

HAMILTON COLLEGE STUDIO ART DEPARTMENT
Environmental, Health and Safety (EH&S) Handbook
PHOTOGRAPHY

Purpose:

To serve as a supplemental EH&S guide and reference for students.

General Responsibilities:

- Students—Understand and adhere to all safe work practices as communicated by faculty and staff, and as outlined in this document.
- Student Monitors—Understand safe work practices of the department and assist faculty and staff with implementation and oversight.
- Faculty and Staff—Train and communicate students and other staff to ensure compliance with all EH&S regulatory requirements.
- Materials Technician—Coordinate and act as liaison among EP&S Director, department faculty, and students to ensure compliance with EH&S obligations.
- Director of Environmental Protection & Safety—Oversee college EH&S requirements and audits, maintain and update compliance documents and plans, train staff and faculty, collect and dispose department waste, and assist with all regulatory matters. Maintains proper disposal of used, expired, or unusable chemical waste. Removes containers of hazardous waste in accordance with EH&S standards.

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, e.g. Stock Solution, Working Solution, Spent chemical, etc.
- Must understand safety and health hazards associated with chemicals and equipment.
- Must use equipment and materials for their prescribed use only.
- Must understand hazards associated with the chemicals.
- Must know and understand the location and use of safety equipment, e.g. safety showers, emergency eyewashes, fire extinguishers, and emergency exits.
- Must immediately notify the appropriate authority of any unsafe practice or condition, e.g. faculty, Materials Technician, Custodian, student monitor, or campus safety. All chemical spills must immediately be cleaned and disposed of properly.
- Are responsible for rinsing film developing materials, cleaning sinks and countertops, and clearing and discarding all 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 session, after contact with any hazardous materials, before eating, drinking or smoking, and before leaving the studio.
- Must not eat or drink in the studio.

CHEMICAL HAZARD INFORMATION



There are 8 standard Sprint photo-chemicals, used in our darkroom. Students should familiarize themselves with Material Data Sheets (MSDS) for each chemical. MSDS are located in the darkroom and can be found online at: <http://sprintsystems.com/>



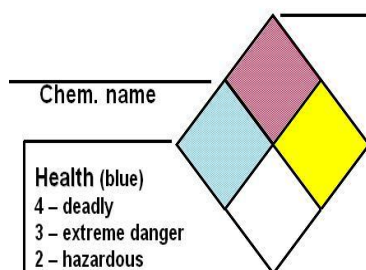
****Important note**—the use of photo-chemicals by a manufacturer other than Sprint is prohibited, unless specifically authorized and approved by a faculty member or the Materials Technician.

OSHA HAZCOM

Labeling & Info

Chemicals that are transferred to other secondary containers typically have an NFPA Hazcom label applied to them. These labels provide information in accordance with the image on the right. Pay Particular attention to Quicksilver Print Developer and Record Alum Hardener (acidic), Endrun Wetting Agent flammable (isopropanol).

NFPA Label



Chem. name

Health (blue)

- 4 – deadly
- 3 – extreme danger
- 2 – hazardous
- 1 – slightly hazardous
- 0 – normal material

Specific Hazard

- OXY - oxidizer
- ACID – acid
- ALK – Alkali
- COR – corrosive
- W – use no water
- RAD - radiation haz.

Fire Hazard (red)

Flash Point Temp.

- 4 – below 73F - v.flam.
- 3 – 73 to 100F – flam.
- 2 – 101 to 200F- comb.
- 1 – over 200F –slightly combustible
- 0 – will not burn

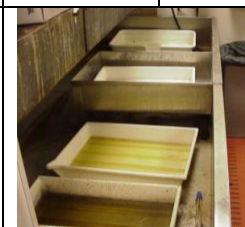
Reactivity (yellow)

- 4 – may detonate
- 3 – shock or heat may detonate
- 2 – violent chem. reaction
- 1 – unstable if heated
- 0 – stable

Standard Film Developer	pH—8.7	
Quicksilver Print Developer	pH—10.7	
Block Stop Bath	pH—4.0	
Record Speed Fixer	pH—6.0	
Archive Fixer Remover	pH—7.9	
Record Alum Hardener	pH—2.15	
Endrun Wetting Agent	pH—6.7	
Endrun Print Brightener	pH—6.5	

Chemical Hazards Associated With Working/Dilute Solutions

Working photo-chemical solutions (diluted) are normally less hazardous than stock (undiluted) photo-chemicals. Personal protective equipment (PPE) as required by the MSDS is to be used during preparation from stock to working solutions.



PERSONAL PROTECTIVE EQUIPMENT (PPE)

General Attire	Clothing should cover arms, legs, and torso. Wear close-toed shoes (no sandals, crocs).	
Eye Protection	Approved safety goggles must be worn while mixing, moving, or disposing of chemicals.	
Hand Protection	Avoid direct contact with photo-chemicals by using tongs. If direct contact with photo-chemicals is necessary, employ single-use nitrile gloves to protect your hands.	

ENGINEERING CONTROL MEASURES—DARKROOM VENTILATION SYSTEMS

Film Drying/Processing Rooms



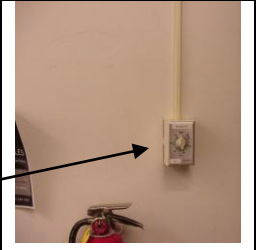
The 4 darkroom closets (223A, B, C & D) have negative exhaust ventilation ducts to control photography chemical vapors generated during the film drying and developing process. These vents are ON at all times.

Sink Mounted Photo-Chemical Ventilation System



Darkroom A and B have sink-mounted photography chemical ventilation systems controlled by a 1-hour timer.

Turn timer ON when darkrooms are to be used for extended periods of time.

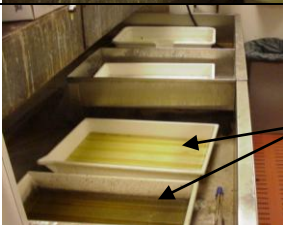


ENVIRONMENTAL PROTECTION & COMPLIANCE

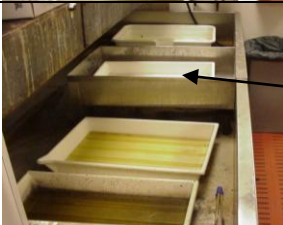
The Management of Photo-Chemical Wastes



Unusable Stock photography chemicals, in their original manufacturer's containers, should be collected and properly disposed of by the Materials Technician.



Working Solution (9:1) chemicals, except Fixer, can be safely and legally disposed of down the sanitary sewer (sink drain).



Spent Fixer contains elemental silver (which is a regulated hazardous waste) and cannot be legally disposed of down the sink drain. Spent Fixer must be poured into the special pan in the main darkroom highlighted to the left.








Spent Fixer is then treated through a "precious metals recovery process" by the silver recovery unit installed underneath the main darkroom sink, which discharges "clean" fixer to the sink drain. This device is serviced by an outside vendor through the Office of Environmental Protection & Safety, and must remain ON at all times.



Spent Fixer generated in locations other than Darkroom A (senior darkroom, film strip closet) require the temporary collection of the waste in 5-gallon (or other) containers. Immediately following pour off into this or other similar containers, spent Fixer must be transported to the silver recovery unit in Darkroom A. DO NOT store spent Fixer in these other containers.

EMERGENCY EQUIPMENT—KNOW THE LOCATION OF THE FOLLOWING...

	<p>Emergency Eyewash Equipment:</p> <ul style="list-style-type: none"> • Emergency Personal Eyewashes (bottled) and the plumbed Emergency Eyewash Station are located outside of Darkroom A, near Closets B and C. 	
	<p>Chemical Spill Kits:</p> <ul style="list-style-type: none"> • 2 spill kit types located in List. • The larger acid and solvent spill kit (left) is located in the Materials Technician's office, and smaller spill buckets are located in the Printmaking and Painting studio flammable storage cabinets. 	
<p>Stocked First Aid Kit</p>	<p>List 220</p>	
<p>Emergency Shower</p>	<p>2nd floor Printmaking corridor</p>	
<p>Fire Extinguishers</p>	<p>Main hallways/exit corridors of List, and in all studios</p>	
	<p>Fire Alarm Visual/Audible Enunciators & Pull Stations</p> <ul style="list-style-type: none"> • There are 4 fire alarm enunciators and pull stations on the west side of List (all near building exits), by or within rooms 111, 114, 115b and 230. • In the event of a fire alarm signal, evacuate the building and proceed to your designated initial gathering point. • In the event of a fire or some other emergency warranting immediate Campus Safety notification (and in the absence of direct access to a phone), use the pull station to call Campus Safety to the scene. 	
<p>Emergency Phone #'s</p>	<p><u>Campus Safety</u>—4000 (emergency line), 4141 (non-emergency line) <u>Physical Plant</u>—4500 <u>HCEMS</u>—4000 <u>Environmental Protection & Safety</u>—4647 <u>Materials Technician</u>—4827</p>	

Photography Darkroom Studio Use & Misc. Safety Considerations

- While studio art activities often require independent work, working alone or without supervision is generally discouraged. Further, studio art activities that utilize hazardous chemicals or dangerous equipment may be subject to other restrictions, as per the below.
- All List studios are open Mon-Fri 9 am to midnight, and Sat/Sun noon to midnight. Students are not to be in the building or studio areas outside of these time frames.
- As noted above, the student use of photo-chemicals by manufacturers other than Sprint may only be authorized by the Materials Technician or your Professor.
- The Safety Agreement in attachment A below may be used by the Studio Art department to help facilitate a safe and environmentally friendly place of working and learning.
- Student studio monitors with additional supervisory roles for the art department, and who are compensated for their efforts, require additional training beyond the scope of this handbook.

ATTACHMENT A
PHOTO STUDIO SAFETY AGREEMENT FOR STUDENTS

Hamilton College Student Safety Agreement Form

Hamilton College is committed to providing *all workshop/studio users* a safe environment in which to work and learn. Students must be well informed of the chemical and physical hazards associated with workshop/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 workshop/studio.
3. Report all injuries to your faculty member or instructor immediately. Any student injured in a workshop or studio must be seen by the Health Center.
4. Eating, drinking or smoking in a workshop or 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 a workshop or studio must know the locations of emergency equipment, such as fire extinguishers, fire blankets, eyewashes, showers, first aid kits, spill kits and telephones.
6. Wear the appropriate attire when working with chemicals or dangerous equipment in a workshop or studio. Wear the necessary Personal Protective Equipment 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 workshop/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 workshop/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 workshop/studio activities, do not assume that others within your class, your instructor's, or college support staff will clean up messes they were not responsible for.

I, _____, have carefully read the workshop/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 being dismissed from the class.

Student Signature:

Date:

Class Name/Section & Instructor: