

Health and Safety Hazard Alert

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Art Kilns



1 WHAT TYPE OF ART KILNS SHOULD SCHOOLS USE?

Kilns are high temperature ovens used to fire clay and ceramic items. Most kilns in schools are electric powered. Some schools may have a gas kiln or use temporary wood-fired or sawdust kilns.

Kerosene and oil drip kilns are not to be used in schools.

2 HEALTH AND SAFETY ISSUES ASSOCIATED WITH KILNS?

- inhalation of toxic fumes and smoke, clay dust, glaze powder and insulation particles
- skin contact with insulation materials
- burns from hot equipment and materials
- injury from sharp shards during loading/unloading and cleaning of kilns
- electrical/gas supply

3 WHAT ARE THE MAIN HAZARDS?

- Ceramic fibre material or fire bricks are usually used to insulate electric kilns. These materials can, in loose form, be of a size and shape fine enough to be inhaled. If inhaled, these materials could lodge in the lungs causing respiratory problems.
- Kiln emissions include numerous corrosive and hazardous substances. Both insulation material and kiln emissions can produce adverse health responses in people depending on the level of exposure and individual susceptibility.

4 HOW CAN YOU PREVENT CONTACT WITH THE HAZARDS?

- Avoid contact with surfaces of the insulating materials as this can cause release of fibres
- Ensure extraction system is operating before, during and after firing to prevent inhalation of kiln emissions.

NOTE: Corrosion to metal fittings outside a kiln enclosure may indicate an ineffective ventilation system.

5 WHAT CONTROLS SHOULD BE USED?

Students cannot operate, load, unload or clean school electric/gas kilns.

Students may construct, operate, load and unload simple kilns where relevant learning outcomes apply to a particular course. In this instance, the student/s must be under the direct supervision of the teacher/leader at all times.

Checklist for Kiln Operation

- have you read the Department Of Education *Kilns CARA guideline*?
- is the ventilation working adequately in the kiln enclosure? (refer to *Kilns CARA guideline*)
- do you have the appropriate personal protective equipment? (refer to *Kilns CARA guideline*)
- do you fire the kiln out-of-school hours where possible?
- after firing, do you leave the extraction fan on, open the kiln door and allow the gas emissions to disperse before unloading?
- is the kiln area free from obstructions and able to be easily accessed?
- is the kiln enclosure area cleaned using the prescribed methods? (refer to *Kilns CARA guideline*)
- are personal hygiene procedures followed after the use of the kiln? (refer to *Kilns CARA guideline*)
- is the kiln inspected at regular intervals and maintained in good order? (refer to *Kilns CARA guideline*)

Any concerns regarding the condition/maintenance of your kiln/s should be referred to your Regional Infrastructure Manager through your School Business Manager.

FOOD OR DRINK IS NOT TO BE TAKEN INTO THE KILN/CERAMIC WORK AREAS.

FOR MORE INFORMATION

www.worksafe.qld.gov.au

This hazard alert and others are available at the 'Creating Healthier Workplaces' website.