

US EPA ARCHIVE DOCUMENT

## COMMUNITY INFORMATION SHEET



### Could your family be affected?

Ohio EPA's Office of Pollution Prevention has published "Woodworking and Refinishing Pollution Prevention Opportunities," which provides examples of how to calculate cost savings and environmental benefits. Any company can insert their material usage numbers and calculate potential cost savings and environmental benefits.

— Office of Pollution Prevention,  
Ohio Environmental Protection Agency

EPA has developed an online pollution prevention tool for paints and coatings. Called The Coatings Guide™, this guide contains several tools to help users identify coatings with low VOC and hazardous air pollutant content that may be suitable for replacing more toxic paints or coatings.

— U.S. EPA



## Reducing Air Pollution from: Wood Furniture Operations

### Why do wood furniture operations need to reduce air pollution?

People who are exposed to toxic air pollutants at sufficient concentrations, for sufficient durations, may increase their chances of getting cancer or experiencing other serious health effects, such as reproductive problems, birth defects, and aggravated asthma.

Pollution prevention can reduce the impact of air pollution by using materials, processes, or practices that reduce or eliminate air pollution at the source.

Wood furniture operations manufacture or finish furniture for homes, offices, stores, public buildings, and restaurants. Wood furniture operations activities include drying, sawing, waxing, sanding, and finishing, all of which may release pollutants into the air and may contribute to health concerns in the operation and in the community.

The best wood furniture operations implement pollution prevention strategies not only to help comply with federal, state, local, and Tribal laws but also to further minimize impacts on human health and the environment. Check with your state, local, and Tribal agencies for existing regulations.

### What kinds of air pollutants may come from wood furniture operations?

- Wood furniture operations can produce emissions of toxic air pollutants.
- Finishes, stains, and topcoats applied during the finishing process can release some toxic air pollutants and volatile organic compounds (VOC). Chemicals in these substances can react in the air to form ground-level ozone (smog), which has been linked to a number of respiratory effects.
- Other sources of toxic emissions include adhesives used for gluing and solvents used during cleanup.

Stripping processes during refinishing can also emit air pollution.

- While federal, state, local, and Tribal regulations limit the amount of emissions from wood furniture operations, dangerous releases of toxic air pollutants can occur if a wood furniture operation is not in compliance with regulations.

### How can wood furniture operations reduce air pollution?

Making changes in operation work practices can stop pollutants at the source and increase production efficiency. By evaluating and improving work practices, operations can decrease emissions, reduce production costs, and protect employee and public health.

Examples of changes in work practices that help reduce air pollution include:

#### Substituting Materials

- Use alternative coating and adhesive formulations with lower toxic air pollutant and VOC content.
- Use cleaners with lower toxic air pollutant and VOC content.

#### Increasing Application Efficiency

- Replace old equipment with new and efficient equipment, such as high-volume low-pressure (HVLP) spray, airless spray, air-assisted airless spray, or electrostatic spray guns.
- Train painters in proper spray application techniques to reduce emissions and enhance the quality of the paint finish.
- Use a coating method that does not require spraying .

#### Changing Cleaning Procedures

- Use cleaning procedures that reduce the amount of solvent needed.
- Schedule production runs to minimize the amount of cleaning needed between colors or products.

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## Wood Furniture Operations

### Recycling Materials

- Reuse cleaning solution or solvent by using dirty solvent for initial cleaning, following with clean solvent.
- Use an on-site distillation unit to recycle dirty cleaning liquid.
- Recover solvents for reuse.

### As a community, what can you do to help reduce air pollution from wood furniture operations?

#### Make Connections

- Get to know local wood furniture operation owners and operators. They know best about the materials and processes used in their business and the regulations with which they must comply.
- Keep local media aware of progress by sending them updates. Publicity can reward success and attract more public involvement.

#### Make a Plan

- Form a work group that includes area owners and operators to develop and implement workable pollution reduction plans.

### Locate Resources

- Use the “For Further Information” list below to find governmental and nonprofit contacts who can provide help with analysis, technical information, equipment, and funding.

### Sponsor Training and Translation

- Small operations may need funding in order to attend or provide training.
- Improved skills lead to reduced finishing material usage and exposure for workers.

### Reward Operations

- Use media connections to provide coverage for successful efforts. Positive publicity can mean increased business.
- Visibly displayed awards or certificates may also increase business.

## For Further Information

- American Home Furnishings Alliance: [www.afma4u.org](http://www.afma4u.org), (336) 884-5000
  - EPA Air Toxics Web Site: [www.epa.gov/ttn/atw/](http://www.epa.gov/ttn/atw/)
  - National Emission Standards for Hazardous Air Pollutants: Wood Furniture Manufacturing Operations: [www.epa.gov/ttn/atw/wood/riwood.html](http://www.epa.gov/ttn/atw/wood/riwood.html)
  - Community-Based Projects: [www.epa.gov/air/toxicair/community.html](http://www.epa.gov/air/toxicair/community.html)
  - Community information, regional, state contacts: [www.epa.gov/epahome/whereyoulive.htm](http://www.epa.gov/epahome/whereyoulive.htm)
  - Pollution prevention awards: State, local, and Tribal government agencies, universities
  - Painting technique training opportunities: The American Home Furnishings Alliance, Iowa Waste Reduction Center: [www.iwrc.org/programs/STAR.cfm](http://www.iwrc.org/programs/STAR.cfm), (800) 422-3109
  - Toxicity of paints and solvents: Local wood manufacturing trade associations, Integrated Risk Information Systems (IRIS) ([www.epa.gov/iris](http://www.epa.gov/iris)), Air Toxics Health Effects Notebooks ([www.epa.gov/ttn/atw/hapindex.html](http://www.epa.gov/ttn/atw/hapindex.html))
  - Solvent Alternatives Guide: [www.sage.rti.org](http://www.sage.rti.org)
  - The Coatings Guide™: [www.cage.rti.org](http://www.cage.rti.org)
- For more information, please see the Resources section of the Owner/Operator Information Sheet.

*Switching coating types reduces emissions of VOC and toxic air pollutants by 25%.*

— Pacific Northwest Pollution Prevention Resource Center

