

STUDIO SAFETY FIELD GUIDE

Silica Dust Control for Home Pottery Studios

A practical system for making, cleaning, and containing clay dust without turning your creative space into a hazard zone.

The core idea: do not wait for dust to look dangerous. Design the session so residue stays wet, contained, and easy to remove.



Start with five non-negotiables

Clay and many glaze materials can contain crystalline silica. The respirable particles of concern are much smaller than ordinary sand and can be generated during pottery and ceramics work.¹

- 1 **Keep it wet.** Trim, smooth, scrape, and refine while clay is wet or leather-hard whenever the process allows.
- 2 **Never dry sweep.** Use wet cleaning methods or a suitable high-efficiency particulate air (HEPA) filtered vacuum.
- 3 **Contain the studio.** Use a dedicated, cleanable work zone that can be closed off from food preparation and living spaces.
- 4 **Do not blow dust around.** Skip compressed air and avoid fans that disturb settled residue or defeat local exhaust.
- 5 **Control first, then protect.** Eliminate or wet the task before reaching for a respirator. Personal protective equipment is the final layer.

Your 10-minute reset

- ☐ Move food, drinks, toys, pet items, and clean laundry out of the work zone.
- ☐ Put a lidded reclaim bucket and a lined waste container within reach.
- ☐ Set out two damp sponges or cloths: one for tools, one for surfaces.
- ☐ Check that floors and tables can be wet cleaned.
- ☐ Close the door or establish a clear boundary before work starts.

Invisible does not mean gone. Fine respirable dust may not form an obvious cloud. Build the control into the task instead of using visibility as your trigger.

Why this matters

Long-term inhalation of respirable crystalline silica is associated with silicosis, lung cancer, chronic obstructive pulmonary disease, and kidney disease.¹ Prevention is the goal; silicosis is irreversible.

Scope: This guide is for home pottery practice. It is educational, not a substitute for exposure monitoring, medical advice, product Safety Data Sheets (SDS), or workplace compliance support.

Know where dust starts

Silica risk is driven by what you do to the material. A damp block of clay is not the same exposure scenario as dry sanding, dumping powdered glaze, or sweeping dried trimmings.

PRIORITY	POTTERY TASKS	BETTER DECISION
STOP / REDESIGN	Dry sweeping or brushing; compressed-air cleanup; shaking dusty aprons or towels	Wet clean. Bag or wet-contain contaminated textiles before moving them.
STOP / REDESIGN	Routine dry sanding, grinding, or dry fettling; uncontrolled spray application	Finish earlier in the clay cycle. If the task cannot be avoided, isolate it and obtain task-specific control advice.
HIGH ATTENTION	Opening, scooping, or mixing dry clay and glaze powders	Buy premixed materials where practical. Keep containers closed and use controlled mixing methods designed to minimize airborne dust.
HIGH ATTENTION	Scraping bone-dry residue from bats, boards, canvas, shelves, or tools	Moisten residue before disturbing it. Replace hard-to-clean coverings with washable surfaces.
CONTROL ROUTINELY	Throwing, hand-building, trimming, reclaim, and wet glazing	Keep residue damp, clean at the end of each session, and prevent splatter or scraps from drying in place.

Read the SDS before use

Search the material's Safety Data Sheet for terms such as **crystalline silica**, **quartz**, or **cristobalite**. Review the hazard, handling, exposure-control, and personal-protection sections. Keep the current SDS accessible.

The residue pathway



The safest cleanup is often the one completed before the material dries.

Pause the task if you see a dust cloud, taste or feel grit in the air, or notice residue spreading beyond the work zone. Leave the area, prevent others from entering, and reassess the method before continuing.

Set up the room to hold the mess

A home studio needs a boundary. The goal is not a perfect clean room; it is a work area that can be closed, cleaned, and exited without carrying residue through the home.⁵



Choose surfaces you can actually clean

- Prefer sealed, smooth floors and worktops.
- Avoid carpet, unfinished wood, deep texture, and permanent canvas where dust can lodge.
- Keep shelves sparse enough to wipe; store materials in closed, labeled containers.
- Place reclaim and scrap containers close to the work, with lids.

Separate clay from daily living

- Do not eat, drink, apply cosmetics, or store food in the studio.
- Keep children and pets out during work and cleanup.
- Use studio-only shoes or shoe covers; do not track residue through the house.

Control airflow, not just odor

- Do not aim portable fans across dusty surfaces.
- Avoid routing studio air into living spaces through an open doorway or shared return vent.
- For a dust-generating process, general room ventilation is not the same as local exhaust that captures dust at the source.
- Maintain any exhaust system and filters according to the manufacturer's instructions.

Open-window myth: An open window may improve comfort, but it does not prove that respirable dust is controlled. The process still needs to be eliminated, wetted, enclosed, or captured.

Home-studio boundary check

Can you close the space? Wet clean every major surface? Keep contaminated shoes and clothing from crossing into living areas? If any answer is no, change the room or limit the activity to wet, low-disturbance work until the gap is fixed.

Use a wet-work routine every time

The easiest dust to control is the dust you never create. Plan the work so shaping, refining, and cleanup happen before clay residue becomes dry and friable.

BEFORE

Stage the controls

- Fill a small cleaning bucket.
- Dampen sponges or microfiber cloths.
- Place reclaim and waste containers nearby.
- Remove unrelated items from the table.
- Inspect the floor for old dry scraps before starting.

DURING

Keep residue contained

- Catch trimmings in a tray or bucket.
- Wipe splatter before it dries.
- Use a damp sponge for final smoothing where appropriate.
- Keep powder containers closed.
- Do not snap, crush, or toss bone-dry scraps.

CLOSE DOWN

Leave no dry job for later

- Move scraps to covered reclaim or waste.
- Wet clean tools, wheel, splash pan, table, and handles.
- Clean from higher surfaces toward the floor.
- Wet mop the floor last.
- Remove apron and wash hands before exiting.

Shape early

wet or leather-hard



Refine damp

sponge or wet method



Clean now

before residue dries

Water control matters too

Do not create a second problem by washing heavy clay sludge into household plumbing. Let solids settle, reclaim usable clay, and manage remaining material according to product SDS information and local disposal requirements.

Use several small water changes

A heavily loaded sponge and muddy bucket spread residue instead of removing it. Use a first pass to lift the bulk material and a cleaner final pass. Finish only when the wipe water remains relatively clean.

Practical trigger: If you are tempted to “just knock off” a dry edge, stop. Decide whether the piece can be refined wet, whether the imperfection can remain, or whether the task needs a controlled dry-process setup.

Clean without redistributing dust

NIOSH's pottery-control review recommends eliminating dry sweeping and using improved cleanup methods such as an adequately sized HEPA-equipped vacuum.² Wet methods remain the default for most home-studio surfaces.

End-of-session close-down

- ☐ Put scraps into lidded reclaim or waste.
- ☐ Wipe tools and handles while residue is damp.
- ☐ Clean wheel head, splash pan, table, bats, and ware boards.
- ☐ Wipe shelves and touch points from cleanest to dirtiest.
- ☐ Pick up larger floor scraps without crushing them.
- ☐ Wet mop the floor with overlapping passes.
- ☐ Rinse or replace cleaning media before the final pass.
- ☐ Remove studio clothing; wash hands and forearms.

Do not use

- Dry broom or brush
- Compressed air
- Leaf blower or shop fan
- An ordinary household vacuum for dry clay or glaze residue
- A dirty mop that deposits slurry elsewhere

About "HEPA" vacuums

A HEPA filter alone does not guarantee that the entire vacuum contains fine dust. Choose a unit designed for hazardous fine-dust collection, with a sealed system and appropriate capacity. Follow the maker's instructions for bags, filters, emptying, and maintenance. Avoid opening or servicing it in living areas.

The two-pass method

1. Lift

Damp wipe bulk residue



2. Reset

Rinse or change media



3. Finish

Clean pass, then floor

Large dry accumulation: Do not launch into cleanup without a plan. Isolate the area, stop people and pets from entering, avoid actions that disturb the residue, and obtain qualified advice if the amount, material, or safe method is uncertain.

Treat dry processes as a design failure

Routine dry sanding, grinding, powder mixing, or spray application should not be normalized in a home studio. First ask whether the result can be achieved another way.

TASK	FIRST CHOICE	IF IT TRULY CANNOT BE AVOIDED
Dry sanding or fettling	Refine at wet or leather-hard stage; use a damp sponge. For compatible ware, use an appropriate wet method.	Stop and obtain task-specific advice on isolation, local exhaust, tools, cleanup, eye protection, and respiratory protection.
Grinding fired ware	Prevent defects; choose kiln furniture and finishing methods that reduce the need.	Use equipment and capture controls designed for the material. Keep others away and contain debris.
Mixing dry powders	Buy premixed clay, slip, or glaze when practical.	Use a dedicated controlled area and method that minimizes dust. Add dry material gently to liquid rather than pouring from height. Follow the SDS.
Spraying glaze	Brush, dip, or pour when compatible with the desired result.	Use a properly designed and maintained spray booth; assess both particulate and chemical hazards in the product.

The control ladder



Do not reverse the order. A respirator on your face does not protect family members, visitors, or pets, and it does not remove contamination from the room.

Red flags: visible airborne dust, powder on clothing, residue beyond the studio, recurring dry cleanup, or no product SDS. Bring in qualified help when the task repeats, cannot be isolated, involves others, or needs exposure monitoring, ventilation design, or respirator selection.

A respirator is the last layer

NIOSH recommends particulate respirators with N95 or better filters for certain airborne crystalline-silica exposures, but the correct respirator still depends on the task, concentration, fit, and other hazards.³ A home studio rarely has measurement data, so do not treat “N95” as permission to proceed with a dusty method.

What to look for

- A **NIOSH Approved** respirator, not a generic “dust mask.”
- A testing and certification number in the form **TC-84A-XXXX** on the respirator or approval label.⁴
- The exact model and size that seals to your face.
- Filters and parts approved for that exact respirator configuration.
- Manufacturer instructions for inspection, use, storage, and replacement.

Facial hair warning: Hair that crosses the sealing surface can interfere with a tight-fitting respirator. A user seal check is performed each time the respirator is donned, but it is not a substitute for formal fit testing.

Five questions before use

- ☐ Have I eliminated or wetted as much of the task as possible?
- ☐ Is this respirator approved and appropriate for the hazard?
- ☐ Am I medically able to wear it?
- ☐ Does it fit, seal, and remain on for the whole exposure period?
- ☐ Can I remove and store it without contaminating myself or the house?

A respirator does not solve

- Dusty housekeeping
- Uncontrolled spray or grinding
- Cross-contamination
- Poor ventilation design
- Wrong filter or poor fit
- Exposure to bystanders

If you have employees: Occupational Safety and Health Administration (OSHA) requirements may include exposure assessment, engineering and work-practice controls, a written exposure-control plan, regulated areas, training, medical surveillance, and a compliant respiratory-protection program. Consult the current standard and qualified support for your workplace.¹

After an unexpected release: Move to fresh air and do not re-enter until the area is controlled. Seek care for breathing difficulty or persistent symptoms; severe breathing difficulty is an emergency.

Stop dust at the studio door

Contaminated shoes, clothing, towels, tools, and airflow can move residue beyond the workbench. Build a clean exit routine that does not depend on remembering when you are tired.

Clothing and footwear

- Use a wipeable apron or dedicated studio clothing.
- Do not shake dusty fabric.
- Change shoes and remove the apron before entering living areas.
- Wet-contain clay-covered towels and reusable cloths before transport.
- Launder studio items separately when contamination is possible; follow the material SDS and equipment instructions.

Children, pets, and visitors

- Keep them out during powder handling, dry-process work, and cleanup.
- Do not store pet bowls, toys, strollers, or household items in the studio.
- Give visitors a clear studio boundary and cleanup expectation.
- Never put a respirator on a child as a substitute for controlling the environment.

Your exit sequence

Clean tools
while damp



Clean room
floor last



Clean self
apron, shoes, hands

Studio boundary audit

CHECK	YES	FIX
The studio can be closed or clearly separated.	☐	☐
Every floor and work surface can be wet cleaned.	☐	☐
Clay and glaze materials are closed, labeled, and stored away from food.	☐	☐
Shoes, apron, and cleaning supplies stay in the studio zone.	☐	☐
Airflow does not carry studio residue into living areas.	☐	☐
Children and pets cannot enter during work or cleanup.	☐	☐

Put the routine on repeat

Every session

- ☐ Keep residue damp and contained.
- ☐ Close powder containers immediately.
- ☐ Clean tools and surfaces before residue dries.
- ☐ Wet mop the floor last.
- ☐ Remove studio clothing and wash up before exiting.

Every month

- ☐ Review which tasks create dry residue.
- ☐ Inspect ventilation and vacuum components per maker instructions.
- ☐ Reorder supplies before controls run out.
- ☐ Review changes in materials, methods, or studio users.
- ☐ Choose one improvement for the next month.

Every week

- ☐ Wet clean shelving, ledges, and low-touch surfaces.
- ☐ Inspect floors, corners, and door thresholds.
- ☐ Check lids, labels, and SDS access.
- ☐ Wash or replace cleanup media.
- ☐ Confirm no dust is migrating into the home.

Restart the assessment whenever you add a process, change materials, move the studio, begin teaching, hire help, or notice residue outside the work zone.

Monthly review notes

PROMPT	WHAT I OBSERVED
Where did residue dry?	
Which task created the most cleanup?	
Did anything cross the studio boundary?	
What one control will I improve?	
Overall studio condition: Clear / Needs attention / Stop and correct Review date: _____ Next review: _____	

Upgrade one control at a time

Start with changes that eliminate dust-producing behavior, then improve containment and cleanup. Record the result so the safer method becomes the normal method.

WHEN	ACTION	YOUR NOTE
Today	Remove the broom, ordinary vacuum, food, and pet items from the studio.	
This week	Create lidded reclaim/waste stations and a two-pass wet-cleaning kit.	
Week 2	Replace one porous or hard-to-clean work surface.	
Week 3	Review SDSs and list any task involving dry powder, sanding, grinding, or spray.	
Week 4	Decide which dry tasks to eliminate and which require qualified control advice.	

My highest-priority task

Task or material: _____

Current method: _____

Control change: _____

How I will know it worked: _____

My next safety improvement: _____

Target date: _____ Person responsible: _____

Use authoritative guidance for the details

The control principles in this guide are grounded in occupational-health sources and adapted for a home pottery setting. Requirements change and vary by jurisdiction. Follow current product instructions, Safety Data Sheets, and applicable law.

- 1 Occupational Safety and Health Administration.** *Small Entity Compliance Guide for the Respirable Crystalline Silica Standard for General Industry and Maritime*, OSHA 3911-12, 2023. Describes health effects, scope, exposure assessment, controls, housekeeping, respiratory protection, and employer obligations.
<https://WWW.OSHA.GOV/sites/default/files/publications/OSHA3911.pdf>
- 2 Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health.** *Control of Silica Dust Exposure in Pottery Manufacturing*. Describes pottery exposure pathways and controls, including damp finishing, airflow considerations, elimination of dry sweeping, and HEPA-equipped vacuuming.
<http://cdc.gov/niosh/engcontrols/ecd/detail172.html>
- 3 National Institute for Occupational Safety and Health.** *Respiratory Protection Recommendations for Airborne Exposures to Crystalline Silica*, DHHS (NIOSH) Publication No. 2008-140.
<https://www.cdc.gov/niosh/docs/2008-140/>
- 4 Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health.** *Identifying NIOSH Approved Respirators*. Explains approval labels and testing and certification numbers.
https://www.cdc.gov/niosh/ppe/niosh-approved-respirators/?CDC_AAref_Val=https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/default.html
- 5 Martin, Kim.** "Silicosis: An Avoidable Disease." *The Journal of Australian Ceramics*, July 2020. Pottery-specific practices include SDS review, wet finishing, wet housekeeping, clean clothing, and dedicated home-studio space.
<https://australianceramics.com/assets/jac592silicosismartinreducedsize.pdf>

Important limitation

This guide does not determine whether a particular exposure is safe, select a respirator for you, design ventilation, diagnose illness, or establish regulatory compliance. If you operate a business with employees or paid assistants, consult the current OSHA or state-plan requirements and a qualified occupational-safety or industrial-hygiene professional.

Keep building the system

File this guide with your SDSs and studio procedures. Revisit the checklists after any change in materials, equipment, layout, or who uses the space. SafetySavvyCo Studio Safety resources are designed to help turn that review into a repeatable routine.

Prepared by SafetySavvyCo. Educational use only. Edition 1.0, September 2026.