COMMUNITY INFORMATION SHEET

HEALTHY AIR
A COMMUNITY AND BUSINESS LEADERS GUIDE

Reducing Air Pollution from: Fiberglass Fabrication Operations

Could your family be affected?

A study in Minnesota showed a potential emission reduction of approximately 30% from implementing pollution prevention techniques at fiberglass fabrication facilities.

— Minnesota Office of Environmental Assistance

The Robert C. Byrd Institute for Advanced Flexible Manufacturing provides statewide and regional access to advanced technology and technical training for small and medium-sized manufacturers.

— Robert C. Byrd Institute

Why do fiberglass fabrication 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.

Fiberglass fabrication operations produce many kinds of products, including tubs, showers, spas, car and truck accessories, boats, and storage bins. Activities at fiberglass fabrication operations include mold preparation, gel coating, laminating, equipment cleaning, systems operations, and finishing operations, all of which may release pollutants into the air and may contribute to health concerns in the operation and in the community.

The best fiberglass fabrication operations implement pollution prevention strategies not only to 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, or Tribal agencies for existing regulations.

What kinds of air pollutants may come from fiberglass fabrication operations?

- Fiberglass fabrication operations can produce emissions of toxic air pollutants, including styrene.
- The primary pollutant at most operations is styrene, which is present in resins and gel coats. A portion of the styrene evaporates during the curing process.
- Paints, thinners, solvents, and adhesives 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.

How can fiberglass fabrication operations help reduce air pollution?

Making changes in operation work practices can stop pollutants at the source. By evaluating and improving these 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 are:

Improving System Design

- Improve production system design to minimize waste and exposure of resin to the air.
- Switch from manual operation to robotics to increase efficiency.
- Change to more efficient spray technologies.

Changing Raw Materials

- Use resins and gel coats that contain less styrene.
- Use vapor-suppressed or ultraviolet-cured resins.

Reducing Exposure to Solvent

- Cover solvent containers.
- Separate wastes to simplify solvent recycling.

COMMUNITY INFORMATION SHEET
Fiberglass Fabrication

As a community, what can you do to help reduce air pollution from fiberglass fabrication operations?

Make Connections.
- Get to know local fiberglass fabrication operations because 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
- One idea is to form a work group that includes local 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.

Encourage Pollution Prevention
- Encourage or sponsor training for employees of local fiberglass operations.

Reward Shops
- 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 Composites Manufacturers Association: *www.acmanet.org*, (703) 525-0511
- EPA Air Toxics Web Site: *www.epa.gov/ttn/atw/*
- Community-Based Projects: www.epa.gov/air/toxicair/community.html
- Community information, regional, state contacts: *www.epa.gov/epahome/whereyoulive.htm*
- Pollution prevention awards: State, local, or Tribal government agencies, universities
- Spray Training: American Composite Manufacturers Association: *www.acmanet.org/index.cfm*
- Toxicity of Solvents: Integrated Risk Information Systems (IRIS) (*www.epa.gov/iris*), Air Toxics Health Effects Notebooks (*www.epa.gov/ttn/atw/hapindex.html*)
- Indiana Department of Environmental Management: *www.in.gov/idem/oppta/index.html*
- Robert C. Byrd Institute for Advanced Flexible Manufacturing: *www.rcbi.org*
- For more information, please see the Resources section of the Owner/Operator Information Sheet.

National Emission Standards for Hazardous Air Pollutants
- Flexible Polyurethane Foam Production: *www.epa.gov/ttn/atw/foam/foampg.html*
- Flexible Polyurethane Foam Operations: *www.epa.gov/ttn/atw/foam2/foam2pg.html*

The Indiana Department of Environmental Management works with local small businesses to reduce pollution by providing experts for onsite technical assistance, economic advice, and other managerial advice.

— Indiana Department of Environmental Management