

# Air Program Fact Sheet Wood Furniture Coating RACT

February 2017

## What is the Wood Furniture Coating RACT?

This fact sheet will help explain how the Reasonably Available Control Technology (RACT) rule for the wood furniture coating industry may affect a business. This RACT rule is designed to reduce Volatile Organic Compound (VOC) emissions from wood coating operations. VOC emissions are a significant cause of ground level ozone (smog) and, while a single facility may not be a major part of the smog problem, when taken together all the businesses involved in wood finishing represent a significant source of VOC emissions. The location of a business, the size of the operation and the types of wood products finished will determine if this rule affects a business. The actual regulation can be found in section NR 422.125 of the Wisconsin Administrative Code (Wis. Adm. Code).

## When does this rule affect a business?

If a business meets **all** the following criteria, it will be affected by this rule:

- The facility is located in any of the following counties:
  - Kenosha
  - Milwaukee
  - Sheboygan
  - Kewaunee
  - Ozaukee
  - Washington
  - Manitowoc
  - Racine
  - Waukesha
- The facility finishes any wood product or component that is included in Standard Industrial Classification codes 2434, 2511, 2512, 2517, 2519, 2521, 2531, 2541 or 2599. These codes include, but are not limited to:
  - kitchen cabinets
  - household furniture
  - office furniture
  - institutional furniture
  - partitions and fixtures
- The facility's maximum theoretical emissions (MTE) of VOCs from all wood furniture finishing operations are 25 tons or more per year. Maximum theoretical emissions are the emissions that would occur if the business operated at maximum production capacity for 24 hours/day, 365 days/year (or 8,760 hours/year).

Maximum production capacity includes the use of finishing material and associated cleaning and washoff material with the highest VOC content. A business with maximum theoretical emissions of VOCs greater than 25 tons per year may avoid this rule by obtaining a "synthetic minor" permit from the DNR. This means limiting the actual VOC emissions from wood furniture finishing operations to less than 25 tons per year.

## How does a business comply with this rule?

Affected businesses must comply in four areas. An explanation of each compliance requirement is included in this summary. The four areas are:

### Coating Emission Limits

All affected businesses must meet the VOC emission limits for the coatings listed in Table 1 (see the following page). Several options are available to comply with these emission limits:

- *Compliant Materials.* Use only coatings that meet the specified limits.

- *Emissions Averaging.* This method may allow the use of some sealers or topcoats with a VOC content higher than the limit in the table. Low VOC coatings, including washcoats, basecoats and stains, as well as sealers and topcoats, may be used to offset high VOC coatings.

Compliance must be demonstrated on a daily basis using equations and methods specified in the rule.

- *Control Devices.* Thermal or catalytic incineration or other VOC control devices may be used to achieve compliance. The rule specifies an equation and method to determine the overall control efficiency for demonstrating daily compliance.

<b>Table 1. VOC Emission Limits</b>	
<b>Coating Type</b>	<b>Emission Limit (lb VOC per lb solids)</b>
<b>FINISHING MATERIAL EMISSION LIMITS (as applied)</b>	
Acid-cured alkyd amino vinyl sealer	2.3
Other sealer*	1.9
Acid-cured alkyd amino conversion varnish topcoat	2.0
Other topcoat*	1.8
<b>OTHER COATING LIMITS (as applied)</b>	
Strippable spray booth coating	0.8
* Where both the sealer and topcoat are not acid-cured alkyds, a business may choose to meet a limit of 0.8 pounds VOC per pound solids for the topcoats only. Under this provision, no VOC emission limit applies to the sealers. The supplier or coating manufacturer may be able to provide coating information to assist in determining if coatings will meet these VOC limits.	

### Coating application equipment

Finishing materials are to be applied using only electrostatic application, flow or dip coating, a low-pressure spray method, paint brush, hand roller or roll coater. (Low-pressure spray means use of an air-atomizing spray gun that operates at no more than 10 psig.) Other application methods or equipment can be used when:

- the “as applied” VOC content of a coating is not more than 1.0 pound per pound of solids;
- applying final touch-up and repair finishing materials;
- using a control device to meet the emission limits.

### Notification and compliance certification

If a facility modifies an operating method so that emission limitations change, a new notification must be submitted within 60 days of the modification. The notification must include:

- identification of all affected coating operations
- all the emission limits that apply
- compliance certification

If, through a modification of operating methods, the facility chooses to comply with the emission limits through emissions averaging, the following additional information must be submitted:

- name and location of the facility
- name of each coating that will be used in the emissions averaging
- coating lines on which it will be applied
- method used to measure the weight of solids or volume of coating used each day
- an example of how records will be kept

If a facility has missed any deadlines for compliance, the requirements should be met as soon as possible. All notifications must include the name, address and phone number of the facility where wood finishing is taking place. The name and phone number of the person at the facility responsible for documenting compliance with this rule must also be included.

Contact your local DNR Air Program compliance inspector for the notification forms or visit the DNR’s *Wood Furniture* web page: <http://dnr.wi.gov/topic/SmallBusiness/Resources/WoodFurniture.html>.

## Record keeping

Keep records of all coatings used. Records should include this information:

- a unique name or identification number for each affected coating
- the VOC content of each affected finishing material and coating, as applied, in units of pounds VOC per pound of solids
- if using emissions averaging, the total daily actual and allowable VOC emissions as calculated in accordance with s. NR 422.125(3)(a), along with supporting data used for the calculation
- if using an air pollution control device, the information required in s. NR 422.125(6)(d) should also be included

## Pollution prevention tips

Limiting the amount of VOC in the various coatings used on wood products will help reduce pollution. VOC emissions can also be minimized by using more efficient application and cleanup equipment.

Additional efforts to reduce waste and increase profits could include:

- working with the suppliers to explore alternative products and equipment
- training operators on efficient application techniques
- keeping coatings and solvents in closed containers

## Additional Information

Details on the Wood Furniture Coating RACT long with other relevant environmental regulations can be found on the Small Business Environmental Assistance Program's (SBEAP) *Wood Furniture* page:

<http://dnr.wi.gov/topic/SmallBusiness/Resources/WoodFurniture.html>. For questions about any of the regulations, contact SBEAP at 855-889-3021 or [DNRSMBusiness@wisconsin.gov](mailto:DNRSMBusiness@wisconsin.gov).

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