

MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product: 405, C405X

Product Use: An earthenware clay for modeling, handbuilding and throwing on the potter's wheel.

Date Prepared: Feb. 11, 2016

Manufacturer and Supplier:



The Pottery Supply House Limited
1120 Speers Road
Oakville, ON, Canada L6L 2X4
Emergency Tel.: 1-800-465-8544

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview: Not acutely hazardous. Chronic exposure to respirable particulates may cause lung disease.

Potential Health Effects:

Route of entry: **Skin contact:** May cause skin irritation.

Skin absorption: Not absorbed through the skin.

Eye contact: May cause abrasion of the cornea.

Inhalation: Contains crystalline silica (quartz). Chronic exposure may cause silicosis, cancer and other disorders.

Ingestion: Not acutely hazardous. May cause gastrointestinal upset.

Effects of acute exposure to product: May cause drying and reddening of the skin. May aggravate existing dermatitis. May cause eye irritation.

Effects of chronic exposure to product: Respirable crystalline silica (quartz) can cause:

a. Silicosis, a fibrosis (scarring) of the lungs. Silicosis may be progressive; it may lead to disability and death.

b. Lung Cancer: Crystalline silica (quartz) inhaled from occupational sources is classified by IARC as carcinogenic to humans.

c. Tuberculosis: Silicosis increases the risk of tuberculosis.

d. Autoimmune and Chronic Kidney Diseases.

e. Non-Malignant Respiratory Diseases (other than silicosis).

Irritancy of the product: Not a likely irritant.

Sensitization of the product: No information available.

Carcinogenicity of the product: Respirable crystalline silica may cause cancer after prolonged exposure. Titanium dioxide is possibly carcinogenic to humans through inhalation (IARC classification Group 2B). May contain trace amounts (parts per trillion) of naturally occurring dioxin congeners (PCDD, PCDF) including TCDD. 2, 3, 7,8. TCDD has been classified as a known human carcinogen by the IARC in Monograph 69 (1997).

Reproductive toxicity: No information available.

Teratogenicity: No information available.

Mutagenicity: No information available.

Name of toxicologically synergistic products: None known.

SECTION 3. COMPOSITION INFORMATION ON INGREDIENTS

Component	CAS#	Percentage	LD 50	LC 50
Crystalline silica (quartz)	14808-60-7	22.1 – 31.9	>22,500 mg/kg Oral, Rat	Not available
Kaolin clay ¹	1332-58-7	>26.0	Not available	Not available
Talc ²	14807-96-6	6.7 – 13.4	Not available	Not available
Dolomite ³	16389-88-1	0.0 – 4.0	Not Available	Not Available
Limestone ⁴	1317-65-3	3.0 – 7.0	Not Available	Not Available
Titanium dioxide	13463-67-7	0.4 – 2.2	>10000 mg/kg Oral, Rat	Not Available

1. Aluminum silicate mineral. 2. Magnesium silicate mineral. 3. Magnesium/calcium carbonate. 4. Calcium carbonate

SECTION 4. FIRST AID MEASURES

Procedures Skin contact: Wash off with soap and plenty of water. Remove and wash contaminated clothing before re-use. If symptoms persist, call a physician.

Eye contact: Wash immediately with plenty of water. If irritation persists, seek medical attention.

Inhalation: No specific first-aid is necessary since the adverse health effects associated with exposure to crystalline silica (quartz) result from chronic exposures.

Ingestion: Drink plenty of water. Do not induce vomiting. Consult a physician if necessary.

SECTION 5. FIRE FIGHTING MEASURES

Conditions of flammability: Not flammable.

Flash point and method of determination: Not applicable.

Upper flammable limit: Not applicable.

Lower flammable limit: Not applicable.

Auto-ignition temperature: Not applicable.

Explosion data – sensitivity to mechanical impact: Not explosive. Not sensitive.

Explosion data – sensitivity to static discharge: Not explosive. Not sensitive.

Extinguishing media, means of extinction: Product is not flammable, combustible or explosive. Use extinguishing media appropriate for surrounding fire.

Hazardous combustion products: No hazard expected.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Procedures to be followed in case of leak or spill: Discard any product, residue, disposable container or liner in compliance with regulatory requirements.

SECTION 7. HANDLING AND STORAGE

Handling procedures and equipment: Minimize dust formation by avoiding carving, cutting or grinding of dry or fired clay objects. If unavoidable, use adequate exhaust ventilation to keep airborne dust concentrations below permissible exposure limits. In case of insufficient ventilation, wear a respirator approved for silica dust. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. When firing, use adequate kiln ventilation.

Storage: Keep sealed in plastic to prevent drying by evaporation. Keep from freezing to maintain uniform working consistency.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits: TWA (Ontario)

Crystalline silica (quartz)	0.1 mg/m ³ (respirable)
Kaolin	2 mg/m ³
Talc	2 mg/m ³ (containing no asbestos)
Dolomite	10 mg/m ³ (PNOS*)
Limestone	10 mg/m ³ (PNOS*)
Titanium dioxide	10 mg/m ³

* PNOS: Particles (Insoluble or Poorly Soluble) Not Otherwise Specified.

Specific engineering controls to be used: Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s). Ensure that eye washing facilities are nearby. When firing, use adequate kiln ventilation.

Personal protective equipment to be used: In case of exposure to dust, and in any case if such exposure is above regulatory limits (see above), wear a personal respirator.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Approximately 80% solid, 20% liquid (water).
Odour and appearance: Dark grey with mild earthy odour.
Odour threshold: Not applicable.
Specific gravity: Not available.
Vapour pressure: Not applicable.
Vapour density: Not applicable.
Evaporation rate: Not available.
Boiling point: About 100°C for the liquid (water) portion. >1250°C for the solids portion.
Freezing point: About 0°C for the liquid (water) portion.
PH: Not available.
Coefficient of water/oil distribution: Not available.

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid: Contact with powerful oxidizing agents may cause fires.
Incompatible materials: Powerful oxidizing such as fluorine, chlorine trifluoride, and oxygen difluoride. Dolomite and limestone react with acids to liberate carbon dioxide.
Hazardous decomposition products: No decomposition if stored normally. Silica will dissolve in hydrofluoric acid and produce the corrosive gas silicon tetrafluoride (SiF₄). When exposed to high temperatures, free quartz can change crystal structure to form tridymite (above 870°C) or cristobalite (above 1470°C) which are greater respiratory hazards than quartz. (Tridymite and cristobalite (TWA-TLV) =0.025 mg/m³ .) May contain organic material (lignite); thermal decomposition will produce carbon dioxide and, in poorly oxidizing conditions, toxic carbon monoxide.
Possibility of hazardous reactions: Unlikely in normal use.

SECTION 11. TOXICOLOGICAL INFORMATION

LD50: Not established for this product. See Section 3 for information on ingredients.
LC50: Not established for this product. See Section 3 for information on ingredients.

The method of exposure that can lead to the adverse health effects described below is inhalation.

- A. **SILICOSIS** The major concern is silicosis, caused by the inhalation and retention of respirable crystalline silica dust. Chronic or Ordinary Silicosis is the most common form of silicosis, and can occur after many years of exposure to relatively low levels of airborne respirable crystalline silica dust. Symptoms, if present, are shortness of breath, wheezing, cough and sputum production and may be associated with decreased and disabling lung function and death. It may lead to heart disease secondary to the lung disease.
- B. **CANCER IARC** - The International Agency for Research on Cancer ("IARC") concluded that there was "sufficient evidence in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources"
- C. **AUTOIMMUNE DISEASES** Several studies have reported excess cases of several autoimmune disorders, -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis -- among silica-exposed workers.
- D. **TUBERCULOSIS** Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to persons with tuberculosis.
- E. **KIDNEY DISEASE** Several studies have reported excess cases of kidney diseases, including end stage renal disease, among silica-exposed workers.
- F. **NON-MALIGNANT RESPIRATORY DISEASES** There are studies that disclose an association between dusts found in various mining occupations and non-malignant respiratory diseases including chronic bronchitis, emphysema and small airways disease, particularly among smokers.

SECTION 12. ECOLOGICAL INFORMATION

No data available for this product. No specific adverse effect known.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal: Waste must be disposed of in accordance with federal, provincial and local environmental control regulations.

SECTION 14. TRANSPORT INFORMATION

Special shipping information: None.

SECTION 15. REGULATORY INFORMATION

This product has been classified D2A in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

SECTION 16. OTHER INFORMATION

Preparation information: Prepared by Jon Walls.

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