OBERLIN COLLEGE - STUDIO ART

HEALTH & SAFETY HANDBOOK

Appendix D: Drawing

Locations: Drawing Domes, Painting Studios, Senior Studios

Drawing materials typically constitute a low health/safety risk from materials present or inherent hazards. Certain materials used for drawing can pose higher risks and will be noted in the materials section.

1. Hazards of Media (inherent)
The hazards of each type of drawing material will depend on the toxicity of the ingredients of the materials and how much exposure occurs during use.

When drawing materials are airborne, they are more dangerous to your system, while many materials cause skin irritation. See the SDS forms for each material you work with to determine precautions, risks and treatment plan for inhalation, contact or ingestion.

The hazards of traditional drawing materials arise from exposure to their pigments, vehicles and solvents. Today, as the definition of drawing changes, students should cross reference as needed based on materials they choose to work with.

Drawing materials are pigments suspended in vehicles. Drawing vehicles include wax (crayons) inert materials (pastels, conte crayons, chalks), and liquids (solvent and water-based inks and marking pens). Pencils contain graphite and clay or pigmented clay/binder mixtures.

Fixatives, Mists, Adhesives, Spray Paint
Both permanent and workable spray fixatives used to fix drawings contain toxic solvents. There is high exposure by inhalation to these solvents because the products are sprayed in the air, often right on a desk or easel. Additionally, you can be inhaling the plastic particulates that comprise the fixative itself.

AEROSOLS MAY ONLY BE USED IN THE DESIGNATED SPRAY BOOTH (WARD 001) OR IN DESIGNATED OUTDOOR LOCATIONS. *See 'best practices' section for more details on use/locations.*

Spray mists are particularly hazardous because they are easily inhaled. If the paint being sprayed contains solvents, then you can be inhaling liquid droplets of the solvents. In addition, the pigments are also easily inhaled, creating a much more dangerous situation than applying paint by brush.

Aerosol spray paints have an additional hazard besides pigments and solvents. They contain propellants, usually isobutanes and propane, which are extremely flammable and have been the cause of many fires.

Other aerosol spray products such as retouching sprays, spray varnishes, etc. also contain solvents.

Pencils
Pencils are made with graphite and are not considered a hazard. Colored pencils have pigments added to the graphite, but the amounts are small so that there is no significant risk of exposure.

Charcoal
Charcoal is usually made from willow or vine sticks, where wood cellulose has been heated without moisture to create the black color. Compressed charcoal sticks use various resins in a binder to create the color. Although charcoal is usually considered a nuisance dust, inhalation of large amounts of charcoal dust can create chronic lung problems through a mechanical irritation and clogging effect. A major source of charcoal inhalation is from the habit of blowing excess charcoal dust off the drawing.

Chalks
Colored chalks are also considered nuisance dusts. Some chalks are dustier than others. Individuals who have asthma sometimes have problems with dusty chalks, but this is a nonspecific dust reaction, not a toxic reaction.

Pastel
Pastel sticks and pencils consist of pigments bound into solid form by a resin. Inhalation of pastel dusts is the major hazard. Some pastels are dustier than others. Pastels can contain toxic pigments such as chrome yellow (lead chromate), which can cause lung cancer, and cadmium pigments (which can cause kidney and lung damage and are suspect human carcinogens). Blowing excess pastel dust off the drawing is one major source of inhalation of pastel pigments.

Crayons and Oil Pastels
Crayons and oil pastels do not present an inhalation hazard, and thus are much safer than pastels. Some oil pastels can contain toxic pigments, but this is only a hazard by accidental ingestion.

Liquid Drawing Material
Drawing inks are usually water-based, but there are some solvent-based drawing inks. These usually contain toxic solvents like xylene (ex: Sharpie markers).

Many permanent felt tip markers used in design or graphic arts contain solvents. Xylene, which is a highly toxic aromatic hydrocarbon, is the most common ingredient; newer brands often contain the less toxic propyl alcohol (although it is an eye, nose and throat irritant). The major hazard from using permanent markers results from using several at the same time at close range.

Water-based markers do not have an inhalation hazard although there is concern about the dyes used in these and with permanent markers).

2. Best Practices
Working safely means becoming more knowledgeable about the hazards of the media that you work with, making changes in how you select and handle your art materials, and creating a healthier environment to work in.

Good hygiene, reviewing SDS forms, and working safely can prevent many problems cause by pigments and exposure or accidental ingestion. Wear gloves, wash hands regularly, and avoid over exposure to materials.

Spray Materials (fixatives, spray paint, spray adhesives)

-Try to brush-paint items rather than spraying if possible.
-Use water-based airbrushing paints and inks rather than solvent-based paints.
-Use spray cans or an airbrush in a spray booth (Ward 001).
-Always store aerosol cans in a yellow flammable cabinet when not in use; avoid leaving cans near heat sources or in direct sunlight for prolonged periods.
-Wear protective gloves and eye coverings when using any aerosol.
-Allow sprayed items to remain in spray booth or outside for at least 20 minutes before moving inside. Fixitive and spray paint will continue to off-gas during while drying.

Pastels, Chalks, etc.
-Use the least dusty types of pastels, chalks, etc. Asthmatics in particular might want to switch to oil pastels or similar non-dusty media.
-Don't blow off excess pastel or charcoal dust with your mouth. Instead, tap off the built-up dust so it falls into the trash can (or paper).
-Wet-mop, vacuum and wet-wipe all surfaces clean of dusts, do not sweep.

Liquid Drawing Material
-Use water-based markers and drawing inks if possible.
-Alcohol-based markers are less toxic than aromatic solvent-based markers.
-Solvent-based drawing inks and permanent markers should be used with good dilution ventilation (e.g. near classroom vents).

3. Area Rules
All users of the studio classrooms are expected to follow studio area rules at all times. If you have any questions, ask your instructor or Studio Manager.

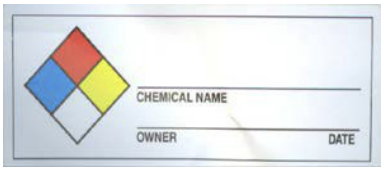
- Follow all Oberlin Studio Art Health and Safety handbook guidelines (the handbook should be reviewed by your instructor).
- If you intend to use a material that is not provided through your course or is not already present in the studio, approval is required from your instructor and/or Studio Manager prior to use. Certain materials may present a risk of chemical interaction and may be prohibited; always check first before bringing anything potentially hazardous, flammable, or a known allergen into the studios.
- Closed toed shoes must be worn at all times.
- Oberlin Studio Art Hazardous Waste Disposal Chart in the classroom and other health and safety guidelines posted for your media.
- **In case of emergency, call campus police at (440) 775-8444**

• File an incident report in the event of serious injury, chemical spills, or other emergency events (forms may be found in the physical H&S handbook in each SDS box and in the main office). Submit completed forms into the Studio Manager within 48 hours of the event.
• Possession or use of drugs or alcoholic beverages are not permitted in the classrooms, studios, or outdoor areas. **The possession or consumption of alcohol is prohibited by college regulations. Any other controlled substances are prohibited by law.** Violation is subject to discipline according to the Honor Code and punishable by law.
• No smoking or vaping is permitted on campus.
• No Food is permitted in studios where hazardous materials are stored. Beverages should have a lid or cap on them to avoid inadvertent contamination.
• Do not prop classroom doors. Doors are to remain closed to ensure the building security, and so that the ventilation systems work properly.
• Follow best practices for material handling. If you have questions about a material, ask your instructor Studio Manager for guidance.
• Familiarize yourself with the closest eyewash unit, first aid kit, and fire extinguisher. (Locations: Appendix A)
• Do not spray any aerosols in any classroom/studio/doorway or exterior wall/floor. A spray booth is located in Ward room 001. Aerosols may also be used in the designated gravel area by the Ward loading dock.
• Wear nitrile gloves when handling hazardous materials. These are provided in your classroom studios or by request.
• Remove all trash that does not fit in trashcans to the dumpster on the east side of Ward. Any trash that does not fit in the trash receptacle must be taken to the dumpster. Broken glass must be packed inside paper, labeled on the outside as broken glass, and walked to the dumpster. Glass with hazardous materials must be wrapped, labeled with a completed yellow hazardous waste label, and given to the Studio Manager or Facilities Manager for pickup. The trash guidelines are to ensure the safety of anyone encountering the trash. Liquids, medical waste, yard waste, appliances and pallets are prohibited from disposal in the dumpster.
• Clean up after yourself; wipe down surfaces (easels, drawing boards, stools) with a wet towel.
• Do not block doorways or block access to lights.
• Do not remove furniture from rooms or borrow furniture from rooms without permission from faculty or the Studio Manager.
• Do not plug extensions corders into each other; make sure that all cords are clear from any walkways and that nothing is placed on top of the cords while in use.
• No hazardous materials down sinks or toilets.
• Store all flammables in the flammable cabinet. Keep flammable cabinet closed at all times.
• All materials must be removed at the end of each semester; long-term storage in lab spaces is not permitted.
• NO SOLVENT USE ALLOWED IN DRAWING DOMES.
• Follow the **CONTAINER POLICY** (see policy below)

Labelling Materials

There are 2 types of labels used in the Studio Art Area-- yellow and white. Both labels are found at the red SDS box. Each is used for a different purpose.

White:

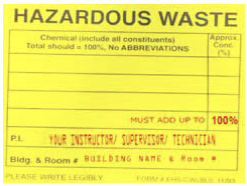


All new and or used product in containers (refers to when a secondary container is used or if the original container does not clearly display the contents and related hazards) must be labeled to identify their contents. Labels can be found at the SDS box in each studio and work area.

All containers must be marked with your ***name, contents and date opened***. All secondary/satellite containers for hazardous materials must be marked with content, your name and the date opened. All unmarked containers will be disposed of with no notice.

Yellow:

WHEN HAZARDOUS ITEMS ARE DESIGNATED AS WASTE.



All containers must have a yellow label identifying the contents that are designated as trash for EHS pick up.

- Flammable solid containers (red flip top) must have a yellow hazardous waste label on the outside (top).
- 5 gallon jugs must have a yellow hazardous waste label on the outside.
- Fibrous containers must have a yellow hazardous waste label on the outside (top).
- Each item in the blue bin must have a yellow hazardous waste label.

Note: Hazardous Waste labels should include all constituents in the waste mixture as well as an approximate percentage of the total for that item and must add up to 100%.

Labels should also include the building and room number of the shop generating the waste along with the Studio Manager for your area, this is located on the SWMA sign posted at the sink or at the SDS/Safety Area.