

HAMILTON COLLEGE STUDIO ART DEPARTMENT

Printmaking Studio Environmental, Health and Safety (EHS) Handbook

Purpose:

- To serve as a supplemental EHS reference guide for all employees and students within the KTSA Printmaking studio (206).

General Facility Responsibilities:

- Students—Understand and adhere to all safe work practices as communicated by faculty and staff, and as outlined in this document.
- Restricted Students (monitors, seniors)—Understand safe work practices of the department and assist faculty and staff with implementation and studio oversight.
- Faculty—Train students and other staff to ensure compliance with all EHS regulatory requirements.
- Studio Operations Manager—Coordinate and act as the liaison between the EHS Director, department faculty, and students to ensure compliance with EHS obligations.
- Director of Environmental Protection & Safety—Oversee the college's EHS requirements, conduct audits, maintain and update compliance documents and plans, train faculty and staff, collect and dispose of departmental waste, and assist with all other regulatory matters.

General Studio Use Guidelines for Students:

- Must be enrolled in a class in order to use the department's facilities and equipment.
- Must understand all terminology used in this handbook.
- Must understand safety and health hazards associated with all chemicals (i.e. through MSDS's or the like).
- Must use equipment and materials for their prescribed purposes only, and adhere to the following safety attire/other rules when using any presses:
 - No loose clothing (i.e., ties, scarves, loose sleeves, etc.).
 - No open-toed shoes/sandals, short shorts or mini-skirts.
 - All jewelry (i.e., rings, necklaces, bracelets, body piercings, or watches) must be removed or covered.
 - Long hair must be pulled back in a bun or otherwise tightly constrained. Long beards must also be constrained.
- Must know and understand the location and use of safety equipment, e.g. emergency eyewashes/showers, emergency phones, emergency exits, spill kits and fire extinguishers. Note that fire extinguisher use requires additional training.
- Must immediately notify the appropriate authority of any unsafe practice or condition, e.g. faculty, Studio Operations Manager, Custodian, student monitor, EH&S or Campus Safety.
- Are responsible for cleaning and maintaining all workstations, countertops and sinks, and clearing/discarding of trash after each work session.
- Are responsible for maintaining clean, obstruction-free work areas and access to emergency equipment, exits, electrical equipment, and passageways. All aisle-ways must be kept free of chairs, boxes, equipment, and waste receptacles.
- Must not engage in horseplay, practical jokes or other behavior that might confuse, startle, or distract other students.
- Must wash hands frequently during work sessions, after contact with any hazardous materials, before eating, drinking or smoking, and before leaving the studio.
- Must not eat or drink in the studio.
- Must not pour any hazardous waste down a sink drain or allow it to evaporate.

CHEMICAL HAZARD INFORMATION

GHS PICTOGRAMS



Original Manufacturer Container Labels & GHS Pictograms

Over the last several years, original manufacturer chemical containers have been phasing-in the labeling provisions of the new OSHA/GHS Hazcom standard. This new standardized label format will use the nine pictograms depicted to the left on both its chemical label and the Safety Data Sheet (SDS). It is important to note that original manufacturer chemical containers pre-dating this new standard may depict hazards through alternative means, like signal words (i.e. danger, warning), NFPA ratings, or words (i.e. flammable, corrosive, poison, etc.). See examples below.

CHEMICAL X

DANGER

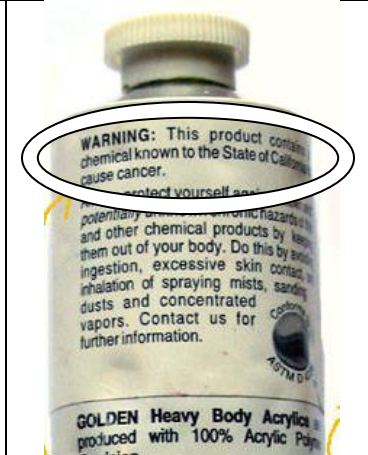
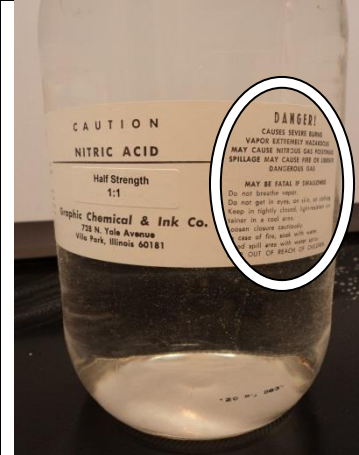
HAZARD STATEMENTS:
 Fatal if swallowed.
 Causes severe skin burns and eye damage.

PRECAUTIONARY STATEMENTS:

- Wear protective gloves.
- Wear face protection.
- Do not eat drink or smoke when using this product.
- Wash hands thoroughly after use.
- Store in a sealed container.
- **IF ON SKIN:** Rinse immediately with with cool water.
- **IF IN EYES:** Rinse thoroughly with water and seek medical attention.
- **IF SWALLOWED:** Do not induce vomiting. Seek medical attention.

Dispose of contents/container in accordance with local regulations.
 Chemical X Manufacturing, 1234 Over There St., (123) 456-7890

See the S.D.S for more information.



Secondary Workplace Labeling

Chemicals dispensed into secondary containers must be labeled with a Hazcom label using the NFPA format depicted below, which convey safety information numerically.

Chemical Product Inventory & SDS's

All chemical products used in this studio must be inventoried on a departmental spreadsheet, and a SDS (safety data sheet) for each chemical must be maintained and made accessible. It is essential to be familiar with the SDS's for the products you use through training, and SDS's for new products introduced into the studio must be reviewed and assessed before introduction. Hamilton maintains a database of SDS's that can be accessed through MSDS-Online at this [LINK](#). Otherwise, the studio may also keep hard copy SDS's on hand for select high hazard or frequent use chemicals.

HEALTH HAZARD

4-Deadly
3-Extreme danger
2-Hazardous
1-Slightly hazardous
0-Normal material

FIRE HAZARD
Flash Points

4-Below 73 F
3-Below 100 F
2-Below 200 F
1-Above 200 F
0-Will not burn

SPECIFIC HAZARD

Oxidizer	OXY
Acid	ACID
Alkali	ALK
Corrosive	COR
Use NO WATER	W
Radiation Hazard	☼☼

INSTABILITY

4-May detonate
3-Shock and heat may detonate
2-Violent chemical change
1-Unstable if heated
0-Stable





Labeling of Hazardous Art Materials Act (LHAMA)

Many chemical materials in Studio Art disciplines also have chemical safety labeling that adheres to LHAMA and the Art & Creative Materials Institute (ACMI). Generally speaking, art chemicals with the AP seal are considered to be low hazard or non-toxic, while art chemicals with the Caution Label (CL) seal, or California Proposition (CA PROP) 65 icon, are considered to have some hazardous properties or ingredients that necessitate additional safety precautions. Alternatively, art chemical labeling may simply say “Conforms to ASTM D-4236”. This labeling is acceptable as a general screening tool only for hazardous properties. You should consult the chemical’s MSDS for additional safety information, as per the below.



PHYSICAL HAZARD INFORMATION

Etching & Litho Presses

The studio has 3 presses total—2 for intaglio etching and 1 for lithography. While all 3 presses are non-powered/manually operated, their use typically requires direct supervision by faculty. Consider the following press hazards:

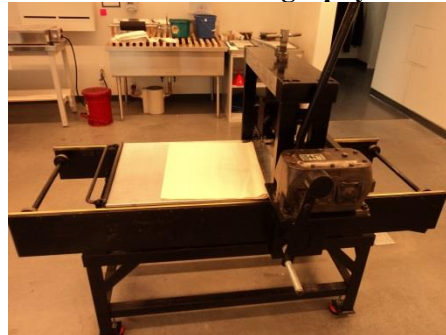
- Operation of the presses includes crush/pinch hazards to the hands/fingers, as well as entanglement hazards associated with the gears/moving parts and loose clothing, hair or jewelry. Follow appropriate training and distancing techniques.
- The devices themselves are very heavy, and are generally not to be moved. And since litho stones are also very heavy (normally >25 lbs.), they should only be maneuvered to/from the litho press with the assistance of the studio’s hydraulic lift.



Charles Brand Etching Press



Charles Brand Lithography Press



Conrad Etching Press



Hot Plates

The studio has 2 electrically powered (220 V) hot plates that can reach temperatures up to 550 degrees F. These devices should be managed with high caution/awareness and distancing techniques to avoid thermal burns or electric shock. And no flammable or combustible materials should ever come in contact with the hot plates.



ENGINEERING, VENTILATION & EMERGENCY EQUIPMENT CONTROL MEASURES

Occupancy Based Ventilation Controls

The studio has an occupancy based ventilation system that operates at 3 different modes:

- Mode 1—when the studio is unoccupied, the ventilation fans operate at 25% of design capacity.
- Mode 2—when the ceiling mounted motion detector indicates the studio is occupied, the ventilation fans operate at 50% of design capacity.
- Mode 3—when the studio is being heavily utilized (a class is in session) the instructor or students can direct the ventilation fans to operate at 100% of design capacity by pressing the “Fan Control/Occ Button” near the main entrance door. The fans will remain at 100% of design capacity for 30 minutes, before returning to 50% of design capacity.



Hot Plate Ventilation

Both studio hot plates are provided with wall mounted slotted bench hoods to collect fugitive vapors and excess heat during use/operation. The controls to both systems are adjacent to each hood.



Acid Etching Fume Hood Ventilation

The use of nitric (or other) acids for the purpose of plate etching must always be performed in the studio’s fume hood. The controls to turn the unit and lighting on/off are as indicated.

The 2 chemical storage cabinets underneath the hood’s working surface are to appropriate locations were concentrated/unused and used acids shall be stored.



Aquatint Rosin Box Ventilation

The studio has two rosin boxes for the application of rosin. And there are separate canopy hood ventilation systems to each unit. The controls to both units are as indicated.

It is important to note that misc. rosin dusts large enough to not become airborne and captured by the hoods, but fall outside of the rosin box onto the floor must be regularly cleaned up by studio personnel or the Studio Operations Manager, preferably with a HEPA vacuum.



Sink Work Station Ventilation for Solvent Use

Paint thinner and denatured alcohol are used at this work station near a sink. The dual wall mounted slotted bench hood collects solvent vapors from both this work station, and from any generated vapors near the sink. The controls to turn the unit on/off are as indicated.

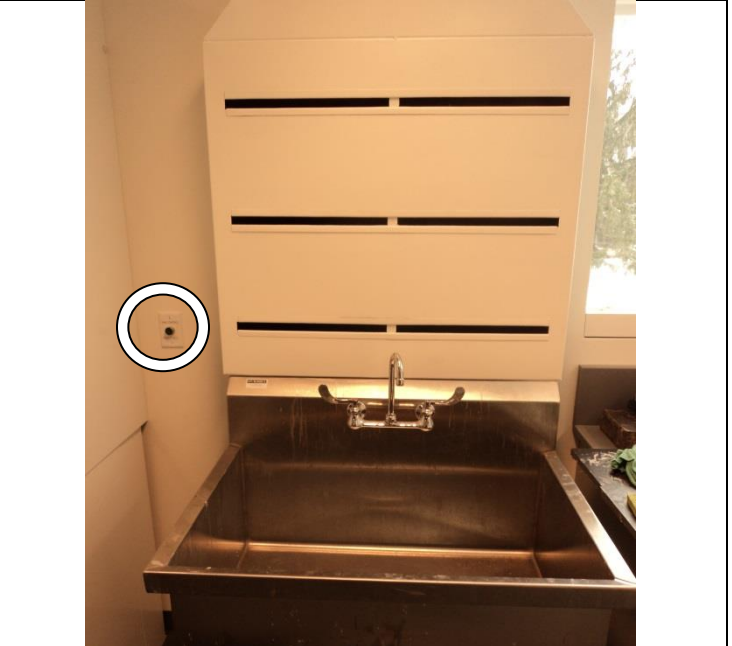
It is important to note (as discussed below) that it is not acceptable to dump used/spent solvents down the sink drain, as that material must be collected as hazardous waste. However it is OK to wash/rinse plates following solvent use in the sink, whereupon fugitive vapors from this process may be collected and removed from the breathing zone.



Sink Work Station Ventilation for Acid Use

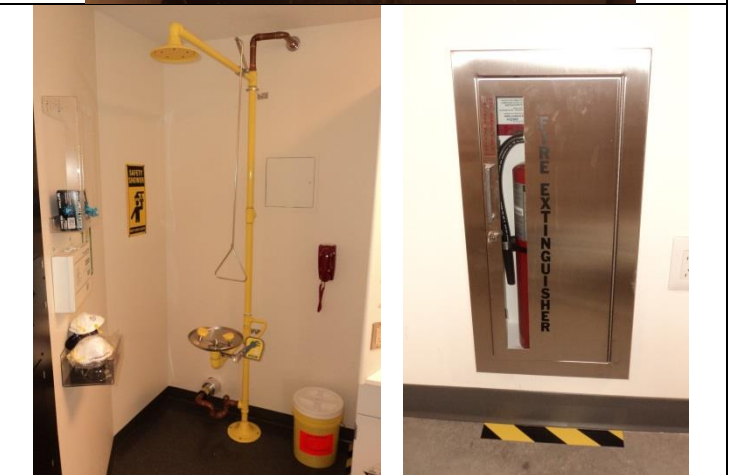
Plates that are etched with nitric (or other) acids are done so safely in the fume hood to the immediate left of this sink. However when these plates are washed/rinse, it is acceptable to do so in this sink. The sink is equipped with a wall mounted slotted bench hood to capture any generated acid vapors from this plate washing/rinsing activity. The controls to turn the unit are as indicated.

It is again important to note (as discussed below) that it is not acceptable to dump used/spent acids down the sink drain, as that material must be collected as hazardous waste. However it is OK to wash/rinse plates following acid use, whereupon fugitive vapors from this process may be collected and removed from the breathing zone.








Emergency Controls

The painting studio has a demarked "safety zone" that include a fire extinguisher, combo emergency eyewash/shower, emergency phone, first aid kit and spill kit, which must remain accessible and sanitary at all times.



PERSONAL PROTECTIVE EQUIPMENT (PPE)

General Studio Attire	As a general recommendation, personal clothing should cover the arms, legs and torso. Wear close-toed shoes (no sandals, crocs). When the presses are utilized, loose clothing (ties, scarves, sleeves) is prohibited, long hair must be constrained, and loose jewelry must be removed or covered.		
Eye Protection	The use of any chemical solvents with contact (no chemical splash) hazards only, or other moderate hazard dry chemicals, requires safety glasses. For chemicals of with a splash hazard, including any acids, the use of indirectly vented safety goggles is required.		
Hand Protection	The routine handling of pigments, colorants, solvents or acids require the use of nitrile gloves for hand protection.		
Body (and clothing) Protection	The conduct of mixing or dispensing acids involves a splash hazard, which could impact both personal clothing and skin. Wear chemical splash aprons when performing such activities.		
Respiratory Protection	Use ventilation controls as your first, best way to minimize exposure to respiratory hazards in the printmaking studio. The voluntary use of an N-95 filtering facepiece (or dustmask) is acceptable as a safe work practice when dealing with low hazard or fugitive dusts on an intermittent basis.		

ENVIRONMENTAL PROTECTION & COMPLIANCE

Printmaking Studio Waste Management

The printmaking studio uses many chemical materials, each of which are subject to a hazardous waste determination. Generally speaking, consider the following...

Chemical Container Rules

Chemical containers whose contents have been entirely used up and are empty (like solvent or acid containers) may be disposed of as trash, as they are not regulated as hazardous waste. However, partially full chemical containers that contain substantial residual chemical materials (like cans of litho/etching ink, or paint tubes) must be collected because they **ARE** subject to hazardous waste determinations.



Sink Use & Disposal Rules

There are 2 sinks in the printmaking studio, which convey wastewaters to the sanitary sewer for treatment and disposal. Sinks primarily provide for hand hygiene, and other misc. washing/rinsing activities (even when what's being washed/rinsed was used with chemical materials). However it is never acceptable to dispose of chemical materials directly down the sink. Even if the chemical is not a regulated chemical material (like rosin), the addition of gritty material could both clog the drain and violate local sewer use ordinances.



Hazardous Waste Generation & Satellite Accumulation Areas (SAA's)

The printmaking studio has 2 designated SAA's, which are the locations at or near the point where hazardous wastes are routinely generated and stored. Hazardous waste containers must be marked with a hazardous waste label that clearly indicates the contents. The date on the label should only be filled out by the Director of EHS upon container pick up.

Flammable Storage Cabinet SAA

The bottom compartment of the studio's flammable storage cabinet is the designated SAA for flammable/combustible hazardous wastes, in labeled, screw top 5-gallon buckets. These buckets must be closed and stored within the flammable storage cabinet when they are not in use. The typical materials to be collected in these containers include:

- Spent paint thinner or denatured alcohol (and any rags/paper products significantly contaminated with either of these liquid solvent)
- Partially full cans/tubes of etching or litho inks



5-gallon Pedal Activated Safety Can

2 of these devices are in the studio to temporarily store flammable/combustible hazardous wastes during class periods. On a regular or as needed basis, hazardous wastes from the safety cans must be relocated to the labeled 5-gallon buckets in the SAA.

Corrosive Storage Cabinet SAA

A dilute concentration of nitric acid is the principal type of acid used in the printmaking studio. This acid solution is reused and recycled numerous times before it is considered to be spent. Once a working solution of nitric acid is spent, it must be labeled with hazardous waste label, whereupon it will be collected by the Director of EHS.



OTHER FIRE SAFETY & EMERGENCY PREPAREDNESS CONSIDERATIONS

Emergency Equipment

The Studio Operations Manager is responsible for ensuring that all emergency equipment specified above is accessible and sanitary at all times through routine inspection. Additional emergency spill response equipment is maintained by the Director of EHS in KTSA, for deployment as needed.

Fire Safety

All who work or study in KTSA should be familiar with the fire safety plan for the building, which can be found at this [LINK](#). This plan identifies the locations of emergency equipment located outside of studios (pull stations, fire extinguishers), egress paths, and fire safety system descriptions. In the event of a fire alarm signal (including the activation of the clear fire strobe to the right), evacuate the building and proceed to your designated muster point (**KJ circle**). In the event the amber alert signal (strobe to the left) is activated locally by a Building Coordinator, shelter in place and await further instruction.



Emergency Phone #'s

- Campus Safety—4000 (emergency line), 4141 (non-emergency line)
- Physical Plant—4500
- HCEMS—4000
- Environmental Protection & Safety—4647
- Studio Operations Manager—4827

STUDIO ACCESS, SECURITY & USE GUIDELINES

Studio Access

KTSA is generally accessible to the entire College community between the hours of 8:00 am and midnight, by way of its main entrance doors being unlocked. Between the hours of midnight and 8:00 am, KTSA main entrance doors will be controlled via the Card Access system, whereby only employees who regularly reside in the building and certain authorized students must use their Hill Card to gain access to the facility. Student access during controlled hours will be limited to those actively enrolled in classes, and based upon studio use criteria established below.



Studio Security

All studio spaces where chemical, physical or environmental hazards are used and/or stored (as identified via a hazard sign) shall be secured against unauthorized access, so as to prevent theft, releases/spills, sabotage or security breaches. The principal strategy to achieve this requirement is closed and locked/controlled studio doors. The only time studio doors should be open/ajar or unlocked is when a class is actively in session, or when it can be directly supervised by department personnel outside of class sessions.



Printmaking Studio (KTSA 206)

Chemical Hazards			Physical/Equipment Hazards	
Irritants 	Health Hazards 	Flammables 	Hot Surfaces 	Finger/Nip
Oxidizers 	Corrosives 		Hazardous Dusts 	
Engineering, Administrative & PPE Control Measures				
No Food/Drink 	Ventilation & Hood 	Training 	PPE 	
Emergency Contact Information <ul style="list-style-type: none"> • Campus Safety: x4000 • Studio Operations Manager: x4827 • Environmental Protection & Safety: x4647 			Access, Security & Use Level 4/Restricted Hazard Space Studio is locked when unoccupied and only authorized students or employees are allowed to use the space.	

Studio Use

The printmaking studio is designated as a **Level 4/Restricted Hazard Space**, as per the hazard sign depicted to the left. Student use of the studio and all materials contained therein is restricted to those enrolled in classes, or as authorized by department faculty/staff. Direct supervision by faculty or staff is required for all authorized studio users.

ATTACHMENT A
HAMILTON COLLEGE STUDIO SAFETY AGREEMENT FOR STUDENTS

Hamilton College is committed to providing *all studio users* a safe environment in which to work and learn. Students must be well informed of the chemical and physical hazards associated with all studio activities, and conform to the following rules established for the use of these facilities:

1. The use of any hazardous chemical material, or the use/operation of any equipment/machinery/power tool, must be approved by your instructor.
2. Unauthorized facility use, horseplay or pranks are strictly prohibited in the studio.
3. Report all injuries to your faculty member or instructor immediately. Any student injured in the studio must be seen by the Health Center.
4. Eating, drinking or smoking in a studio where chemicals are actively in use is strictly forbidden. Eating or drinking is acceptable in suitable non-chemical use or storage areas, or as specified by your instructor.
5. Everyone who uses this studio must know the locations of emergency equipment, such as fire extinguishers, eyewashes, showers, first aid kits, spill kits and telephones.
6. Wear the appropriate attire when working with chemicals or dangerous equipment in the studio. Wear the necessary Personal Protective Equipment (PPE) as specified by your instructor, and do not wear loose clothing, dangling jewelry, or your hair in an unconfined manner when using equipment that may catch these loose items.
7. When using equipment, machinery or power tools, obey the instructions, Standard Operating Procedures, or manufacturer's recommendations/warnings governing their use at all times.
8. All hazardous chemical materials must be properly used, stored, labeled and disposed of.
9. Know the flammability, reactivity, health hazard and special hazards of any hazardous chemical material you must use. Report any signs or symptoms indicating a potential overexposure to a hazardous chemical to your instructor.
10. After using chemicals in the studio, always wash your hands prior to leaving, even after wearing protective gloves.
11. Dispose of hazardous chemical materials in a manner specified by your instructor. Do not use sinks to drain dispose of chemical materials. Sinks are only to be used for rinsing or other hygienic purposes. Do not dispose of any residual chemical waste materials unless you are certain that the waste stream may be discarded as trash/solid waste. Report all spills to your instructor immediately.
12. Maintain the areas you use in the studio in a tidy, neat, and well-kept manner. Since you individually are in the best position to know what chemicals or products are in use during certain studio activities, do not assume that others within your class, your instructors, or college support staff will clean up messes they were not responsible for.

I, _____, have carefully read the studio safety agreement for Hamilton College and understand that these rules will be rigorously and impartially enforced. I also understand that willful and/or repeated violations of these safety rules will result in my studio privileges being revoked.

Student Signature:

Date:

Class Name/Section & Instructor: