VENTILATION

Ventilation, do I need it? Protect Yourself!

1. Can you see or smell fumes, vapours, aerosols or dusts (use a spot light beam to pinpoint dusts and aerosols) in your workroom?
2. Do you regularly suffer from eye, nose or throat irritation?
3. Do you regularly suffer from headaches, nausea or lethargy?
4. Do you have skin problems, eg dermatitis or rashes?
5. Does your hanky look more like a paint or dust rag after you've blown your nose!

If the answer to these questions is yes, you need a ventilation system.

Ventilation

You will need expert help to design an effective and safe ventilation system. Consult an Occupational Health and Safety Officer or the Department of Labour to select the right ventilation for your studio. There are two types of ventilation: general or dilution and local exhaust ventilation.
General ventilation relies on a large volume of heated or cooled clean air, pulled by a fan, to dilute contaminants. An exhaust fan removes the mixture from the workroom. Because it does not adequately remove contaminants from the breathing area, this system should only be used to remove less toxic solvent vapours and fumes. It should NOT be used to remove dusts, metal particles or any highly toxic material.

Local exhaust ventilation (LEV) is more expensive, but it is the only system that allows you to control the flow of air and to safely remove toxic materials. Local ventilation is placed directly at the source of contamination, drawing fumes, gases, vapours and dusts away from the breathing area of the artist. LEV relies on a system of hoods, ducts, air cleaners and fans, so it doesn't need as much incoming air as dilution ventilation. LEV can be used for all artforms.

Principles of good ventilation

1. Clean air should blow directly across the work area while contaminated air is sucked away from the breathing zone of anyone working in that area.
2. The contaminated air should be drawn out of the building by an exhaust fan.
3. The exhaust intake should be placed as close to the source of the contaminants as possible.
4. Avoid crossdrafts. Open windows and doors, machine and human traffic can interrupt the flow of contaminated air to the exhaust system.
5. Clean air must be provided to replace the air that is being extracted by the exhaust system. Replacement air can be provided by a vent, fans or ducting.
6. The exhaust system should not be placed where it can recirculate contaminated air into the building, eg near the clean air inlet or open windows on your and other floors.
7. Polluting the environment. You should not be putting contaminated air into the living spaces of others, eg courtyards and airshafts (which have a limited airflow). You should use a suitable air-filtration system if you are working with toxic chemicals. The Environmental protection Agency has standards that govern air pollution. It is likely that these standards will be tightened over the next decade. You could save money now by substituting safer chemicals and by installing an environmentally and industrially safe ventilation system.

Maintaining and monitoring your ventilation system

After installation, the ventilation system should be regularly checked to ensure that it functions correctly. You will need the help of an expert to test the air-flow and pressure.

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