

# Kansas City Art Institute

## Continuing and Professional Studies Safety Manual

### Printmaking – Main Campus - East Building

#### Personal Protective Equipment

- Students should bring an apron or smock, to avoid contamination of clothing
- Students will be provided with nitrile gloves for use with oil-based inks and solvents

#### Using the Printmaking Presses

Keep your hands away from the press bed or any moving parts when the press is in use. You should only have your hands on the handle or designated areas when operating the presses. Do not force anything through the presses.

#### Using Inks

- Oil-based inks consist of pigments suspended in linseed oil as a vehicle. There can be additional hazardous binders or preservatives.
- Oil-based inks are flammable. Rags dirtied with inks may ignite by spontaneous combustion. Place oil-soaked rags in the flammable rag can.
- Inks can contain highly toxic pigments. Avoid contact with skin and mouth.
- Water-based inks should be used when possible.

#### Using Solvents

- Organic solvents are used in printmaking to dissolve and mix with oils, and inks; and to clean plates, rollers, and tools.
- Solvents are toxic to ingest or absorb through the skin, and create toxic fumes that can cause serious medical problems if inhaled. High concentrations of most solvents can cause dizziness, nausea, fatigue, loss of coordination, or coma.
- Assure proper ventilation when using solvents.
- Some solvents are more dangerous than others. Use the least toxic solvent possible. For example, replace the more toxic methyl alcohol with denatured alcohol or isopropyl alcohol.
- Wear gloves when working with solvents. Change gloves when they become contaminated. Use extreme caution when pouring to avoid spills.
- Never use solvents to clean the hands, wipe them with a clean, dry rag, then wash with soap and water. Baby oil can also be used.
- Rags contaminated with solvents should be disposed of in a flammables trashcan, to avoid fire hazards.

## Acids

- Acids are used in intaglio and in lithography. Concentrated acids are corrosive to the skin, eyes, respiratory system and gastrointestinal system. Dilute acids can cause skin irritation after repeated or prolonged contact.
- Technicians or instructors will handle acid preparation for CPS students
- If acid is spilled on your skin, wash with lots of water. In case of eye contact, rinse the eyes with water for at least 15-20 minutes and seek medical attention.

## Lithography

- Lithography uses stones, zinc or aluminum metal plates for printing. It involves use of a variety of chemicals to make the image ink-receptive and non-image areas receptive to water and ink- repellent.
- Rosin dust may cause asthma and allergic dermatitis. There is the hazard of explosion from the buildup of rosin dust, in enclosed rosin boxes, around an ignition source.

## Intaglio

- Intaglio is a printmaking process in which ink is pressed into depressed areas of the plate and then transferred to paper. These depressed areas can be produced by a variety of techniques, including acid etching, drypoint, engraving and mezzotint.
- Other chemicals used in intaglio have potential health risks, ask your instructor about the proper personal protective equipment
- Drypoint, mezzotint and engraving use sharp tools to incise lines in metal plates. When possible, clamp down plates to avoid slippage.
- Long-term use of hand tools doing repetitive motions can cause Carpel Tunnel Syndrome, which includes swelling, pain, tingling, and loss of strength in your wrist and hand. To prevent Carpal Tunnel Syndrome, arrange your workspace at the right height and distance for your hands and wrist to work with less strain. Take breaks, vary tasks and relax your grip.

## Relief Printing

- Relief printing techniques include woodcuts, and linoleum cuts. These techniques involve the cutting away of plate areas that are not to be printed.
- Some woods used for woodcuts can cause skin irritation and/or allergies. This is particularly true of tropical hardwoods.
- Woodcut and linoleum cut use sharp gouges that can cut the skin. Always cut in a direction away from you, with your free hand on the side or behind the hand with the tool.
- Use precautions to avoid Carpal Tunnel Syndrome.

## Screenprinting

- Screenprinting involves creating an image onto a mesh screen using a light exposure unit.
- Silkscreen emulsion is a photosensitive chemical, and contact with the skin should be avoided. Screen reclaimer and haze remover are toxic chemicals, use with caution.
- The exposure unit uses a powerful light that can harm the eyes upon direct contact. Do not look directly into the unit.