) shielding coating" means a coating used...

(87s) "Soft coating" means any coating that provides a soft tactile feel and appearance similar to surfaces such as leather when applied to plastic parts.

SECTION 5. NR 422.02(89) is amended to read:

NR 422.02(89) "Specialty ~~coatings~~ coating" means, ~~for one of the following:~~

(a) For the purpose of automobile refinishing operations, coatings used only for discrete portions of the vehicle, such as bumpers or spot repairs, which are necessary due to unusual coating performance requirements. Specialty coatings include, but are not limited to, adhesion promoters, uniform finish blenders, elastomeric coatings, gloss flatteners, bright metal trim repair, jamming (cut-in) clear coats, impact resistant coatings, underbody coatings, weld-through primers and ~~anti-glare/safety~~ anti-glare safety coatings.

(b) For the purpose of plastic parts coating under s. NR 422.083, coatings used for unusual job performance requirements. These products include adhesion primers, soft coatings, reflective argent coatings, electrostatic prep coatings, headlamp lens coatings, pad printing coatings, stencil coatings, vacuum metallizing coatings, anti-glare safety coatings, resist coatings and sensitizer coatings.

SECTION 6. NR 422.02(90m), (95m) and (106m) are created to read:

NR 422.02(90m) "Stencil coating" means a coating that is applied over a stencil on a plastic part at a thickness of one mil or less of coating solids. Stencil coatings are most frequently letters, numbers or decorative designs.

(95m) "Texture coating" means a coating applied to a plastic part that provides an irregular finished surface such as one that is rough or grainy.

(106m) "Vacuum metallizing" means a process whereby metal is vaporized and deposited on a substrate in a vacuum chamber.

SECTION 7. NR 422.04(1)(a) is amended to read:

NR 422.04(1)(a) No owner or operator of a coating line subject to an emission limitation contained in ss. NR 422.05 to ~~422.08~~ 422.083, 422.09 to 422.12, 422.132, 422.135, 422.15 or 422.155 and complying with the emission limitation by means of this subsection may cause, allow or permit the daily volume-weighted average VOC content to exceed the emission limitation to which the coatings are subject. For purposes of this paragraph, daily volume-weighted average VOC content shall be calculated by using the following equation:

$$VOC_A = \frac{\sum_{i=1}^n C_i V_i}{V_T}$$

where:

VOC_A is the volume-weighted average VOC content of 2 or more coatings applied on a coating line during any day in kilograms per liter (pounds per gallon) of coating, excluding water

i is the subscript denoting an individual coating

n is the number of different coatings subject to the same numerical emission limitation applied during any day on a coating line

C_i is the VOC content of each coating (i) as applied during any day on the coating line in kilograms per liter (pounds per gallon) of coating, excluding water

V_i is the volume of each coating (i), excluding water, as applied during any day on the coating line in liters (gallons)

V_T is the total volume of all n coatings subject to the same emission limitation, excluding water, applied during any day on the coating line in liters (gallons)

SECTION 8. In NR 422, Table 1, Table 2 and Table 3 are renumbered Table 2, Table 3 and Table 4.

SECTION 9. NR 422.083 is created to read:

NR 422.083 Plastic parts coating. (1) APPLICABILITY. (a) Except as provided in sub. (4), this section applies to plastic parts coating at facilities which are located in Kenosha, Milwaukee, Ozaukee, Racine, Washington or Waukesha county and have maximum theoretical emissions of VOCs from the facility, excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, 423.04, 423.05, 424.04 or 424.05, of 25 tons per year or more.

Note: To determine the maximum theoretical emissions of VOCs from a facility, excluding any maximum theoretical emissions of VOCs specifically subject to the cited provisions, use the following procedure. 1. Calculate the maximum theoretical emissions of VOCs from the facility. 2. Calculate the maximum theoretical emissions of VOCs from the facility subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, 423.04, 423.05, 424.04 or 424.05. 3. Subtract the emissions calculated in step 2 from the emissions calculated in step 1. 4. If the quantity calculated in step 3 is less than 25 tons per year, then the only requirements of this section which apply to the facility are the recordkeeping requirements of sub. (4).

(b) Except as provided in sub. (4), this section applies to plastic parts coating at facilities which are located in Kewaunee, Manitowoc or Sheboygan county and have maximum theoretical emissions of VOCs from the facility, excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, 423.04, 423.05, 424.04 or 424.05, of 100 tons per year or more.

Note: To determine the maximum theoretical emissions of VOCs from a facility, excluding any maximum theoretical emissions of VOCs specifically subject to the cited provisions, use the following procedure. 1. Calculate the maximum theoretical emissions of VOCs from

the facility. 2. Calculate the maximum theoretical emissions of VOCs from the facility subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, 423.04, 423.05, 424.04 or 424.05. 3. Subtract the emissions calculated in step 2 from the emissions calculated in step 1. 4. If the quantity calculated in step 3 is less than 100 tons per year, then the only requirements of this section which apply to the facility are the recordkeeping requirements of sub. (4).

(c) This section does not apply to the following:

1. Plastic parts coating regulated under s. NR 422.095, 422.11 or 422.145.

2. Plastic parts coating regulated under s. NR 422.10 or 422.15 where plastic parts are attached to metal parts prior to the coating of the plastic and metal assembly.

(2) EXEMPTIONS. The application of touch-up coatings is exempt from the requirements of this section.

(3) EMISSION LIMITATIONS. After December 31, 2002, no owner or operator of a plastic parts coating operation may cause, allow or permit the emission of any VOCs in excess of the limitations specified in Table 1. If more than one VOC content limitation in Table 1 applies to a coating, the lowest VOC content limitation shall be satisfied.

Table 1
VOC Content Limitations for Coatings Used in Plastic Parts Coating
 [kilogram/liter (pounds/gallon) of coating, excluding water, as applied]

Coating Application and Type	Maximum VOC content
(a) Automotive/transportation	
1. Interiors	
a. Baked	
Prime coats	0.46 (3.8)
Other nonclear coatings	0.49 (4.1)
b. Air dried	
Prime coats	0.42 (3.5)
Other nonclear coatings	0.59 (4.9)

2. Exteriors

a. Baked

Nonelastomeric prime coats	0.54 (4.5)
Elastomeric prime coats	0.60 (5.0)
Clear coats	0.52 (4.3)
Other coatings	0.55 (4.6)

b. Air dried

Prime coats	0.66 (5.5)
Clear coats	0.54 (4.5)
Other coatings, red and black	0.67 (5.6)
Other coatings	0.61 (5.1)

3. Specialty

a. Adhesive primers	0.82 (6.8)
b. Air bag cover coatings	0.71 (5.9)
c. Anti-glare safety coatings	0.77 (6.4)
d. Electrostatic prep coatings	0.82 (6.8)
e. Head lamp lens coatings	0.89 (7.4)
f. Pad printing coatings	0.82 (6.8)
g. Reflective argent coatings	0.71 (5.9)
h. Resist coatings	0.82 (6.8)
i. Soft coatings	0.71 (5.9)
j. Stencil coatings	0.82 (6.8)
k. Texture basecoats	0.66 (5.5)
l. Texture topcoats	0.77 (6.4)

m. Vacuum metallizing basecoats	0.66 (5.5)
n. Vacuum metallizing topcoats	0.77 (6.4)
(b) Business machine	
1. Prime coats	0.35 (2.9)
2. Other nonclear coatings	0.35 (2.9)
3. Specialty	
a. Electromagnetic interference/radio frequency interference (EMI/RFI) shielding coatings	0.48 (4.0)
b. Resist coatings	0.71 (5.9)
c. Sensitizer coatings	0.85 (7.1)
d. Soft coatings	0.52 (4.3)
(c) Miscellaneous categories	
1. Air cleaner covers	0.72 (6.0)
2. Building exterior molding, trim, shutters and weather stripping	0.75 (6.2)
3. Building interior molding and trim	0.30 (2.5)
4. Cosmetic cases	
a. Opaque coatings	0.58 (4.8)
b. Other coatings	0.71 (5.9)
5. Personal hygiene razors	
a. Soft coatings	0.66 (5.5)
b. Other coatings	0.75 (6.2)
6. Signs	
a. Mask coatings	0.10 (0.8)

b. Opaque coatings	0.71 (5.9)
c. Other coatings	0.78 (6.5)
7. Smoke detector covers	0.75 (6.2)

(4) RECORDKEEPING REQUIREMENTS. (a) To determine applicability under sub. (1)(a) or (b), each owner or operator of a plastic parts coating operation at a facility located in Kenosha, Kewaunee, Manitowoc, Milwaukee, Ozaukee, Racine, Sheboygan, Washington or Waukesha county shall maintain records of the maximum theoretical emissions of VOCs from the facility excluding any maximum theoretical emissions of VOCs specifically subject to s. NR 419.05, 419.06 or 419.08, ch. NR 420 or 421, ss. NR 422.05 to 422.08 or 422.085 to 422.17, or s. NR 423.03, 423.035, 423.04, 423.05, 424.04 or 424.05.

(b) Any owner or operator subject to this section under the applicability criteria of sub. (1)(a) or (b) shall maintain records as described in s. NR 439.04(5).

(c) Records required under this subsection shall be kept for 5 years unless another time period is specified under s. NR 439.04(2).

SECTION 10. NR 422.095(4)(a) to (d) are amended to read:

NR 422.095(4)EMISSION LIMITATIONS-COATINGS. (4) EMISSION LIMITATIONS – COATING. (a) No owner or operator of an automobile refinishing operation may refinish or allow the refinishing of any motor vehicles or their body parts and components using any coating or coating system with a VOC content in excess of that specified in ~~Table 1~~ Table 2. All coatings and coating components shall be used according to manufacturer's specifications and mixing instructions.

(b) The most restrictive VOC limitation in ~~Table 1~~ Table 2 applies with either of the following:

1. Different combinations or mixing ratios of coatings and coating components are used which constitute a different coating system than any of the systems listed in ~~Table 4~~ Table 2.

2. The same combination and mixing ratio of coating components is used for more than one category in ~~Table 4~~ Table 2.

(c) Automobile refinishing coatings and coating components manufactured prior to January 11, 1999 are exempt from the emission limitations in ~~Table 4~~ Table 2.

(d) The maximum VOC content for any category of coating in ~~Table 4~~ Table 2 shall be calculated according to the following formula:

$$\text{VOC} = \frac{(W_v - W_w - W_{ec})}{(V - V_w - V_{ec})}$$

where:

VOC content is the pounds of VOC per gallon of coating

W_v is the mass of total volatiles, in pounds

W_w is the mass of water, in pounds

W_{ec} is the mass of exempt compounds, in pounds

V is the volume of coating, in gallons

V_w is the volume of water, in gallons

V_{ec} is the volume of exempt compounds, in gallons

SECTION 11. NR 422.135(2)(a) and (b) are amended to read:

NR 422.135(2)(a) No owner or operator of a molded wood parts or products coating facility which uses flow coating to apply topcoats may cause, allow or permit the emission of any VOCs in excess of the limitations specified in ~~Table 2~~ Table 3.

(b) No owner or operator of a molded wood parts or products coating facility which applies a

topcoat using any application method other than flow coating may cause, allow or permit the emission of any VOCs in excess of the limitations specified in ~~Table 3~~ Table 4.

SECTION 12. NR 439.04(5)(a)(intro.) is amended to read:

NR 439.04(5)(a)(intro.) Any owner or operator of a coating or printing line or operation subject to an emission limitation in ss. NR 422.05 to ~~422.08~~ 422.083, 422.09 to 422.12, 422.132, 422.135 or 422.145 to 422.155 shall collect and record the following information for each coating or printing line in operation:

The foregoing rule was approved and adopted by the State of Wisconsin Natural Resources Board on April 25, 2001.

The rule shall take effect the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2)(intro.), Stats.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____
Darrell Bazzell, Secretary

(SEAL)