



# Alchemy Art Center

## Studio Safety, Rules and Cleaning Handbook

Thank you so much for becoming a Studio Artist Member of Alchemy Art Center! You are joining a unique arts community that relies on its members to make it the best that it can be. In order for you to become a Studio Member of Alchemy Art Center, we ask that you familiarize yourself with the studio safety/cleaning guidelines outlined below.

### **SAFETY AND CLEANING RULES**

As a studio member, you are responsible for your own health, the health of other studio members, and maintaining a clean and safe workspace. In order to keep the space clean while keeping membership costs down, you are asked to FULLY clean up behind yourself each and every time you come in the studio.

### **Clean every time you use the studio**

Exposure to clay dust can cause silicosis, a disease which can be fatal (see materials hazards at the end of this booklet). To keep yourself and others safe from silicosis, clay dust must never be left in the studio.

- *Always* sponge and mop your area after working. Go over your area with a CLEAN rinsed sponge several times to ensure clay residue has been eliminated. Make sure mop is rinsed MULTIPLE times during mopping so that clay is not just spread around. Even if it looks clean while wet, a surface may dry to reveal a layer of clay.
- Spills must be wiped up immediately so that they do not become dust hazards.

- To clean canvas on table or slab roller, SATURATE work area with water and sponge thoroughly. Use clean dry sponge to go over area several more times to fully remove clay.
- If you have used the wheel, make sure to clean the entire wheel INSIDE AND OUT, INCLUDING THE SIDES. Sponge or mop the floor around your wheel, and any other surfaces (cupboards, chairs, mirror) that may have been sprayed by clay.
- Slop water can be emptied into a 5 gallon bucket on the porch, or combined into another small bucket by the sink.
- Prewash hands and tools in the sink basin before final clean rinse to prevent clay from going down the sink. Wash your tools and brushes THOROUGHLY and put them away (do not leave on sink). Clean out the sink behind you.
- Red Clay leaves stains, which can ruin the work of those who are working with white clay. Take special care to clean up all tools and tables that have been exposed to red clay to prevent cross-contamination of clays.
- **Do not sweep!** Sweeping gets clay particles into the air, making them more dangerous.
- Glaze Chemicals can also be harmful, especially when eaten or left to dry out and turn into dust. Always fully clean glaze off of brushes, tables, sponges, etc. and avoid eating in the studio. It is recommended to use gloves when working with glaze.
- Keep personal belongings in your storage area. AAC is not responsible for anything, including clay, left in common spaces. Personal items left out can make it difficult for others to clean the studio space. If necessary, bring things home so that you have enough space on your shelf.
- Please use the designated shelves for Greenware, Bisqueware, and Glazeware. **Promptly remove your bisqueware from the shelf.** It will be thrown out if left unclaimed for more than 1 month in common space.

- Dirty rags go in the tub under the slab roller. Clean rags can be found in the marked cabinet to the right of the sink.

## **ADDITIONAL CLEANING**

This is your studio! If you would like to help keep it in great shape, you can additionally take on the following tasks whenever you like:

- Mop the floor (use clean mop, and rinse the mop frequently. Otherwise you are actually making the floor dirtier by spreading clay around!)
- Sponge off the counters/cabinet faces (easy and effective!)
- Organize shelves and tools (put like tools together)
- Sweep the entrance/porch
- Laundry (rags/towels, aprons)
- Empty the P-trap under the sink (ask Maria or Glenn for instruction)
- Take out the garbage
- Restock firewood

### Specialized skills (contact Maria and Glenn if you are interested)

- Recycling clay
- Loading/unloading kiln
- Making common glazes for everyone to use
- Repairing and caring for the kiln and kiln shelves

## **PURCHASING CLAY**

At Alchemy, we fire our kiln to cone 6 (not to be confused with 06). This is called mid-range. Our assortment of clay is all mid-range. We require members to purchase their clay through Alchemy so that we can ensure it is the correct clay for our kilns. If you are wanting to try a clay that we don't offer, please let us know! We would be happy to advise you on a purchase, or even include your request in our next clay order.

- DO NOT USE CLAY THAT HAS NOT BEEN PRE-APPROVED. Low fire clay, including "island clay" will melt in our kiln and potentially ruin our equipment and the work of others.
- Clay is located in the cupboards underneath the main counters. Clay bags are labeled with the type of clay, and have a purchase ticket on them. A description

sheet is located on the wall above the counters, and descriptions are also available in the “shop” section of our website. Please read this to get a sense of the types of clay.

- To purchase a bag of clay, put the purchase ticket in the mailbox by the kiln room with your name, date, type of clay, and payment. If you pay online ([www.alchemyartcenter.com/store](http://www.alchemyartcenter.com/store)), please indicate this on your purchase ticket. **DO NOT TAKE CLAY WITHOUT PURCHASING IT, EVEN IF YOU MEAN TO LATER.**
- Label your bag of clay with your name, and keep it on your storage shelf or at home. If it is left out in the studio it will be taken.
- If you are using pre-approved clay not purchased from Alchemy, you must pay a \$15 firing fee per 15lb bag of clay.

## **GLAZE**

Our glaze is all cone 6, mid-fire glaze. It is located in buckets under the slab roller and glazeware shelves. Corresponding test tiles are located on the wall above the slab roller. Studio underglazes are located on the shelf under the CD player. **If you have never glazed before, you must schedule a demo or attend an open studio.**

Below are tips intended as reminders for Members who have had a glazing demo:

- Our glazes are constantly evolving, so please be aware they might not turn out exactly like the test-tile. Make your own test-tile if you want exact results.
- Glaze can only be applied to bisque ware (work that has been fired once).
- Only use glaze that is NOT labeled Raku.
- Do not use your own glaze unless it has been pre-approved by Glenn or Maria (email [glenn@alchemyartcenter.com](mailto:glenn@alchemyartcenter.com)).
- Glaze must be mixed prior to use with either the drill mixer or the immersion blender.
- Glaze should have the consistency of half and half or heavy cream when a spoon is dipped in- if it is too thick, add water ½ cup at a time and mix thoroughly until proper consistency is achieved.
- Glaze must be wiped **COMPLETELY** from within ⅛ inch of any part of your work that will touch the kiln shelf. If you use wax to protect the bottom of your piece, **glaze must still be wiped from the surface of the wax.**
- Pieces should be dipped 1-2 times for a few seconds each time. If you are brushing, apply three coats for more even coverage. **Glaze that is applied too**

**thickly will travel, drip, and potentially spray onto other work in the kiln.** If you are unsure, ask Maria or Glenn.

- Underglaze is in small bottles under CD player. It can be applied to unfired clay or bisque fired clay. It can be applied to the bottom of your piece without danger of sticking to the kiln. Unlike glaze, it can be mixed like paint to achieve a different color. Underglaze fires matte, and should be coated with a clear glaze if the piece is intended to hold water or be eaten from.
- ALWAYS clean all glaze drips or spills, and wash all brushes THOROUGHLY before putting back.

## Materials Hazards of Ceramics

The hazards associated with ceramics have been recognized for hundreds of years. They are related to three aspects of the process: preparing and molding the clay, glazing, and firing the clay. Carefully review the Material Safety Data Sheet (MSDS) for the products your students will use, particularly glazing compounds, which often contain some highly toxic compounds. Identify the hazardous components in each product. Teach students how to protect themselves either by reviewing the information on the MSDS or by obtaining one of the references listed on page 9 and reviewing the specific information on the materials being used.

**The following table describes the potential hazards associated with different ceramic processes.**

Activity	Material	Potential Hazard
Mixing dry clay	Dry clay	Clay contains crystalline silica, which if inhaled over the course of many years can lead to the debilitating lung disease silicosis. Loading and mixing dry clay in a clay mixer creates the most likely opportunity for exposure to the silica-containing clay dust.
Mixing dry clay	Talc	Talc added to clay may be contaminated with asbestos or “asbestos-like” fibers.
Mixing dry clay	Clay mixer, bulk materials	Like all mechanical equipment, clay mixers have moving parts that could catch your hand or arm if you reach into it while it is operating. Bags of dry clay and clay additives are heavy; repeated lifting can cause back injuries.

Handling wet clay	Wet clay, potter's wheel	Wet clay is a growth medium for mold and other microorganisms that can cause allergies and infections of the skin or nail beds. Mold can aggravate some pre-existing medical conditions such as asthma. Working with clay for extended periods of time on a potter's wheel can lead to a repetitive trauma disorder of the hand or wrist.
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Glazing	Glaze	Glazes are mixtures of silica, alumina, metal fluxes (such as lead, barium, lithium, calcium, or sodium), and colorants. Some colorants contain highly toxic metals such as lead, cadmium, chromium, uranium, and arsenic. These metals should not be used in school programs if at all possible because safer substitutes are available. Many prepared glazes contain frits which are created by melting various glaze ingredients into a glass and grinding them into a powder. Frits containing toxic metals are hazardous and should be handled with caution since they can leach into the body over time and should not be used.
Firing Kiln	Clay	During the firing process, clay releases combustion products and gases whether using a fuel-fired or electric kiln. These emissions include carbon monoxide, formaldehyde, sulfur oxides, chlorine, fluorine, metal fume, and nitrogen oxides. Unless ventilation is excellent, metal fume particles such as lead and cadmium can settle and contaminate other ware and surfaces. In addition, fuel-fired kilns release the products of combustion from their fuel sources. Firing Kiln Clay Infrared radiation emanates from hot (glowing) fired ceramics and can cause cataracts after long periods of exposure. Unloading hot objects from a kiln can cause burns.

## Ceramics Precautions for Studio Members

- If possible, avoid exposure to clay dust by purchasing pre-mixed clay (available by the 15lb bag at Alchemy). If you mix your own clay, the mixer should have local exhaust ventilation and be equipped with appropriate machine guards to prevent access to moving parts while operating. Consider wearing a respirator when mixing clay.
- When lifting heavy items such as bags of clay, clay additives, or glazing compounds, use appropriate lifting techniques, get help from another person, or use mechanical aids. Raise your potter's wheel so you can work in an upright position.

- Regularly wet mop the studio—particularly the dry mixing area—to remove potentially toxic dust such as silica and heavy metals. **Do not allow spilled clay to dry; it can be crumbled into an airborne dust.**
- Purchase prepared glazes without toxic components whenever possible. If you do use or mix glazes containing highly toxic metals such as lead, cadmium, arsenic, or uranium, your institution must meet the applicable OSHA regulations.
- If you mix your own glazes, wear gloves. Mix glazes under local exhaust ventilation or wear a respirator. Avoid spraying techniques that will aerosolize the glazes. Instead, brush or drip glaze on your clay. If you must use spraying techniques, use a paint spray booth.
- Because your hands become contaminated while working, do not eat, drink, or smoke in the studio. Wash your hands thoroughly when you finish working or leave the studio. Good personal hygiene is one of the most important ways you can reduce your exposure.
- Regularly apply hand cream to replace lost oils and to keep your hands from drying out. Cover cuts or other broken skin with gloves to prevent infections
- Wear a full-length smock or coveralls in the studio and do not wear them outside the studio. Wash them frequently and separately from other clothing.
- Wear a disposable smock or coveralls if working with toxic metals. Remove the smock or coveralls before leaving the studio and dispose of in your institution's designated hazardous material container.
- All kilns must be locally exhausted and vented to the outside. Keep combustible materials, particularly flammable materials, away from kilns. Small kilns should be raised at least a foot off the floor with a refractory brick placed underneath. Keep a fire extinguisher close by and know how to use it.
- Wear appropriate shaded eye protection when looking directly into the kiln. Note: If you are creating ceramics that will come into contact with food or drink, select a food-safe glaze that is periodically tested by a laboratory. Some glazes contain heavy metals such as lead and cadmium that can leach from glazed items after they have been fired. Using prepared glazes labeled "food safe" will not assure a safe product since small variations in application and firing can alter leaching characteristics. Most

glazes leach their metals faster when exposed to acid solutions such as orange juice. The federal government has developed test protocols for evaluating the leachability of glazes and strict guidelines for the maximum acceptable lead/cadmium release from ceramic food ware.