

<b>Procedure Title</b>	<b>Silica/Clay Control</b>		
<b>Date of Issue</b>	April 28, 1999	<b>Related Policy</b>	
<b>Revision Dates</b>	November 16, 2011; January 13, 2016	<b>Related Forms</b>	
<b>Review Date</b>	January 1, 2021	<b>Originator</b>	Administrative Council
<b>References</b>			
AP 3801-D "Occupational Health & Safety Program"; Occupational Health and Safety Act; Ontario Regulation 490/09			

**Procedure:**

**1.0 RATIONALE**

In Ontario, silica has been identified as a Designated Substance and is regulated under the Occupational Health and Safety Act and by Ontario Regulation 490/09.

This procedure outlines the process to reduce/eliminate the exposure to crystalline silica found in prepared clay.

This procedure also restricts the use of silica-based sand for indoor sandboxes and exterior sand play areas.

**2.0 DEFINITIONS**

For the purpose of this Administrative Procedure the following terms and definitions will apply:

**Clay (pottery clay):** a fine-grained aggregate of hydrous silicate particles. Pottery clay is the clay used to make the three categories of pottery: earthenware, stoneware and porcelain. Clay is plasticine/putty like when wet, but firm when dry.

**Designated Substance:** a biological, chemical or physical agent or combination thereof, prescribed as a designated substance to which the exposure of a worker is prohibited, regulated, restricted, limited or controlled.

**HEPA filter:** A high efficiency particulate aerosol filter that is at least 99.97% efficient in collecting a 0.3 micrometer aerosol.

**Silica:** A naturally occurring element that can be found in two forms – crystalline or non-crystalline (also referred to as amorphous). Sand and quartz are common examples of crystalline silica.

Materials that contain crystalline silica are not hazardous unless they are disturbed, generating small-sized particles that can get into the lungs (respirable crystalline silica). For example, blasting, cutting, chipping, drilling and grinding materials that contain silica dust that is hazardous to breathe.

**3.0 BOARD REQUIREMENTS**

That no employee or student is exposed to the hazard of silica at levels where personal protective equipment would be required.

**4.0 ADMINISTRATIVE CONTROLS**

- i. The Occupational Health and Safety Officer shall work with the Purchasing Department to ensure only pre-mixed (wet) clay is purchased by schools, and that clay containing asbestos or a high concentration of free silica is strictly prohibited.
- ii. Silica products purchased by schools must be clearly labelled as containing silica and appropriate MSDS must be provided by the supplier with the delivery.
- iii. A clay project must never be dry-sanded, scraped or carved as these processes create dust containing silica.
- iv. During the time that a clay program is operating in the art room signage must be posted on the classroom door reading "CLAY UNIT CLASSES IN PROGRESS."
- v. Students should be directed to wet wipe work surfaces and wet mop the floor at the end of each class period to remove any spilled clay.
- vi. Prior to commencing the Clay instructional unit, the teacher must provide the students a comprehensive instruction on the potential hazards of clay materials and processes.

**4.1 Board Responsibilities:**

- i. Establish all necessary measures and procedures by means of both work and hygiene practices to ensure employee and student exposure to silica is below regulated hazardous levels.

**4.2 Principal Responsibilities:**

- i. Identify silica containing products within the school facility. Ensure that the Health and Safety Officer is made aware of these products, specifically their type and location(s) within the school.
- ii. Ensure work, clean up and hygiene procedures necessary to minimize employee and student exposure to airborne silica are in place.

**4.3 Head Custodian Responsibilities:**

- i. Maintain current knowledge of location of all silica containing products and materials within the school facility.
- ii. Ensure all custodial personnel are aware of the locations of silica within the school facility and the clean up procedures necessary to minimize the generation of dust.

**4.4 Employee Responsibility:**

- i. Maintain current knowledge of silica containing products used in the employees' program or work area.
- ii. Ensure silica containing materials are not mixed, sanded, crushed, ground or modified in any way that may produce respirable dust.
- iii. Ensure students practice good work and hygiene procedures.
- iv. Report any abnormal conditions or circumstances that may increase the exposure level of silica dust in the
- v. workplace.

**5.0 WORK PROCEDURES**

- i. Notify the custodial staff that silica based clay is being used.
- ii. Post signage on the classroom door identifying that the clay unit is in progress
- iii. Read the Workplace Hazardous Materials Information System (WHMIS) label on the container or package and obtain the Material Safety Data Sheet (MSDS) before using the clay.
- iv. Use silica based clay only for work that is to be fired.
- v. Use alternative material that does not contain silica for work that is not to be fired.
- vi. Never use clay in carpeted areas.
- vii. Cover all work surfaces with newspaper or newsprint. Use a spray bottle containing water to dampen the paper. Place the work boards (modeling base), on top of the paper.
- viii. Never allow dry sanding of the pieces. If edges or surfaces need to be smoothed, use a damp disposable cloth or paper towel.
- ix. Always store leftover clay in a labeled wet pail or plastic bag. Add water to keep the clay moist at all times.

**6.0 CLEAN UP PROCEDURE**

- i. Never use a vacuum or broom to clean up clay dust and debris. Standard vacuum bags are not fine enough to trap the silica dust and the fine particles will become airborne when they pass through the vacuum bag and filter.
- ii. Always use wet disposable towels or cloths to damp clean all tools and classroom surfaces. Ensure tools and surfaces have no remaining residue. Never clean using dry wipes.

**7.0 WASTE DISPOSAL PROCEDURE**

- i. Dispose all cleaning cloths, paper towels and dampened newspaper or newsprint in a double-bagged standard garbage bag and place in the school's waste disposal container.

**8.0 PERSONAL HYGIENE**

- i. After working with silica materials, employees and students shall practice normal personal hygiene methods including the washing of hands, face and exposed skin with warm water and liquid soap.

**9.0 PRIMARY SAND BOX MATERIALS**

- i. Materials purchased for use in interior primary sand boxes shall be silica free as listed in the purchasing department material catalogue.

**10.0 EXTERIOR SAND PLAY AREAS**

- i. Sand materials purchased for use in exterior sand boxes must be clean sharp masonry sand, free of dust and debris not capable of becoming airborne.