

US EPA ARCHIVE DOCUMENT



## Could your family be affected?

In 1996 there were approximately 125,000 nail salons in the United States, employing over 500,000 nail technicians with total sales of over 4.5 billion dollars.

— Indoor Air Pollution Control

30 states have restricted or banned the use of liquid methyl methacrylate monomer. Methyl methacrylate monomer is an ingredient used in some artificial nail products which bond strongly with the nail.

— U.S. EPA

U.S. nail salons raked in \$6.53 billion in revenue in 2003, up 67 percent from 10 years ago.

\_\_ Design for the Environment



## Reducing Air Pollution from: Nail Salons

### Why should I reduce air pollution from nail salons?

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 safeguards the health of your employees, families, and customers by using materials, processes, or practices that can reduce or eliminate air pollution at the source.

Pollution prevention practices also save money on waste disposal, solvent usage, and the cost of air pollution controls.

You may already be regulated by federal, state, local, and Tribal agencies and may already voluntarily implement pollution prevention practices. These practices can go beyond compliance and further minimize impacts on human health and the environment.

### Why should I be concerned about air pollution from my nail salon?

Many of the products used in nail salons contain a variety of chemicals which may be harmful to people or to the environment if not handled carefully. These products include solvents, hardeners, fragrances, glues, polishes and dry/curing agents. Possible effects on health can range anywhere from mild rashes to very serious conditions, depending on degree and duration of exposures (For more detailed information on chemicals present in nail care products, see (7), (1) and (3) in Resources list.)

- **Chemical Vapors:** Many of the most potentially harmful chemicals used in nail salon products “vaporize” quickly into the air while customers are being worked on, or when materials are being transferred from storage into smaller containers.

Chemicals in solvents can also react in the air to cause both respiratory and environmental problems from production of ground-level ozone (smog). Since smell is not a reliable indicator of exposure, it’s important to know which products contain chemicals that owners and operators need to treat with special care.

- **Dust:** Filing artificial nails produces fine particles. The resulting dust may contain glues, benzoyl peroxide, silica, and methacrylate polymers. Wraps usually contain the same materials as nails in any given product line.
- **A Special Situation:** Years ago, Liquid Methyl Methacrylate (MMA) Monomer was used in artificial nail products. In the early 1970’s the US Food and Drug Administration (FDA) responded to complaints with investigations that established its dangers. Since then, 30 states have restricted or banned its use. However, Liquid MMA is still available and is used in some products. In (6) of the Resources list, the Nail Manufacturers Council (NMC) provides information about how to identify Liquid MMA and describes safe products to use as substitutes.
- **Other Health Considerations:** In addition to trying to minimize the health effects of breathing chemical vapors and dust, nail salon owners and operators can protect worker and customer health in other ways. Establishing good sanitation practices for instrument sterilization, hand washing and glove use can prevent disease transmission. See listed resources for excellent suggestions and checklists, including ways to prevent accidents in nail salons.

### How can I reduce the air pollution from my nail salon?

- **Learn about the chemicals in the products you use:** You can get Material Safety Data Sheets (MSDS) from your nail product suppliers and manufacturers. Each MSDS tells what the hazardous components and exposure limits are for the chemicals in each of their products. They explain any health hazards, precautions to be taken, and what to do in emergencies. For more information about using MSDS, see Resources (7) and (4).
- **Minimize effects of vapors:** Try to prevent vapors from getting into the air by keeping supplies tightly sealed except when dispensing products. Guard against spills when transferring materials from storage to smaller containers. Substitute safe materials and products. Promptly dispose of chemical-soaked gauze pads into sealed bags and change trash can liners daily. Use only metal self-closing trash receptacles.
- **Minimize effects of dust:** Workers should wear masks when filing nails. Dust-controlling techniques, such as forming the nail properly, should be used to reduce the need for filing.
- **Ventilate to remove vapors and dust:** Nail salons should have a well-designed, properly installed, overall exhaust ventilation system. Install a local exhaust ventilation system above each manicure station. All systems should be vented outside in a

manner that avoids re-circulating air back into the salon.

For more detailed information, links to other Web sites, and helpful checklists dealing with all aspects of nail salon health and safety measures, see the list of Resources.

### What else can I do to reduce air pollution?

Keep informed through internet resources such as those listed. Stay involved with trade associations, which offer updates, publications, and continuing education opportunities.

Your community may already have groups working for cleaner air. Your expertise and knowledge can be very helpful to these groups by helping them understand what the nail salon industry is doing to improve air quality.

Many pollution prevention offices offer free on-site assessments for interested businesses. Resource (9) provides information about assistance and technical help, environmental experts, environmental regulations and laws, funding, and cost-saving opportunities.

Also, sponsor employee awards for good ideas, great efforts and dedication to pollution prevention. For example, you could provide a cash award for employees who implement ideas that reduce both costs and pollution.

## Resources

EPA has compiled an information booklet to educate nail salon owners and employees about the potential hazards of chemicals present in nail products and to recommend many best shop practices to minimize health and environmental risks in their shops. This booklet has been produced in English, Vietnamese, and Korean to ensure that stakeholders from different backgrounds are all equally educated on nail salon risks and safety measures. Resource (7). Other resources listed also provide useful information, links, and work practices checklists for nail salons. See additional checklists in (1) and (5).

1. Artificial Fingernail Products. A HESIS Guide to Chemical Exposures in the Nail Salon: [www.dhs.ca.gov/ohb/HESIS/artnails.htm](http://www.dhs.ca.gov/ohb/HESIS/artnails.htm)
2. Cosmetic, Toiletry, and Fragrance Association: [www.ctfa.org](http://www.ctfa.org), 202-331-1770
3. Integrated Risk Information Systems (IRIS): [www.epa.gov/iris](http://www.epa.gov/iris)
4. Material Safety Data Sheets: [www.msds-online.com](http://www.msds-online.com)
5. Nail Manufacturers Council List of Salon Work Practices: [www.asepticonails.com/nailsafety.htm](http://www.asepticonails.com/nailsafety.htm)
6. Nail Manufacturers Council Update on MMA: [www.isnow.com/about/inta/NMC\\_MMA.pdf](http://www.isnow.com/about/inta/NMC_MMA.pdf)
7. U.S. EPA: A Guide to Protect the Health of Nail Salon Workers and their Working Environment: [www.epa.gov/dfe/pubs/salon/NailBookEnglish.pdf](http://www.epa.gov/dfe/pubs/salon/NailBookEnglish.pdf), 888-884-2478 x58326
8. U.S. EPA Design for the Environment Nail Salon Project: [www.epa.gov/dfe/projects/salon/index.htm](http://www.epa.gov/dfe/projects/salon/index.htm)
9. US EPA Small Business Gateway homepage: [www.epa.gov/smallbusiness/](http://www.epa.gov/smallbusiness/)
10. Community-Based Projects: [www.epa.gov/air/toxicair/community.html](http://www.epa.gov/air/toxicair/community.html)

