



# FACT SHEET

## In re: Proposed revisions to 250-RICR-120-05-19 “Control of Volatile Organic Compounds from Coating Operations”

### Introduction

The Department of Environmental Management (DEM), Office of Air Resources, is proposing to amend 250-RICR-120-05-19 “Control of Volatile Organic Compounds from Coating Operations” (Part 19). Part 19 limits volatile organic compound emissions from various surface coating operations.

### Description of Proposed Amendments

Part 19 is being amended to incorporate revised emissions limitations for existing surface coating categories, as well as add emissions limitations for surface coating categories not currently regulated. Compliance with the proposed emissions limitations must be achieved by July 1, 2020. The applicability threshold for existing categories, VOC emissions greater than or equal to 15 pounds per day in any one day from surface coating operations, is proposed to be changed to the equivalent twelve month applicability threshold of VOC emissions greater than or equal to 2.7 tons per rolling 12-month period. The applicability threshold, VOC emissions greater than or equal to 2.7 tons per rolling 12-month period, will also apply to the new surface coating categories, except the paper, film and foil coating category which is proposed to have an applicability threshold of the potential to emit 25 tons VOC per year from an **individual** coating line. The applicability threshold for a paper coating facility based on facility wide paper coating and related VOC emissions is proposed to be VOC emissions greater than or equal to 2.7 tons per rolling 12-month period

The amendments include revised and new VOC content limitations for paper, film and foil coating, metal furniture coating, large appliance coating, miscellaneous metal and plastic parts coating, and flatwood paneling. The proposed miscellaneous metal and plastic parts coating category contains new specific VOC content limitations for automotive/transportation, business machines, and pleasure craft coatings. The VOC content limitations proposed meet and do not exceed current EPA requirements.

There are five options included in the proposed rule for achieving compliance with the emissions limitations, as follows:

- Use only low-VOC coatings that meets the applicable as applied VOC content limitations in pounds of VOC per gallon of coating, for the particular coating category, or
- Use a combination of low-VOC coating and add on control equipment meeting the applicable as applied VOC content limitations in pounds of VOC per gallon of coating, for the particular coating category; or

- Use of daily-weighted averaging to achieve the applicable as applied VOC content limitations in pounds of VOC per gallon of solids as applied for the particular coating category; or
- Installation of an approved control system to achieve an overall VOC control efficiency of at least 90%; or
- An alternative equivalent method of control as approved by the Director. Approval of an alternative method must be approved by EPA as a source specific State Implementation Plan (SIP) revision.

In lieu of meeting the applicable emissions limitations for a particular surface coating category, any surface coating facility with actual emissions of VOC greater than or equal to 2.7 tons per rolling 12- month period from all surface coating operations, may enter into an enforceable document limiting emissions from all surface coating operations to less than 1,666 pounds in any one calendar month.

We expect that most sources will comply with the revised rule by meeting the applicable low-VOC content limitations or entering into an enforceable document limiting monthly emissions to 1,666 pounds per month.

The VOC content limitations for flatwood paneling in the existing rule are on a pounds of VOC per 1000 square feet coated basis. Consistent with EPA guidance these have been updated in the proposed rule to pounds VOC per gallon of coating less water and exempt compounds. The equivalent pounds of VOC per gallon of coating of the existing limits as compared to and proposed limits are below:

**Flatwood Paneling**

	<b>Existing emission rate limit, lbs VOC/ 1000 square feet coated surface</b>	<b>Existing equivalent limit in lbs VOC/gallon of coating, less water and exempt compounds, as applied</b>	<b><u>Proposed, lbs VOC/gallon of coating, less water and exempt compounds, as applied</u></b>
Printed interior wall panels made of hardwood plywood and thin particleboard	6	2.5	2.1
Natural finish hardwood plywood panels	12	3.3	2.1
Class II hardboard panels	10	3.6	2.1

For large appliances, metal furniture, and miscellaneous metal parts coating, several new coating categories have been added as well as VOC content limitations applicable to air dried and baked on coatings, as follows:

## Large Appliance Coating

Coating Category	<b>Existing</b> Large Appliance (all) lbs VOC/gallon of coating, less water and exempt compounds, as applied	<b>Proposed Baked</b> lbs VOC/gallon of coating, less water and exempt compounds, as applied	<b>Proposed Air Dried</b> lbs VOC/gallon of coating, less water and exempt compounds, as applied
All	2.8	n/a	n/a
General, one component	n/a	2.3	2.3
General, multi-component	n/a	2.3	2.8
Extreme high gloss	n/a	3.0	2.8
Extreme performance	n/a	3.0	3.5
Heat resistance	n/a	3.0	3.5
Solar absorbent	n/a	3.0	3.5
Metallic	n/a	3.5	3.5
Pretreatment coatings	n/a	3.5	3.5

## Metal Furniture Coating

Coating Type	<b>Existing</b> Metal Furniture (all) lbs VOC/gal, as applied	<b>Proposed Baked</b> lbs VOC/gallon of coating, less water and exempt compounds, as applied	<b>Proposed Air-dried</b> lbs VOC/gallon of coating, less water and exempt compounds, as applied
All	3.0	n/a	n/a
General, One Component	n/a	2.3	2.3
General, Multi-Component	n/a	2.3	2.8
Extreme High Gloss	n/a	3	2.8
Extreme Performance	n/a	3	3.5
Heat Resistant	n/a	3	3.5
Metallic	n/a	3.5	3.5
Pretreatment Coatings	n/a	3.5	3.5
Solar Absorbent	n/a	3	3.5

## Miscellaneous Metal Parts

Coating Category	Existing lbs VOC/gallon of coating, less water and exempt compounds, as applied	<u>Proposed</u>	
		<u>Air-dried</u> <u>lbs VOC/gallon of</u> <u>coating, less water and</u> <u>exempt compounds, as</u> <u>applied</u>	<u>Baked</u> <u>lbs VOC/gallon of</u> <u>coating, less water and</u> <u>exempt compounds, as</u> <u>applied</u>
Clear Coating	4.3	n/a	n/a
Air Dried Coating (all)	3.5	*see individual type	n/a
All other coating on mis metal parts	3	*see individual type	n/a
General One Component	n/a	2.8	2.3
General Multi Component	n/a	2.8	2.3
Camouflage	n/a	3.5	3.5
Electric-Insulating Varnish	n/a	3.5	3.5
Etching Filler	a/a	3.5	3.5
Extreme High-Gloss	n/a	3.5	3
Extreme Performance	3.5	3.5	3
Heat-Resistant	n/a	3.5	3
High Performance Architectural	n/a	6.2	6.2
High Temperature	n/a	3.5	3.5
Metallic	n/a	3.5	3.5
Military Specification	n/a	2.8	2.3
Mold-Seal	n/a	3.5	3.5
Pan Backing	n/a	3.5	3.5
Prefabricated Architectural Multi- Component	n/a	3.5	2.3
Prefabricated Architectural One- Component	n/a	3.5	2.3
Pretreatment Coatings	n/a	3.5	3.5
Repair and Touch Up	n/a	3.5	3
Silicone Release	n/a	3.5	3.5
Solar-Absorbent	n/a	3.5	3
Vacuum-Metalizing	n/a	3.5	3.5
Drum Coating, New, Exterior	n/a	2.8	2.8
Drum Coating, New, Interior	4.3	3.5	3.5

Drum Coating, Reconditioned, Exterior	n/a	3.5	3.5
Drum Coating, Reconditioned, Interior	4.3	4.2	4.2

The proposed VOC content limits for miscellaneous plastic parts, including coatings applied to miscellaneous plastic parts on automotive/transportation and business machines, and pleasure craft coating, that were not previously regulated in Part 19 are as follows:

**Miscellaneous plastic parts and products (not including automotive/transportation, business machine and pleasure craft coating)**

Coating category	lbs VOC/gallon of coating, less water and exempt compounds, as applied
General One Component	2.3
General Multi Component	3.5
Electric Dissipating Coatings and Shock-Free Coatings	6.7
Extreme Performance	3.5 (2-pack coatings)
Metallic	3.5
Military Specification	2.8 (1 pack) 3.5 (2 pack)
Mold-Seal	6.3
Multi-colored Coatings	5.7
Optical Coatings	6.7
Vacuum-Metalizing	

**Pleasure craft coating**

Coating category	lbs VOC/gallon of coating, less water and exempt compounds, as applied
Extreme High Gloss Topcoat	4.1
High Gloss Topcoat	3.5
Pretreatment Wash Primers	6.5
Finish Primer/Surfacer	3.5
High Build Primer Surfacer	2.8
Aluminum Substrate Antifoulant Coating	4.7
Other Substrate Antifoulant Coating	2.8
All other pleasure craft surface coatings for metal or plastic	3.5

### Automotive/transportation Plastic Part or Product

Coating category	lbs VOC/gallon of coating, less water and exempt compounds, as applied
High Bake Coatings – Interior and Exterior Parts	
- Flexible Primer	4.5
- Non-Flexible Primer	3.5
- Base Coats	4.3
- Clear Coat	4.0
- Non-basecoat/clear coat	4.3
Low Bake/Air Dried Coatings – Exterior Parts	
- Primers	4.8
- Basecoat	5.0
- Clearcoats	4.5
- Non-basecoat/clearcoat	
Low Bake/Air Dried Coatings – Interior Parts	5.0
Touch up and Repair Coatings	5.2

### Business Machine Plastic Part or Product

Category	lbs VOC/gallon of coating, less water and exempt compounds, as applied
Primers	
Topcoat	2.9
Texture coat	
Fog Coat	2.2
Touch up and Repair coatings	2.9

For paper, film and foil coating, the existing rule only includes emissions limitations for paper coating. The proposed rule contains emissions limitations for paper, film and foil coating if the potential emissions from the individual coating line are greater than 25 tons per year. The proposed rule contains the following VOC content limits:

### Paper, film, or foil coating

Category	lbs VOC/gallon of coating, less water and exempt compounds, as applied
Paper only*	2.9
Paper, film or coil that is not pressure sensitive tape and label**	0.08
Paper, film or coil that is a pressure sensitive tape and label**	0.067

\*VOC emissions greater than 2.7 tons per rolling 12- month period.

\*\* Potential VOC emissions from the individual paper, film or foil coating unit greater than 25 tons per year.

The proposed rule also contains VOC content limit on a pounds VOC per gallon of solids, as applied basis for sources opting to comply using a combination of control equipment and low VOC coating or using daily weighted averaging to comply with the emissions limitations. These proposed revised and new limits are as follows:

### Flat wood Paneling

	<b>Existing</b> emission rate limit, lbs VOC/ 1000 square feet coated surface	<b>Proposed,</b> <b><u>lbs VOC per gal</u></b> <b><u>of solids, as</u></b> <b><u>applied</u></b>
Printed interior wall panels made of hardwood plywood and thin particleboard	6	2.9
Natural finish hardwood plywood panels	12	2.9
Class II hardboard panels	10	2.9

### Large Appliance Coating

<b>Coating Category</b>	<b><u>Existing</u></b> Large Appliance (all) lbs VOC per gal of solids, as applied	<b><u>Proposed Baked</u></b> lbs VOC per gal of solids, as applied	<b><u>Proposed Air Dried</u></b> lbs VOC per gal of solids, as applied
All	4.52	n/a	n/a
General, one component	n/a	3.3	3.3
General, multi-component	n/a	3.3	4.5
Extreme high gloss	n/a	5.1	4.5
Extreme performance	n/a	5.1	6.7
Heat resistance	n/a	5.1	6.7
Solar absorbent	n/a	5.1	6.7
Metallic	n/a	6.7	6.7
Pretreatment coatings	n/a	6.7	6.7





## Metal Furniture Coating

Coating Type	<b>Existing</b> Metal Furniture (all) lbs VOC/gal solids, as applied	<b><u>Proposed</u></b> <b><u>Baked</u></b> lbs VOC per gal of solids, as applied	<b><u>Proposed</u></b> <b><u>Air-dried</u></b> lbs VOC per gal of solids, as applied
All	5.06	n/a	n/a
General, One Component	n/a	3.3	3.3
General, Multi-Component	n/a	3.3	4.5
Extreme High Gloss	n/a	5.1	4.5
Extreme Performance	n/a	5.1	6.7
Heat Resistant	n/a	5.1	6.7
Metallic	n/a	6.7	6.7
Pretreatment Coatings	n/a	6.7	6.7
Solar Absorbent	n/a	5.1	6.7

### Miscellaneous Metal Parts

Coating Category	Existing lbs VOC per gal of solids, as applied	<b><u>Proposed</u></b>	
		<b><u>Air-dried</u></b> <b><u>lbs VOC per gal of</u></b> <b><u>solids, as applied</u></b>	<b><u>Baked</u></b> <b><u>lbs VOC per gal of</u></b> <b><u>solids, as applied</u></b>
Clear Coating	10.34	n/a	n/a
Air Dried Coating (all)	6.67	*see individual type	n/a
All other coating on mis metal parts	5.06	*see individual type	n/a
General One Component	n/a	4.52	3.35
General Multi Component	n/a	4.52	3.35
Camouflage	n/a	6.67	6.67
Electric-Insulating Varnish	n/a	6.67	6.67
Etching Filler	a/a	6.67	6.67
Extreme High-Gloss	n/a	6.67	5.06
Extreme Performance	6.67	6.67	5.06
Heat-Resistant	n/a	6.67	5.06
High Performance Architectural	n/a	38	38
High Temperature	n/a	6.67	6.67
Metallic	n/a	6.67	6.67
Military Specification	n/a	4.52	3.35
Mold-Seal	n/a	6.67	6.67
Pan Backing	n/a	6.67	6.67
Prefabricated Architectural Multi- Component	n/a	6.67	3.35
Prefabricated Architectural One- Component	n/a	6.67	3.35
Pretreatment Coatings	n/a	6.67	6.67
Repair and Touch Up	n/a	6.67	6.67
Silicone Release	n/a	6.67	5.06
Solar-Absorbent	n/a	6.67	6.67
Vacuum-Metalizing	n/a	4.52	4.52
Drum Coating, New, Exterior	n/a	6.67	6.67
Drum Coating, New, Interior	10.34	6.67	6.67
Drum Coating, Reconditioned, Exterior	n/a	9.78	9.78
Drum Coating, Reconditioned, Interior	10.34	4.52	3.35

**Miscellaneous plastic parts and products (not including automotive/transportation, business machine and pleasure craft coating)**

Coating category	lbs VOC/gal solids, as applied
General One Component	3.35
General Multi Component	6.67
Electric Dissipating Coatings and Shock-Free Coatings	74.7
Extreme Performance	6.67(2-pack coatings)
Metallic	6.67
Military Specification	4.52 (1 pack) 6.67 (2 pack)
Mold-Seal	43.7
Multi-colored Coatings	25.3
Optical Coatings	74.7
Vacuum-Metalizing	

**Pleasure craft coating (metal of plastic part or product)**

Coating category	lbs VOC/gal solids, as applied
Extreme High Gloss Topcoat	9.2
High Gloss Topcoat	6.7
Pretreatment Wash Primers	55.6
Finish Primer/Surfacer	6.7
High Build Primer Surfacer	4.6
Aluminum Substrate Antifoulant Coating	12.8
Other Substrate Antifoulant Coating	4.4
All other pleasure craft surface coatings for metal or plastic	6.7

**Automotive/transportation Plastic Part or Product**

Coating category	lbs VOC/gallon of solids, as applied
High Bake Coatings – Interior and Exterior Parts	
- Flexible Primer	11.58
- Non-Flexible Primer	6.67
- Base Coats	10.34
- Clear Coat	8.76
- Non-basecoat/clear coat	10.34
Low Bake/Air Dried Coatings – Exterior Parts	
- Primers	13.80
- Basecoat	15.59
- Clearcoats	11.58
- Non-basecoat/clearcoat	15.59

Low Bake/Air Dried Coatings – Interior Parts	
Touch up and Repair Coatings	17.72

**Business Machine Plastic Part or Product**

Category	lbs VOC/gallon of solids, as applied
Primers	4.8
Topcoat	
Texture coat	
Fog Coat	3.14
Touch up and Repair coatings	4.8

**Paper, film, or foil coating**

Category	lbs VOC/gallon of solids, as applied
Paper only*	4.79
Paper, film or coil that is not pressure sensitive tape and label**	0.40
Paper, film or coil that is a pressure sensitive tape and label**	0.20

\*VOC emissions greater than or equal to 2.7 tons per rolling 12-month period

\*\* Potential VOC emissions from the individual paper, film or foil coating unit greater than 25 tons per year.

Proposed work practice standards for surface coating and cleaning operations have been added to the rule to minimize VOC emissions. These standards include:

- Storing all new and used VOC-containing cleaning materials, coating, thinners or coating related waste, including used shop towels, in closed containers;
- Ensuring that mixing and storage containers used for VOC-containing cleaning materials, coatings, thinners, and coating-related waste materials are kept closed at all times except when depositing or removing these materials;
- Minimizing spills of VOC-containing cleaning materials, coatings, thinners, and coating-related waste materials;
- Conveying VOC-containing cleaning materials, coatings, thinners, and coating-related waste materials from one location to another in closed containers or pipes; and
- Minimizing VOC emissions from 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.

• The proposed rule contains acceptable application methods for miscellaneous metal and plastic parts coating, large appliance coating, and metal furniture coating. Acceptable application methods include the use of:

- Electrostatic spray application;
- HVLP spray;
- Flow coat;
- Roller coat;

- Dip coat, including electrodeposition;
- Airless spray;
- Air-assisted airless spray; or
- A coating application method capable of achieving a transfer efficiency equivalent to or greater than that achieved by HVLP, as approved by the Director and EPA.

Additionally, definitions and an incorporated materials section have been added. Portions of the regulation that no longer apply have been eliminated.

### **Demonstration of Need**

On March 6, 2017 EPA issued a finding of failure to submit to Rhode Island for failure to submit required State Implementation Plan (SIP) components to address Clean Air Act requirements for the 2008 Ozone National Ambient Air Quality Standard. The finding establishes deadlines by which states either must submit complete SIP revisions or become subject to sanctions. The offset sanction is currently in place.

Specifically, 40 CFR § 51.1116 required RI to submit a SIP revision that meets the requirements of Section 184(b) of the Clean Air Act. Section 184(b) requires states in the ozone transport region to implement or update reasonably available control technology (RACT) controls on all major VOC and NO<sub>x</sub> emission sources and on source categories covered by a Control Technique Guideline (CTG) document. In 2008 EPA published a CTG recommending VOC controls for miscellaneous metal and plastic parts coatings, “Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings.” In 2006 EPA published a CTG recommending VOC controls for flatwood paneling coating, “Control Techniques Guidelines for Flat Wood Paneling Coatings.” In 2007 EPA published CTG’s recommending VOC controls for paper, film and foil coating “Control Techniques Guidelines for Paper, Film, and Foil Coatings,” metal furniture coating, “Control Techniques Guidelines for Metal Furniture Coating,” and large appliance coating, “Control Techniques Guidelines for Large Appliance Coating.” The Department is proposing to incorporate these CTG’s into Part 19, “Control of Volatile Organic Compounds from Coating Operations,” which will be submitted to the U.S. Environmental Protection Agency for approval in Rhode Island’s State Implementation Plan. RI must make a complete SIP submission, including incorporation of the requirements in the above CTG’s to remove the offset sanction.

### **Alternative Approaches Considered**

No alternative approaches were considered.

### **Identification of Overlapped or Duplicated State Regulations**

The Office of Air Resources has identified no state regulations that overlap or duplicate the proposed amendments.

### **Determination of Significant Adverse Economic Impact on Small Business or Any City or Town**

The Office of Air Resources has determined that implementation of the amendments to Part 19 would not have a significant adverse economic impact on small businesses or cities and towns in the State. Alternative coatings are readily available that meet these emissions limitations in the proposed rule. Additionally, several small businesses will qualify to enter an enforceable document limiting the facilities emissions to less than 1,666 pounds per month which has no cost. A complete cost benefit analysis has been prepared evaluating the proposed rules' effect on small business.

**For more information or copies of the proposed amendments contact:**

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Or, visit the Proposed Regulations section of the DEM website at:

<http://www.dem.ri.gov/documents/regulations/>