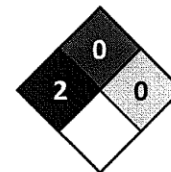




Date Prepared: 04-Nov-2013
Revised: New Issue
SDS ID: TN #5_GHS_001

| HMIS Ratings | |
|--------------------------|---|
| Health Hazard | 2 |
| Fire Hazard | 0 |
| Reactivity Hazard | 0 |
| Max. Personal Protection | E |



SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product trade name(s): **Tennessee #5**
Common Name(s): **Ball Clay, Kaolinitic Clay**
Chemical Formula: $\text{Al}_2\text{Si}_2\text{O}_5(\text{OH})_4$
CAS Number: 999999-99-4
Physical Form: Light gray to brown solid

Recommended Uses: Non-exhaustive list: Ceramics, ceramic glazes, porcelain insulators, gypsum wallboard, ceiling tile, coal tar sealing emulsions

Restrictions on Use: Food ingredient, cosmetic ingredient, agricultural feed, pesticide

Manufacturer's Name & Address: Kentucky-Tennessee Clay Company
 100 Mansell Court East
 Suite 300
 Roswell, GA 30076

Telephone: 770-594-0660
Fax: 770-645-3460
Customer Service: 800-814-4538

Emergency Telephone: **For Chemical Emergency Call CHEMTREC (24 hours): 1-800-424-9300**
 (US, Canada, Puerto Rico, Virgin Islands)
 1-703-527-3887 (Outside Above Area) collect calls accepted

SECTION 2: HAZARDS IDENTIFICATION

Contains Crystalline Silica $\geq 1\%$ $\leq 10\%$ Respirable

Classification:

| | |
|--|--------------------------|
| Eye Damage/Irritation | Category 2 |
| Skin Corrosion/Irritation | Category 2 |
| Specific Target Organ Toxicity - Single Exposure | Category 3 - Respiratory |
| Specific Target Organ Toxicity - Repeated Exposure | Category 1 - Respiratory |
| Carcinogenicity | Category 1a |

Label Elements:



Signal Word:
WARNING

Hazard Statements: **H373:** May cause damage to lung through prolonged or repeated inhalation.

Precautionary Statements:

P260: Do not breathe dust.
P285: In case of inadequate ventilation wear respiratory protection.
P501: Dispose of contents/containers in accordance with local regulation.

SAFETY DATA SHEETProduct Name: **Tennessee #5**
SDS ID: **TN #5_GHS_001****SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

| Ingredient | Weight % (Approx.) | CAS N° | EINECS N° |
|-----------------------------|--------------------|------------|-----------|
| Kaolin | 60% - 90% | 1332-58-7 | 310-194-1 |
| Quartz - Crystalline Silica | 10% - 30% | 14808-60-7 | 238-878-4 |
| Titanium Dioxide | 1% - 5% | 13463-67-7 | 136-675-5 |
| Water | 1% - 20% | 7732-18-5 | 215-185-5 |

SECTION 4: FIRST AID MEASURES**Inhalation**

If adverse effects occur, get immediate medical attention. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial

Skin

Wash immediately with soap and water. Get medical attention if irritation develops or persists.

Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion

DO NOT induce vomiting. If swallowed, drink plenty of water, do NOT induce vomiting. Never make an unconscious person vomit or drink fluids. Get medical attention.

Symptoms: Immediate

eye irritation, skin irritation, respiratory tract irritation

Symptoms: Delayed

gastrointestinal effects

SECTION 5: FIREFIGHTING MEASURES**Flammable Properties**

Product is non-flammable.

Use extinguishing agents appropriate for surrounding fire.

Unsuitable Extinguishing Media

None known.

Protective Equipment and Precautions for Firefighters

No hazard is expected from the normal use of this product.

Fire Fighting Measures

No hazard expected

NFPA 704M Hazard Classification: Health: 2 Flammable: 0 Reactivity: 0

SECTION 6: ACCIDENTAL RELEASE MEASURES**Personal Precautions**

Keep unnecessary people away, isolate hazard area and deny entry. Wet material is slippery under foot.

Wear personal protective clothing and equipment, see Section 8.

Environmental Precautions

Avoid release to the environment.

Cleanup Methods

Collect spilled material in appropriate container for reuse or disposal.

SECTION 7: HANDLING AND STORAGE**Precautions for Safe Handling**

Avoid dust generation and accumulation. Do not use in poorly ventilated or confined spaces. Do not taste or swallow.

Avoid inhalation or contact. Wash thoroughly after handling.

Conditions for Safe Storage

Store in a cool, dry place. Store in a well-ventilated area.

SAFETY DATA SHEETProduct Name: **Tennessee #5**
SDS ID: TN #5_GHS_001**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Guidelines:**

Follow standard occupational hygiene control methods and procedures. Use an approved respirator if exposure limits are exceeded or if exposure limits are exceeded or if irritation develops or persists.

Component Exposure Limits:

| Hazardous Ingredient | Weight % (Approx.) | CAS N° | OSHA PEL* | ACGIH TLV* |
|---|--------------------|------------|---|---|
| Kaolin | 60% - 90% | 1332-58-7 | 15 mg/m ³ (Total Dust) 5 mg/m ³ (Respirable Fraction) | 2 mg/m ³ (Respirable Fraction) |
| Quartz - Crystalline Silica (Respirable Fraction 1-10%) | 10% - 30% | 14808-60-7 | 0.1mg/m ³ (Respirable Fraction) | 0.025 mg/m ³ (Respirable Fraction) |
| Titanium Dioxide (Naturally Occurring) | 1% - 5% | 13463-67-7 | 15 mg/m ³ (Total Dust) | 10 mg/m ³ (Total Dust) |

* Unless otherwise noted, all PEL and TLV are reported as 8 hour time weighted average (TWA).

Component Analysis

There are no biological limit values for any of this product's components.

Engineering Controls

Ventilation: Use exhaust ventilation, if required, to maintain dust concentration below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Where there is potential for airborne exposure, use of a MSHA/NIOSH or OSHA/NIOSH approved respirator is recommended.

Eyes/Face: Wear side shield safety glasses or chemical resistant safety goggles.

Glove Recommendation: Rubber gloves are recommended for prolonged exposure.

Protective Clothing: Wear appropriate chemical resistant clothing. Contaminated clothing should be removed and laundered before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|---|
| Physical State: Solid | Appearance: light gray to brown solid |
| Color: light gray to brown | Physical Form: powder to lump |
| Odor: earthy odor | Odor Threshold: Not applicable |
| pH: 4-6 (aqueous solution) | Melting Point: > 1500°C |
| Boiling Point: Not applicable | Flash Point: Will not ignite |
| Decomposition: loses crystalline water at > 500°C (930°F) | Evaporation Rate: Not applicable |
| LEL: Not applicable | UEL: Not applicable |
| Vapor Pressure: Not applicable | Vapor Density (air = 1): Not applicable |
| Density: Not applicable | Specific Gravity (water = 1): ~2.6 gm/cc |
| Water Solubility: None | Coeff> Water/Oil Dist: Not applicable |
| Auto Ignition: Will not ignite | Viscosity: Not applicable |
| Flow Point: Not applicable | Sublimation Point: Not applicable |
| VOC: None | |

SAFETY DATA SHEET

Product Name: **Tennessee #5**
SDS ID: **TN #5_GHS_001**

SECTION 10: STABILITY AND REACTIVITY**Reactivity:**

No reactive hazard is expected.

Chemical Stability:

Stable at normal temperatures and pressure

Possibility of Hazardous Reactions:

Will not oxidize or polymerize.

Conditions to avoid:

None known.

Materials to Avoid (Incompatibilities):

None known.

Decomposition Products:

When exposed to high temperatures, free quartz can change crystal structure to form tridymite (above 870°C) or cristobalite (above 1470°C) which have greater health hazards than quartz. (Tridymite and cristobalite (TWA-TLV) = 0.025 mg/m³.)

SECTION 11: TOXICOLOGICAL INFORMATION

Primary Route of Exposure: Skin, Eye Contact, Inhalation and Ingestion

Acute Health Hazards:

Eye contact may cause mechanical irritation.

Skin contact may aggravate existing dermatitis.

Inhalation from prolonged and continuous exposure to excessive quantities of dust may aggravate existing asthmatic or respiratory conditions.

Acute and Chronic Toxicity

May cause eye irritation, skin irritation, respiratory tract irritation, and gastrointestinal tract irritation. May cause damage to respiratory tract through prolonged or repeated exposure.

Occupationally inhaled ball clay produced pulmonary fibrosis with sites of action being the lung, the lymph nodes and the hilus. Ball clay when taken orally over a long period of time can cause granulomas of the stomach.

Exposure to quartz (the most stable and common form of crystalline silica) is responsible for the majority of clinically diagnosed silicosis. Silicosis is a fibronodular lung disease that occurs after occupational exposure to crystalline silica for 5 years or longer. Inhalation of quartz dusts may cause shortness of breath, limitation of chest expansion, dry cough, and a lessened capacity for work. Individuals with a pre-existing disease in, or a history of ailments involving the skin or respiratory tract, are at greater risk for developing adverse health effects when exposed to this material.

In humans, chronic intermittent exposure to quartz caused pulmonary fibrosis, cough, and difficulty breathing. Overexposure to crystalline silica may cause silicosis, a form of disabling, progressive, and sometimes fatal pulmonary fibrosis characterized by the presence of typical nodulation in the lungs. Tuberculosis frequently complicates silicosis and the risk for tuberculosis is also increased in workers exposed to silica who have no radiographic evidence of silicosis. Crystalline silica can cause silicotic lesions in such organs as the liver, spleen and bone marrow. In humans, a causal relationship exists between exposure to crystalline silica and the development of autoimmune diseases. In multi-dose studies with animals, long term inhalation of quartz affected the lungs, endocrine system, immune system and blood.

This product contains quartz (respirable) as an impurity. Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibers, 1997, Vol. 68, IARC, Lyon, France.)

The material 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). These trace amounts are not believed to be a health risk, but Special Protections and Special Precautions (Section 8) are advised.

IARC Monograph Vol. 69 (1997) concludes that 2,3,7,8-TCDD (dioxin) is carcinogenic to humans. Methods of transmission may include inhalation, ingestion or dermal absorption.

SAFETY DATA SHEET**Product Name: Tennessee #5**
SDS ID: TN #5_GHS_001**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Quartz - Crystalline Silica (14808-60-7)

Oral LD50 Rat 500 mg/kg

Titanium dioxide (13463-67-7)

Oral LD50 >10000 mg/kg

Water (7732-18-5)

Oral LD50 Rat >90 mL/kg

Irritation/Corrosivity Data

May cause eye irritation, skin irritation, respiratory tract irritation, and gastrointestinal tract irritation.

Respiratory Sensitizer

No test data available

Dermal Sensitizer

No test data available

Carcinogenicity**Component Carcinogenicity****Kaolin - CAS N° 1332-58-7**

ACGIH: A4 - Not Classifiable as a Human Carcinogen

Quartz - Crystalline Silica - CAS N° 14808-60-7

ACGIH: A2 - Suspected Human Carcinogen

IARC: Group 1 - Carcinogenic to humans

Titanium dioxide - CAS N° 13463-67-7

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Group 2B - Possibly carcinogenic to humans

Mutagenic Data

No information available

Reproductive Effects Data

No information available

Specific Organ Toxicity - Single Exposure

Target organs include ears, skin, respiratory system, and gastrointestinal tract.

Specific Organ Toxicity - Repeated Exposure

Causes damage to eyes, skin, respiratory system, and gastrointestinal tract through prolonged or repeated exposure.

Aspiration Hazard

No data available

Medical Conditions Aggravated by Exposure

Individuals with pre-existing eye disorders, skin disorders, respiratory disorders and/or gastrointestinal disorders may have increased susceptibility to the effects of exposure.

SAFETY DATA SHEET

Product Name: **Tennessee #5**
SDS ID: TN #5_GHS_001

SECTION 12: ECOLOGICAL INFORMATION**Ecotoxicity**

No information available for the product

Component Analysis - Aquatic Toxicity

No LOLI ecotoxicity data are available for this product's components

No information available for the product

Bioaccumulation

No information available for the product

Bioconcentration

This material is not believed to bioconcentrate

Biodegradation

This product is made from a naturally occurring, abundant, innocuous mineral

Persistence

This product is made from a naturally occurring, abundant, innocuous mineral

Mobility in Soil:

This product is insoluble in water

Results of PBT and vPvB Assessment

Not relevant

Other Toxicity

May affect turbidity if discharged in large quantities to lakes, streams or sewers.

SECTION 13: DISPOSAL CONSIDERATIONS**Non-hazardous waste - RCRA (40 CFR 261)**

Dispose of waste materials in accordance with all local, state, and Federal requirements.

This product may not be disposed of in waterways or sewers.

SECTION 14: TRANSPORT INFORMATION

EPA Waste Number: Not regulated.

DOT Classification: Not regulated.

IMO Classification: Not regulated.

Internal UN: Not regulated.

IMDG Code: This product is not considered to be a marine pollutant.

SAFETY DATA SHEET**Product Name: Tennessee #5**
SDS ID: TN #5_GHS_001**SECTION 15: REGULATORY INFORMATION**

SARA Title III Section 302 Extremely Hazardous Substances: This product does not contain extremely hazardous subject to the reporting requirements of Section 302 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 355.

SARA Title III Section 311 and 312 Health and Physical Hazard Categories per 40 CFR 370.2:

| Immediate | Delayed | Fire | Pressure | Reactivity |
|------------------|----------------|-------------|-----------------|-------------------|
| Yes | Yes | No | No | No |

SARA Section 313 Notification: This product does not contain toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

TSCA: Product is listed in Initial Inventory, Vol. 1, Appendix A, CAS No. 1332-58-7

CERCLA: Ball Clay is not a CERCLA listed hazardous substance.

California Proposition 65: WARNING: This product may also contain extremely small amounts of one or more naturally-occurring materials known to the State of California to cause cancer, birth defects, or other reproductive harm.

NJ Special Health Hazardous Substances List [4]: RTK Hazardous Substance List; Substance number 4016.

PA Special Hazardous Substances List: Regulated under PA Code Chapter 323.

Stockholm Convention: This product is not subject to the Stockholm Convention.

Montreal Protocol: This product is not subject to the Montreal Protocol.

Rotterdam Convention: This product is not subject to the Rotterdam Convention.

National Inventories:

DSL (Canada): Listed
NDSL (Canada): Not Listed
PICCS (Philippines): Listed
KECI (Korea): Listed
ENCS (MITI) (Japan): Listed
AICS (Australia): Listed
IECSC (China): Listed
EINECS (Europe): Listed

REACH Status: Exempt (Annex v.7). Product is a naturally occurring mineral.

SAFETY DATA SHEETProduct Name: **Tennessee #5**
SDS ID: TN #5_GHS_001**SECTION 16: OTHER INFORMATION****Training**

Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations.

Summary of Changes

New SDS 04-Nov-2013

Key / Legend

| | |
|----------|---|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| AICS | Australian Inventory of Chemical Substances |
| CAS | Chemical Abstract Service |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| CFR | Code of Federal Regulations |
| CHEMTREC | Chemical Transportation Emergency Center |
| DOT | Department of Transportation |
| DSL | Canadian Domestic Substances List |
| EINECS | European Inventory of New and Existing Chemical Substances |
| ENCS | Existing and New Substances Inventory |
| EPA | Environmental Protection Agency |
| FDA | Food and Drug Administration |
| HMIS | Hazardous Materials Identification System |
| IARC | International Agency for Research on Cancer |
| IECSC | Inventory of Existing Chemical Substances Produced or Imported in China |
| IMDG | International Maritime Dangerous Goods Code |
| IMO | International Maritime Organization |
| KECI | Korean Existing Chemicals Inventory |
| LEL | Lower Explosive Limit |
| LOLI | List Of Lists |
| MITI | Japanese Ministry of International Trade and Industry |
| MSHA | Mine Safety and Health Administration |
| NDSL | Canadian Non-Domestic Substance List |
| NIOSH | National Institute of Occupational Safety and Health |
| NFPA | National Fire Protection Agency |
| OSHA | Occupational Health and Safety Administration |
| PBT | Persistent Bioaccumulative Toxic Chemical |
| PEL | Permissible Exposure Limit |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances |
| RCRA | Resource Conservation and Recovery Act |
| REACH | Registration, Evaluation, Authorization and Restriction of Chemicals |
| RTK | Right to Know |
| SARA | Superfund Amendments and Reauthorization Act |
| SDS | Safety Data Sheet |
| STOT | Specific Target Organ Toxicity |
| TLV | Threshold Limit Value |
| TSCA | Toxic Substances Control Act |
| TWA | Time Weighted Average |
| UEL | Upper Explosive Limit |
| UN | United Nations |
| VOC | Volatile Organic Content |
| vPvB | Very Powerful Very Bioaccumulative |

| |
|--------------------------|
| SAFETY DATA SHEET |
|--------------------------|

| | |
|---------------|---------------------|
| Product Name: | Tennessee #5 |
| SDS ID: | TN #5_GHS_001 |

Disclaimer

Such information is to the best of IMERY'S knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. IMERY'S NORTH AMERICA CERAMICS MAKES NO WARRANTY WITH RESPECT HERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON.

IMERY'S is a business name that includes Imerys North America Ceramics of which Kentucky-Tennessee Clay Company is a member. Registered in the USA. Registered office: 100 Mansell Court East, Suite 300, Roswell, GA 30076

Prepared By: Imerys North America Ceramics Technical Group.

END OF SHEET

TN #5_GHS_001

Section 1 Chemical Product and Company Identification

Page E1 of E2

**Aldon
Corporation**221 Rochester Street
Avon, NY 14414
(585) 226-6177**CHEMTREC 24 Hour Emergency USA**
Phone Number (800) 424-9300
1 703-741-5500 (from anywhere in the world).
For laboratory and industrial use only.
Not for drug, food or household use.**Product** FOOD COLORING - SET OF 4**Synonyms** Vegetable Dye

Section 2 Hazards Identification

This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

Signal word: None required**Pictograms:** No symbol required**Target organs:** None known**GHS Classification:** None required**GHS Label information: Hazard statement:** None required**Precautionary statement:** None required**Supplemental information:**

Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / Information on Ingredients

| Chemical Name | CAS # | % | EINECS |
|--|------------|-------|-----------|
| (Parts 1-4) Water | 7732-18-5 | 99.5% | 231-791-2 |
| (Part 1) FD&C Blue #1 (C.I. No. 42090) | 3844-45-9 | 0.5% | 223-339-8 |
| (Part 2) FD&C Yellow #5 (C.I. No. 19140) | 1934-21-0 | 0.5% | 217-699-5 |
| (Part 3) FD&C Red #40 (C.I. No. 16035) | 25956-17-6 | 0.5% | 247-368-0 |
| (Part 4) FD&C Green #3 (C.I. No. 42053) | 2353-45-9 | 0.5% | 219-091-5 |

Section 4 First Aid Measures

INGESTION: MAY BE HARMFUL BY INGESTION. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE ALLERGIC REACTIONS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental Release Measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7 Handling & Storage

Page E2 of E2

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

| Exposure Limits: | Chemical Name | ACGIH (TLV) | OSHA (PEL) | NIOSH (REL) |
|------------------|------------------|------------------|------------------|------------------|
| | None established | None established | None established | None established |

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

| | | |
|--|---|---|
| Appearance: Liquid, dark yellow, green, blue or red. Odor: No odor. Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: Approximately 0°C (32°F) (water) Boiling point: Approximately 100°C (212°F) (water) Flash point: Data not available | Evaporation rate (Water = 1): <1 Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): 14 (water) Vapor density (Air = 1): 0.7 (water) Relative density (Specific gravity): Approximately 1.0 (water) Solubility(ies): Complete in water. | Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: Mixture Molecular weight: Mixture |
|--|---|---|

Section 10 Stability & Reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.

Conditions to avoid: Excessive temperatures which cause evaporation.

Incompatible materials: Strong oxidizers, reducing agents.

Hazardous decomposition products: Oxides of carbon, nitrogen oxides, sulfur oxides.

Section 11 Toxicological Information

Acute toxicity: Data not available
Skin corrosion/irritation: Data not available
Serious eye damage/irritation: Data not available
Respiratory or skin sensitization: Data not available
Germ cell mutagenicity: Data not available
Carcinogenicity: Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC classified: Group 3: Not classifiable as to its carcinogenicity to humans.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Reproductive toxicity: Data not available
STOT-single exposure: Data not available
STOT-repeated exposure: Data not available
Aspiration hazard: Data not available
Potential health effects:
Inhalation: Not expected to be a health hazard.
Ingestion: May be harmful by ingestion.
Skin: Contact may cause irritation or allergic reaction.
Eyes: Contact may cause irritation.
Signs and symptoms of exposure: To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.
Additional information: RTECS #: Data not available

Section 12 Ecological Information

Toxicity to fish: No data available
Toxicity to daphnia and other aquatic invertebrates: No data available
Toxicity to algae: No data available
Persistence and degradability: No data available **Bioaccumulative potential:** No data available
Mobility in soil: No data available **PBT and vPvB assessment:** No data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

| | | | |
|-------------------------------------|--|--------------------------------|-----------------------------|
| UN/NA number: Not applicable | Shipping name: Not Regulated | Reportable Quantity: No | Marine pollutant: No |
| Hazard class: Not applicable | Packing group: Not applicable | | |
| Exceptions: Not applicable | 2016 ERG Guide # Not applicable | | |

Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

| Component | TSCA | CERCLA (RQ) | RCRA code | DSL | NDSL | CA Prop 65 |
|--|------|-------------|-----------|-----|------|--|
| All components listed with the following agencies: TSCA, EINECS, and DSL | | | | | | This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity. |

Section 16 Other Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

SAFETY DATA SHEET – JANUARY 3, 2018



Section 1 – Identification

| | |
|---------------------------|---|
| Product Identifier: | Silica Sand |
| Trade Names: | Holliston Sand Products, Slater Farms Products |
| Product Uses: | Filtration Media, Foundry Sand, Industrial Fillers, Bio-retention and Agricultural Sand, Sports Turf, Recreational Products, Commercial Products, Traction Sand Not recommended for sand-blasting. |
| Manufacturer's Name: | Holliston Sand Company, Inc. |
| Manufacturer's Address | PO Box 1168, Slatersville, RI 02876 |
| Manufacturer's Telephone | 401.766.5010, Monday – Friday, 7:00am to 5:00pm |
| Manufacturer's Facsimile: | 401.762.4976 |
| Emergency Telephone | 401.766.5010, Monday – Friday, 7:00am to 5:00pm |

Section 2 – Hazards Identification

GHS – US Classification and Label Elements:

Health:

| | | |
|---|--|--|
| Category 1A – Carcinogen | | |
| Category 1 - Specific Target Organ Toxicity (STOT) following repeated exposures | | |
| Category 2B - Eye Irritation | | |
| Signal Word (GHS-US) - DANGER | | |
| GHS-US Labeling / Hazard Pictograms |  GHS08 |  GHS07 |

Hazard Statements (GHS-US)

| | |
|------|---|
| H335 | May cause eye and respiratory irritation |
| H350 | May cause cancer by inhalation |
| H372 | Causes damage to organs through prolonged or repeated exposure by inhalation. |

Precautionary Statements (GHS-US)

| | |
|---|--|
| P202 – SDS - Read all safety precautions prior to handling. | P264 – Wash thoroughly after handling. |
| P308 / P313/P314/P304 – Call for medical attention if not well or uncomfortable. If inhaled, provide fresh air. | |
| P260 / P280 – Never breathe dust. Wear PPE prior to use. | P271 – Use in a well ventilated area. |
| P403 – Store properly. Closed container. | P501 – Dispose of according to local / regional regulations. |

Section 3 – Composition

| Name | Product Identifier | Percentage (%) | GHS-US Classification |
|--------|--------------------|----------------|--|
| Quartz | CAS #: 14808-60-7 | 85 – 99.9 | Carc. 1A, H350, STOT SE 3, H335, STOT RE 1, H372 |

Section 4 – First Aid Measures

ANY SERIOUS INJURY OR UNCONSCIOUSNESS OBSERVATION SHOULD BE AN AUTOMATIC EMERGENCY CALL TO 911.

Inhalation – Move person to a clear area, provide fresh air. Provide medical or emergency attention.

Eye – Flush eye / eyes with water as needed. Provide medical attention as necessary.

Skin – Simple abrasions should be cleansed with mild soap and water. Provide medical attention as necessary.

Ingestion – Discomfort should be followed up with medical attention.

Signs and Symptoms of Exposure - Symptoms of silicosis may first appear 15 to 20 years after someone's exposure to crystalline silica. As the disease progresses, symptoms may include:

| | | |
|----------------------------|---------------------|-----------------|
| <i>Shortness of breath</i> | <i>Severe Cough</i> | <i>Weakness</i> |
|----------------------------|---------------------|-----------------|

If you have silica in your lungs, your body may not be able to fight infections well. This can lead to other illnesses that can cause.

| | | |
|----------------------------|--------------------|---------------------|
| <i>Chest Pains</i> | <i>Weight Loss</i> | <i>Night Sweats</i> |
| <i>Respiratory Failure</i> | <i>Fever</i> | |

As the disease progresses over time, these symptoms can become worse. The symptoms of acute silicosis which can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as six months, are the same as those associated with chronic silicosis. The symptoms of scleroderma, an autoimmune disease, include thickening and stiffness of the skin, particularly in the fingers, shortness of breath, difficulty swallowing and joint problems.

Section 5 – Fire Fighting Measures

| | |
|------------------------------------|--|
| Extinguishing Media: | Compatible with all media. Use appropriate media for surrounding fire. |
| Unusual Fire and Explosion Habits: | None known. |
| Special Fire Fighting Procedure: | None known. Not flammable. Use normal fire fighting equipment. |
| Hazardous Combustion Products: | None known. |

Section 6 – Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures
 - General measures.
 - Do not breathe dust. Avoid generation of dust during clean-up of spills. Recover the product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up. Use water to wet down clean up area to minimize particulate.
 - For non-emergency / emergency personnel.
 - Wear suitable protective clothing, gloves, eye and face protection. Use recommended respiratory protection. Collect as any solid.
- Environmental Precautions – no additional information available
- Methods and Material for Containment and Clean-up
 - Avoid generation of dust during clean-up of spills. Recover the product by vacuuming, shoveling or sweeping. Vacuum must be fitted with HEPA filter to prevent release of particulates during clean-up. Use water to wet down clean up area to minimize particulate.

Section 7 – Handling and Storage

- This product is not to be used for abrasive blasting without proper equipment and training. Do not breathe dust, which may be created during handling of this product.
- Engineering measures and good housekeeping are essential to preventing accumulation of silica dust in the workplace. Use adequate ventilation and dust collection systems.
- Testing can ensure engineering measures are sufficient. PPE is a solution until verification is established. Refer to Section 8 – Exposure Controls / Personal Protection for further information.
- Silica dust is not always visible in a form of a cloud. Use PPE.
- In accordance with OSHA's Hazard Communication Standard (29CFR 1910.12, 1915.99, 1917.28, 1918.90, 1926.59, 1928.21), state, and / or local right to know laws and regulations, familiarize your employees with this SDS and the information contained herein.
- Warn your employees, your customers and other third parties (in case of resale or distribution to others) of the potential health risks associated with the use of this product and train them in the appropriate use of PPE and engineering controls, which will reduce their risks of exposure.
- See ASTM International standard practice E1132-06, "Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable Crystalline Silica."
- Store in a dry, cool place. Keep container tightly closed.

Section 8: Exposure Controls / Personal Protection

Control Parameters

| | | |
|---|---|--|
| Quartz (14808-60-7) – Occupational exposure limits (respirable fraction) in air for dust containing crystalline silica. | | |
| USA ACGIH | ACGIH TWA (mg/m ³) (8 hour weighted average) | 0.025 mg/m ³ |
| USA IDLH | US IDLH (mg/m ³) | 50 mg/m ³ |
| USA NIOSH | NIOSH REL (TWA) (mg/m ³) (10 hour weighted average) | 0.05 mg/m ³ |
| USA MSHA/OSHA | MSHA/OSHA PEL (TWA) (mg/m ³) (8 hour weighted average) (Mineral Dust) | (30)/(%SiO ₂ +2) mg/m ³ – total dust (10)/(% SiO ₂ +2) mg/m ³ – respirable fraction |

| | | | |
|--|--|---------------------|----------------------|
| Occupational exposure limits in air for inert / nuisance dust. | | | |
| USA ACGIH | ACGIH TLV | 3 mg/m ³ | 10mg/m ³ |
| USA MSHA/OSHA | MSHA/OSHA PEL (As Inert or Nuisance Dust) | 5 mg/m ³ | 15 mg/m ³ |

Exposure Controls

| | |
|--|--|
| Engineering controls | Ensure adequate ventilation, especially in confined areas. Avoid dust production. |
| Personal protection equipment (PPE) | Use dust suits, protective goggles and respiratory protection in dusty areas. Self contained breathing apparatus is also a good option during dust production. Get training on the use of all PPE equipment. Respirator fit testing is mandatory. Contact NIOSH at 800.35.NIOSH, WWW.CDC.GOV/NIOSH |
| | Use impermeable gloves for hand protection. |
| | Use protective goggles for eye protection |
| | Use NIOSH approved respirators in areas containing airborne dust. |
| Hygiene | Always wash your hands after handling |
| Do not breathe dust. Use PPE. Research and engineer a solution for each application. | |

| | |
|--|--|
| California Inhalation Reference Exposure Limit (REL) as of 12/08: Crystalline silica (quartz, cristobalite, tridymite) is 3 ug/m ³ . | |
| Canadian OEL: | |
| <ul style="list-style-type: none"> Canada Labour Code: 0.025 mg/m³ (respirable) | |
| <ul style="list-style-type: none"> Alberta, British Columbia: 0.025 mg/m³ (respirable quartz and cristobalite) | |
| <ul style="list-style-type: none"> Saskatchewan: 2 mg/m³ (respirable, amorphous: silica fume); 0.1 mg/m³ (respirable, amorphous: silica fused); 0.05 mg/m³ (respirable, cristobalite); 0.05 mg/m³ (respirable tridymite); 0.1 mg/m³ (respirable, quartz); 0.1 mg/m³ (respirable, tripoli) | |
| <ul style="list-style-type: none"> Manitoba, Newfoundland, Prince Edward Island: 0.025 mg/m³ (respirable) | |
| <ul style="list-style-type: none"> Ontario: 0.05 mg/m³ (respirable cristobalite, tridymite); 0.1 mg/m³ (quartz, tripoli); 0.1 mg/m³ (silica fused); 2 mg/m³ (silica fume) | |
| <ul style="list-style-type: none"> Quebec: 0.05 mg/m³ (respirable, cristobalite, tridymite); 0.1 mg/m³ (quartz, tripoli) | |
| <ul style="list-style-type: none"> New Brunswick: 0.1 mg/m³ (quartz); 0.05 mg/m³ (cristobalite) | |
| <ul style="list-style-type: none"> Nova Scotia: 0.025 mg/m³ (quartz, cristobalite) | |
| <ul style="list-style-type: none"> Yukon: 2 mg/m³ (respirable, amorphous); 300 particles/ml measured with a konimeter (quartz, and tripoli); 150 particles/ML measured with a konimeter (cristobalite and tridymite) | |
| <ul style="list-style-type: none"> Northwest Territories, Nunavut: 2 mg/m³ (respirable, amorphous); 0.05 mg/m³ (respirable, cristobalite, tridymite, silica flour); 0.1 mg/m³ (respirable, fused silica, quartz, tripoli) | |
| Austria OEL - Maximum concentration 0.15 mg/m ³ | |
| Japan OEL - Japan Society of Occupational Health Respirable crystalline silica 0.03 mg/m ³ | |
| Poland OEL TWA - 2 mg/m ³ (total inhalable dust, containing >50% free crystalline silica); | |
| <ul style="list-style-type: none"> 0.3 mg/mg/m³ (respirable dust, containing >50% free crystalline silica); | |
| <ul style="list-style-type: none"> 4.0 mg/m³ (total inhalable dust, containing 2% to 50% free crystalline silica); | |
| <ul style="list-style-type: none"> 1.0 mg/m³ (respirable dust, containing 2% to 50% free crystalline silica) | |
| United Kingdom OEL – 0.1 mg/m ³ | |
| Mexico – 0.1 mg/m ³ (quartz, inhalable) | |
| <ul style="list-style-type: none"> 0.05 mg/m³ (cristobalite, inhalable) | |
| <ul style="list-style-type: none"> 0.05 mg/m³ (tridymite, inhalable) | |
| <ul style="list-style-type: none"> 0.1 mg/m³ (tripoli containing respirable quartz powder, inhalable) | |
| <ul style="list-style-type: none"> (Also refer to ACGIH) | |
| Argentina – 0.05 mg/m ³ (quartz, respirable) | |
| <ul style="list-style-type: none"> 0.05 mg/m³ (cristobalite, respirable) | |
| <ul style="list-style-type: none"> 0.05 mg/m³ (tridymite, respirable) | |
| <ul style="list-style-type: none"> 0.1 mg/m³ (tripoli, respirable) | |

Section 9: Physical and chemical properties

| | |
|-----------------------------|---------------------|
| Physical State / Appearance | Solid / Crystalline |
| Odor | None |
| Odor Threshold | No data available |
| Color | Natural |
| pH | No data available |
| Evaporation rate | No data available |
| Melting point | 1710°C (3110°F) |
| Freezing point | No data available |
| Boiling point | 2230°C (4046°F) |
| Flash point | No data available |
| Self ignition temperature | No data available |

| | |
|----------------------------------|------------------------|
| Decomposition temperature | No data available |
| Flammability (solid, gas) | Non-combustible solid |
| Vapour pressure | No data available |
| Relative vapour density at 20 °C | No data available |
| Relative density | No data available |
| Density | 2.65 (approx.) |
| Solubility | Practically insoluble. |
| Log Pow | No data available |
| Log Kow | No data available |
| Viscosity | No data available |
| Explosive Limits | None known. |
| Oxidizing properties | None known. |
| Explosive limits | No data available |

Section 10: Stability and Reactivity

| | |
|-------------------------------------|---|
| Reactivity | None under normal conditions. Reactive with strong oxidizing agents. |
| Chemical / Thermal Stability | Chemically stable under normal temperature and pressure. Thermal instability occurs under high temperatures above 870°C (1598°F). It can change to crystalline silica such as tridymite and cristobalite. |
| Incompatible Materials | Avoid strong oxidizers such as fluorine, chlorine tri-fluoride, hydrogen fluoride, oxygen di-fluoride, hydrogen peroxide, acetylene, ammonia. |
| Hazardous Decomposition | Quartz (silica) will dissolve in hydrofluoric acid producing a corrosive gas, silicon tetra-fluoride. |
| Hazardous Polymerization | Not known to polymerize. |

Section 11: Toxicological Information

| | | |
|--|---|--|
| Acute toxicity | Not classified | |
| Aspiration hazard | Not classified | |
| Skin Irritation | Not classified | |
| Eye Irritation | Not classified | |
| Respiratory or skin sensitization | Not classified | |
| Reproductive toxicity | Not classified | |
| Specific target organ toxicity (single exposure) | Not classified | |
| Specific target organ toxicity (repeated exposure) | Causes damage to organs (lung/respiratory system) through prolonged or repeated exposure (inhalation) | |
| Germ cell mutagenicity | Not classified | |
| Carcinogenicity | May cause cancer - inhalation | |
| Quartz (14808-60-7) | IARC Group – Group 1 | National Toxicity Program (NTP) Status: Known Human Carcinogen |
| Silica – All grades (14808-60-7) | | Repeated or prolonged exposure to respirable crystalline silica dust will cause lung damage in the form of silicosis. Symptoms will include progressively more difficult breathing, cough, fever, and weight loss. Acute silicosis can be fatal. |

Section 12: Ecological Information

Crystalline silica is not known to be eco-toxic, not readily biodegradable and not expected to bio-accumulate.

Section 13: Disposal Considerations

AS SOLD, our crystalline silica (quartz) products are not considered hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR 261 et seq. Dispose according to applicable local, state and federal regulations.

Section 14: Transport Information

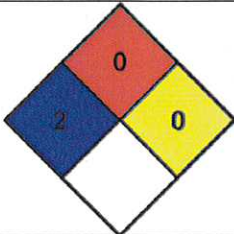
Crystalline silica (quartz) is not a hazardous material for purposes of transportation under the U. S. Department of Transportation Table of Hazardous Materials, 49 CFR §172.101, and Transportation of Dangerous Goods Regulations in the European Union, Canada, Argentina, Republic of Uzbekistan and Japan. Consult applicable international, national, state, provincial or local laws. In accordance with DOT / TDG / ADR / RID / ADNR / IMDG / ACAO / IATA, crystalline silica is not a dangerous product in the sense of transport regulations.

Section 15: Regulatory Information

| | | | |
|--|-------------------------------|---|---|
| US Federal Regulations | Silica / Quartz 14808-60-7 | Immediate health hazard - acute Delayed health hazard – chronic. | On US TSCA (Toxic Substances Control Act) inventory listing. |
| Canada Regulations | | WHMIS Classification. Class D Division 2 Subdivision A – Very toxic material causing other toxic effects. | |
| International Info | | IARC (international Agency for Research on Cancer) listing. | NTP (National Toxicology Program) specifies as a carcinogen. |
| U State Regulations | | See below. | |
| U.S. - California - Proposition 65 - Carcinogens List . This product contains Quartz, a substance known to the state of California to cause cancer. U.S. - Hawaii - Occupational Exposure Limits - TWAs U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Emission Levels (ELs) U.S. - Idaho - Occupational Exposure Limits - Mineral Dusts U.S. - Illinois - Toxic Air Contaminant Carcinogens U.S. - Maine - Chemicals of High Concern U.S. - Massachusetts - Right To Know List U.S. - Michigan - Occupational Exposure Limits - TWAs U.S. - Minnesota - Chemicals of High Concern U.S. - Minnesota - Hazardous Substance List U.S. - Minnesota - Permissible Exposure Limits - TWAs U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - New Jersey - Special Health Hazards Substances List U.S. - Oregon - Permissible Exposure Limits - Mineral Dusts U.S. - Pennsylvania - RTK (Right to Know) List U.S. - Tennessee - Occupational Exposure Limits - TWAs U.S. - Texas - Effects Screening Levels - Long Term U.S. - Texas - Effects Screening Levels - Short Term U.S. - Vermont - Permissible Exposure Limits - TWAs U.S. - Washington - Permissible Exposure Limits - STELs U.S. - Washington - Permissible Exposure Limits - TWAs | | | |

Section 16 – Other Information

NFPA

| | | |
|---------------|--|---|
| Health Hazard | 2 – intense or continued exposure could cause temporary or incapacitation or possible residual injury unless prompt medical attention is given |  |
| Fire Hazard | 0 – materials that will not burn | |
| Reactivity | 0 – normally stable, even under fire exposure conditions, are not reactive with water | |

HMIS III Rating

| | |
|---------------------|---|
| Health | 2 - moderate hazard, temporary injury may occur |
| Flammability | 0 – minimal hazard |
| Physical | 0 – minimal hazard |
| Personal Protection | All equipment required plus engineering measures. |

Definitions

| | |
|-----------|---|
| Carc. 1A | Carcinogenicity Category 1A |
| STOT RE 1 | Specific target organ toxicity (repeated exposure) Category 1 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |

User's Responsibility: The OSHA Hazard Communication Standard 29 CFR 1910.1200 requires that this SDS be made available to your employees who handle or may be exposed to this product. Educate and train your employees regarding applicable precautions. Instruct your employees to handle this product properly.

Disclaimer: The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for one's own particular use. Since the actual use of the product described herein is beyond our control, Holliston Sand company, Inc., assumes no liability arising out of the use of the product by others. Appropriate warnings and safe handling procedures should be provided to handlers and users.

More information on the effects of crystalline silica exposure may be obtained from OSHA website: <http://www.osha.gov> or from NIOSH website: <http://www.cdc.gov/niosh>.

SAFETY DATA SHEET

2/8/2018

SECTION I - IDENTIFICATION

Material Name

BLACKJACK CLAY

Company Information

Activa Products, Inc.
512 South Garrett
Marshall, TX 75670
Phone: 903-938-2224
Fax: 1-903-938-3899
Email: frank@activaproducts.com

For transportation emergencies only call: 903-938-2224

For health emergencies call the Poison Control Center: 1-800-222-1222

SECTION II - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

There are no GHS label elements.

PRIMARY ROUTES OF ENTRY: INHALATION, INGESTION, EYE, SKIN

EFFECTS AND SYMPTOMS OF ACUTE EXPOSURE: NONE EXPECTED

EFFECTS AND SYMPTOMS OF CHRONIC EXPOSURE: NONE EXPECTED

CARCINOGEN LISTING: NTP: **NO** IARC: **NO** OSHA: **NO**

SEE SECTION III FOR COMPONENTS AFFECTED

MEDICAL CONDITIONS USUALLY AGGRAVATED BY OVER EXPOSURE TO THIS PRODUCT: NONE

SECTION III - COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS

| <u>Hazardous Ingredients</u> | <u>CAS/EC #</u> | <u>PEL/TLV (MG/M#)</u> | <u>Max % Weight</u> | <u>NTP</u> | <u>IARC</u> |
|------------------------------|-----------------|----------------------------|-------------------------|------------|-------------|
| None | | | | | |

SECTION IV - FIRST AID MEASURES

FIRST AID MEASURES: NONE REQUIRED. NO ACUTE HEALTH EFFECTS EXPECTED.

SECTION V - FIRE FIGHTING MEASURES

FLASH POINT (METHOD): N/A

AUTOIGNITION TEMPERATURE: N/A

EXPLOSION LIMITS IN AIR (% BY VOLUME): NOT EXPLOSIVE

EXTINGUISHING MEDIA: NO SPECIAL MEDIA REQUIRED

FIRE FIGHTING PROCEDURES: NO SPECIAL FIRE FIGHTING PROCEDURES REQUIRED

UNUSUAL FIRE & EXPLOSION HAZARDS: NOT COMBUSTIBLE

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE A MATERIAL IS SPILLED: Clean up in accordance with all applicable regulations. Absorb spillage with non-combustible, absorbent material. For waste disposal, see Section XIII

SECTION VII - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING STORAGE AND HANDLING: Good industrial hygiene practice requires that exposure be maintained below the TLV. This is preferably achieved through the provision of adequate ventilation. When exposure cannot be adequately controlled in this way, personal respiratory protection should be employed.

SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION AND SPECIAL VENTILATION REQUIREMENTS: NONE REQUIRED
OTHER PROTECTIVE EQUIPMENT (GLOVES, GOGGLES, ETC): NONE REQUIRED
WORK/HYGIENE PRACTICES: NONE REQUIRED
ENGINEERING CONTROLS: NONE REQUIRED

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-------------------------------------|-----------------------------------|
| BOILING POINT: N/A | MELTING POINT: N/A |
| VAPOR PRESSURE: N/A | |
| SPECIFIC VAPOR DENSITY (AIR=1): N/A | SPECIFIC GRAVITY: N/A |
| SOLUBILITY IN WATER: N/A | REACTIVITY IN WATER: NON-REACTIVE |

SECTION X - STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION PRODUCTS: N/A
STABILITY: STABLE CONDITIONS TO AVOID: N/A
INCOMPATIBILITY (MATERIALS TO AVOID): N/A
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and smoke

SECTION XI - TOXICOLOGICAL INFORMATION

ACUTE EFFECTS ASSOCIATED WITH USE OF THIS MATERIAL: NONE EXPECTED
The summated LD50 is >50000 mg/kg.

This product is not considered to be a known or suspected human carcinogen by NTP, IARC or OSHA (see section III)

SECTION XII - ECOLOGICAL INFORMATION

NO HARMFUL EFFECTS KNOWN OTHER THAN THOSE ASSOCIATED WITH SUSPENDED INERT SOLIDS IN WATER.

SECTION XIII - DISPOSAL CONSIDERATIONS

RCRA HAZARD CLASS (40 CFR 261): THIS PRODUCT IS NOT CLASSIFIED AS A HAZARDOUS WASTE.
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION XIV - TRANSPORTATION INFORMATION

U.S. DOT (49 CFR 172.101): THIS IS NOT A HAZARDOUS MATERIAL AS CLASSIFIED BY CFR 172.101.

SECTION XV - REGULATORY INFORMATION

CONTENTS OF THIS SDS COMPLY WITH OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200

EPA SARA TITLE III CHEMICAL LISTINGS:

SECTION 302.4 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):

NONE

SECTION 313 TOXIC CHEMICALS (40 CFR 372):

NONE

INTERNATIONAL REGULATIONS

CANADIAN WHMIS: THIS PRODUCT IS A CONTROLLED PRODUCT UNDER CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. IT CONTAINS THE FOLLOWING TOXIC OR HIGHLY TOXIC MATERIALS:

BARIUM CARBONATE

SUPPLEMENTAL STATE COMPLIANCE INFORMATION:

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) LISTED UNDER NEW JERSEY'S RIGHT TO KNOW PROGRAM:

NONE

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) REQUIRING NOTIFICATION TO THE STATE OF WASHINGTON UNDER THEIR CHILDREN'S SAFE PRODUCTS ACT:

NONE

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) LISTED IN FLORIDA'S TOXIC SUBSTANCE LIST:

NONE

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) LISTED IN MAINE'S PRIORITY CHEMICAL LIST:

NONE

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS CONSIDERED BY VERMONT AS BEING OF VERY HIGH CONCERN TO CHILDREN:

NONE

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) LISTED IN MASSACHUSETTS HAZARDOUS SUBSTANCE LIST:

NONE

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) LISTED ON MICHIGAN'S CRITICAL MATERIALS REGISTER:

NONE

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) LISTED ON MINNESOTA'S HAZARDOUS SUBSTANCES LIST:

NONE

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) LISTED IN PENNSYLVANIA'S HAZARDOUS SUBSTANCES LIST:

NONE

Under CPSC's consumer product regulations (16CFR1500.3 and 1500.14), this product has the following required acute and chronic hazard labeling:

NONE

SECTION XVI - OTHER INFORMATION

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Prepared by Duke OEM Toxicology

BRAND NAMES

THIS SDS APPLIES TO THE FOLLOWING BRAND NAMES

| Brand Name | SKU | SKU Description |
|-------------------------------------|------------|------------------------|
| BLACKJACK CLAY - 25 OBS (8025) | 8025 | |
| BLACKJACK CLAY - 5 LBS (8005) | 8005 | |
| BLACKJACK CLAY - 50 LBS (8050) | 8050 | |
| BLACKJACK CLAY - FILTER CAKE (8000) | 8000 | |