Alpha Resources Inc.

Safety Data Sheet (SDS)

Revision Date: May 5, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Soil Standards/ Ore Standards

AR4005, AR4006, AR4007, AR4016, AR4017, AR4018, AR4019, AR4020, AR4021, AR4025, AR4026, AR4027, AR4028

This product is intended for laboratory use.

Alpha Resources Inc. 3090 Johnson Rd. Stevensville, MI 49127 (269)465-5559

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word: WARNING

SECTION 2— HAZARDS IDENTIFICATION

Hazard Class: Carcinogenicity (category 2), carcinogenicity (category 1A), and specific target organ toxicity-repeated exposure, inhalation (category 1), lungs.

Hazard Statement: Suspected of causing cancer (H351), may cause cancer (H350), and causes damage to organs (lungs) through prolonged or repeated exposure if inhaled (H372).

Precautionary Statements: Obtain special instructions before use (P201), don't handle until all safety precautions have been read and understood (P202), don't breathe dust/fume/gas/mist/vapor/spray (P260), wash skin thoroughly after handling (P264), don't eat drink or smoke when using this product (P270), wear protective gloves/protective clothing/ eye protection/ face protection (P280), and dispose of contents/container to an approved waste disposal plant (P501).

First-Aid Statements: IF exposed or concerned: get medical advice/attention (P308+P313)

SECTION 3— COMPOSITION, INFORMATION ON INGREDIENTS

Hazardous substance required for disclosure.

Component	CAS #	Common %
Kaolin	1332-58-7	<90
Crystalline silica (Quartz)	14808-60-7	<40
Titanium dioxide	13463-67-7	<5

SECTION 4— FIRST AID MEASURES

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). If breathing is difficult qualified personnel may administer Oxygen. If not breathing give artificial respiration when qualified.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water and soap. (P302+P352). Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth. Call a poison center or physician. Never induce vomiting.

SECTION 5 — FIRE FIGHTING MEASURES

Extinguishing media: use dry chemical, alcohol-resistant foam, carbon dioxide, or water spray.
Special hazards arising: Aluminum oxide, silicon oxides
Advice for firefighters: Wear self-contained breathing apparatus for fire-fighting when required. The flame retardant clothing should be used to protect the individual. Also, other personal protective equipment should be utilized.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Protection: Use personal protective equipment when cleaning up release. Ensure adequate ventilation. If no ventilation, a respirator must be used. Keep dust formation to a minium. Avoid breathing dust/vapors/gas/mist.
Environment: Avoid release into environment, especially water ways and drains.
Method: This material can be swept up and placed in a sealed vessel for disposal. Make sure to not stir up the dust because it can be harmful when inhaled. Wash the area with wet cloth after being swept up completely.

SECTION 7 — HANDLING AND STORAGE

Handling: Keep sealed and don't breathe dust if produced. Wear appropriate clothing for protection. Where no ventilation is available a respirator will be required. Further processing of solid materials could result in combustible dusts being created.

Storage: This product should be stored in a cool, dry place and kept sealed (P233) when not in use.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limit Values:

Component	CAS#	Value	Limits	Basis
Kaolin	1332-58-7	TWA	2mg/m^3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Pneumoconiosis The value is for particulate matter containing no asbestos and < 1% crystalline silica Not classifiable as a human carcinogen		
		TWA	5mg/m^3	USA. NIOSH Recommended Exposure Limits
		Main constituent of Kaolin is Kaolinite		
		TWA	10mg/m^3	USA. NIOSH Recommended Exposure Limits
		TWA	15mg/m^3	USA. Occupational Exposure Limits (OSHA)-Table Z-1; Limits for Air contaminants.
		TWA	5mg/m^3	USA. Occupational Exposure Limits (OSHA)-Table Z-1; Limits for Air contaminants.
Quartz	14808-60-7	TWA	0.025mg/m^3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Lung cancer, pulmonary fibrosis, suspected human carcinogen	See table Z-3	
		TWA	30mg/m^3/%SiO2+2	USA. Occupational Exposure Limits (OSHA)-Table Z-3; Mineral dusts
		TWA	10mg/m^3/%SiO2+2	USA. Occupational Exposure Limits (OSHA)-Table Z-1; Mineral dusts
		TWA	250mppcf/%SiO2+5	USA. Occupational Exposure Limits (OSHA)-Table Z-3; Mineral dusts
		TWA	0.05mg/m^3	USA. NIOSH Recommended Exposure Limits

Component	CAS	Value	Limit	Basis
		Potential occupational carcinogen		
		TWA	0.05mg/m^3	USA. NIOSH Recommended Exposure Limits
Titanium dioxide	13463-67-7	TWA	10mg/m^3	USA. ACGIH Threshold Limit Values (TLV)
		Lower respiratory tract irritation, potential occupational carcinogen		
		TWA	15mg/m^3	USA. Occupational Exposure Limits (OSHA)-Table Z-1; Limits for Air contaminants.
		TWA	10mg/m^3	USA. ACGIH Threshold Limit Values (TLV)

Not: Limits/standards shown for guidance only. Follow regulations.

Engineering Controls: Proper ventilation must be available to prevent over-exposure. Don't blow off dust from clothing or skin with compressed air.

Personal Protection: Respiratory protection could be required if adequate ventilation has not been achieved.

Hand Protection: Glove suitability will differ depending on the end use of product. Chemical resistant gloves can provide an excellent barrier of protection.

Eye protection: Safety glasses with side shields are necessary if splashing is possible.

Skin and Body Protection: Chemical and oil resistant clothing are recommended for extended periods of contact.

Hygiene: Wash hands and areas of possible exposure after handling material especially before eating, drinking, and smoking. The work clothing should also be washed regularly to remove any contaminants. Dispose of contaminated clothing that can't be deemed safe.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health, and environmental considerations only and may not represent the products specifications. Contact supplier for additional information.

Beige powder appearance | Odorless | Relative density: N/A

Melting Point: N/A | Boiling Point: N/A | Vapor Density: N/A

pH: N/A | Auto-ignition temperature: N/A

SECTION 10 — STABILITY AND REACTIVITY

Stable material at normal laboratory conditions.

Reactivity: No data

Avoid: moisture

Corrosivity: No data

Hazardous Decomposition: no data **Hazardous Polymerization**: None

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute toxicity Data:

Titanium dioxide: LD50 Oral Rat- >10000mg/kg LD50 Dermal Rabbit- >10000mg/kg

Skin corrosion/irritation: Human skin result: mild skin irritation (3hr)

Serious eye damage/eye irritation: Eyes Rabbit Results: no eye irritation

Respiratory or skin sensitization: no data

Carcinogenicity: Quartz is considered a Group 1: carcinogenic to humans. Also, known to be human carcinogen to NTP.

Germ cell mutagenicity (Titanium dioxide): Hamster ovary-micronucleus test Hamster lungs-DNA inhibition
Hamster ovary-sister chromatid exchange Mouse: micronucleus test

Reproductive toxicity: no data

Specific target organ toxicity-single/repeated exposure: Inhalation causes damage to organs through prolonged or repeated exposure-lungs. (Quartz)

SECTION 12 — ECOLOGICAL INFORMATION

Toxicity Data:
Toxicity to fish static test LC50: other fish – >1000mg/l (96hr)
Toxicity to daphnia and other aquatic invertebrates static test EC50: Daphnia magna (Water flea) – >1000mg/l (48hr)
Bio-degradation: no data

Bioaccumulative potential: no data

Mobility in soil: no data

Other adverse effects: no data

SECTION 13 — DISPOSAL CONSIDERATIONS

Waste disposal should be done in compliance with existing federal, state and local environmental regulations. Do not contaminate any streams, lakes, or ponds. Contact your local licensed waste disposal facility.

SECTION 14 — TRANSPORT INFORMATION

DOT, IMDG, and IATA no a dangerous good.

SECTION 15 — REGULATORY INFORMATION

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title II, Section 302.

SARA 313 Components: This material doesn't contain any chemical components with known CAS that exceed the threshold reporting levels established by SARA Title III, Sect. 313.

SARA 311/312 Hazards: Chronic health hazards

Massachusetts RTK Components: Quartz (14808-60-7), Titanium dioxide (13463-67-7), and Kaolin (1332-58-7)

Pennsylvania RTK Components: Quartz (14808-60-7), Titanium dioxide (13463-67-7), and Kaolin (1332-58-7)

New Jersey RTK Components: Quartz (14808-60-7), Titanium dioxide (13463-67-7), and Kaolin (1332-58-7)

This product does contain a chemical known to the State of California to cause cancer, birth defects, or any other reproductive harm. Quartz (CAS#14808-60-7), Titanium dioxide (CAS#13463-67-7),

SECTION 16 — OTHER INFORMATION

The data and information as stated was furnished by the manufacturer/vendor/supplier of this product. Alpha Resources Inc. cannot warrant the accuracy of this information and shall not be responsible or liable for any damage that may result, should any of the information be erroneous.