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Safety Data Sheet

HS – United States

Section 1. Product and Company Identification

Product Names EPK Kaolin

Synonym Edgar Clay, China Clay, EPK, Edgar Pulverized Kaolin

Supplier/ Manufacturer
Edgar Minerals, Inc.
651 Keuka Rd.
Hawthorne, FL 32640
352-481-2421 phone
352-481-2334 fax

Emergency Phone Number 352-317-1617

Product Use Ceramics, Sanitary Ware, Agriculture, Paint filler, China clay, various industrial applications

Restrictions on use Not applicable

Section 2. Hazards Identification

OSHA/HCS status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification of the substance or mixture **OSHA - CARCINOGENICITY** (Inhalation) - Category 1A
(See section 16 for OSHA, IARC, and NTP carcinogen listings)
OSHA - SPECIFIC TARGET ORGAN TOXICITY (Repeated Exposure) (respiratory tract) (inhalation) - Category 1

Signal Word **Danger**

Hazard Statement EPK Kaolin is a naturally occurring mineral, which may contain amounts of crystalline silica typically 0.1-1.0%, may cause damage to respiratory system through prolonged or repeated exposure.

• • **CARCINOGENICITY:** This product contains crystalline silica. Repeated, prolonged inhalation of dust may cause delayed lung injury which may result in silicosis or pneumoconiosis. The International Agency For Research On Cancer in its publication, "IARC Monographs On the Evaluation Of The Carcinogenic Risk To Humans – Silica, Some Silicates, Coal Dust and Para-aramid Fibrils" - Volume 68, 1997, has concluded that there is sufficient evidence of the carcinogenicity of crystalline silica in humans, and has, therefore, classified crystalline silica in, Group 1, Carcinogenic to Humans. The National Toxicology Program's ("NTP's") Ninth Annual Report on Carcinogens 2000, lists crystalline silica (respirable) as a substance which is known to be a human carcinogen. In humans, a number of studies have found an association between lung cancer and exposure to dust containing respirable crystalline silica. In many of these studies, though not all, lung cancer risks were elevated and could not be explained by confounding factors such as cigarette smoking or arsenic or random inhalation. While the IARC working group concluded there was sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or crystobalite, it noted that carcinogenicity in humans was not detected in all circumstances studied.
ACGIH states that it is a suspected cause of cancer. Other forms of respirable crystalline silica (e.g. tridymite and cristobalite) may also be present or formed under certain industrial processes.

Safety Data Sheet

GHS label elements / Hazard pictograms

Health Hazard (carcinogen)

Irritant (skin,eye & respiratory tract)

Precautionary Statements

Avoid generating dust.
Do not breath dust.
Wear approved respiratory protection if exposure is greater than suggested exposure limits.

Unclassified Hazards

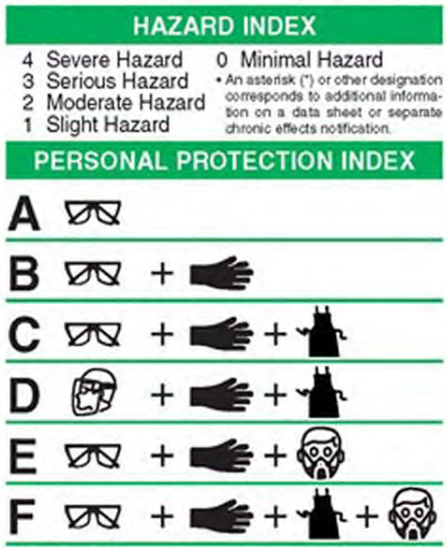
Slippery when wet.

% of ingredients with unknown acute toxicity

None Known

GHS – United States

Hazardous Materials Identification System



Section 3. Composition / Information on Ingredients

Substances:

Chemical	Formula	CAS & ICSC Numbers		Percentage	
Kaolinite	$Al^2O^3.2SiO^2.2H^2O$	CAS # 1332-58-7	ICSC # 1144	99.0% - 99.9%	
Quartz (Crystaline Silica)	SiO^2	CAS # 14808-60-7	ICSC # 0808	0.1% - 1.0%	

Section 4. First-Aid Measures

Description of first-aid Measures:	
First-aid measures general	Never give anything by mouth to an unconscious person. If you feel unwell, seek medical attention.
First-aid measures after inhalation	Move victim to well ventilated area. If mechanical discomfort persists, seek medical attention.
First-aid measures after skin contact	Remove contaminated clothing. Wash affected area with soap and warm water. Obtain medical attention if irritation persists.
First-aid measures after eye contact	Flush the eyes immediately with large amounts of running water, lifting the upper and lower lids occasionally. Remove contact lenses if present and easy to do. If irritation persists or for imbedded foreign body, get immediate medical attention.
First-aid measures after ingestion	Rinse mouth. Do NOT induce vomiting. Unlikely to be toxic by ingestion. If discomfort persists, seek medical attention.
Most Important Symptoms and Effects, Both Acute and Delayed:	
Symptoms/injuries	Causes damage to organs through prolonged or repeated exposure (inhalation).
Symptoms/injuries after inhalation	May cause cancer by inhalation. Dust from this product may cause irritation to the respiratory tract.
Symptoms/injuries after skin contact	Prolonged contact with large amounts of dust may cause mechanical irritation.
Symptoms/injuries after eye contact	Prolonged contact with large amounts of dust may cause mechanical irritation.
Symptoms/injuries after ingestion	If a large quantity has been ingested: intestinal blockage. Gastrointestinal irritation.
Chronic symptoms	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.

If exposed or concerned, get medical advice and attention.

Section 5. Fire-Fighting Measures

NFPA

National Fire Protection Association (U.S.A.)

Suitable extinguishing media	This product is not combustible. Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	No restrictions on extinguishing media for this material.
Special hazards arising from the substance or mixture	This material is not flammable and does not support fire. The paper bags and bulk bags containing the material are flammable.
Hazardous thermal decomposition products	This material does not contain hazardous decomposition products.
Special protective actions for fire-fighters	Product can become slippery when wet.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment.

Section 6. Accidental Release Measures

Use of personal precautions

Avoid inhalation of dry clay dust. Wear appropriate personal protective clothing and respiratory protection when cleaning up dry clay dust.

Emergency procedures

There are no emergency procedures required for this material. Avoid release to the environment, including sewers, surface or ground water.

Methods and Materials For containment

Kaolin waste is not reactive, flammable or biodegradable. Use conventional means; e.g. sweeping, vacuum, etc. Use caution on wet floor, as it may be slippery.

Clean up procedures

Clean up residue with high-efficiency particulate filter vacuum. Scoop spilled material into appropriate containers for disposal. Use methods to minimize dust. Avoid sweeping spilled dry material. If sweeping of a contaminated area is necessary, use a dust suppressant agent.

Section 7. Handling & Storage

Precautions for safe handling

Paper bags weigh 50 lbs. Use proper lifting techniques to avoid physical injury. Bulk bags weigh 2000 lbs. Use proper equipment to lift. Do not breath dust. Do not eat, drink or smoke when using this product. Use methods to minimize dust. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Wear protective gloves/clothing and eye/face protection. Was thoroughly after handling.

Recommendations on the conditions for safe storage

No special storage considerations, but keep in a dry location.

Section 8. Exposure Controls / Personal Protection

Chemical Name	CAS Numbers	Occupational Exposure Limits
Quartz,(Crystalline Silica)SiO^2	CAS#14808-60-7	ACGIH TLV: TWA 0.025 mg/ m^3 (respirable) OSHA PEL: TWA 10 mg/m^3/ divided by the value "%SiO2" + 2 (respirable) OSHA PEL: TWA 30 mg/m^3/ divided by the value "%SiO2" + 2 (total dust) CAL OSHA PEL: TWA .1 mg/ m^3 (respirable) CAL OSHA PEL: TWA .3 mg/ m^3 (total) NIOSH REL: .05 mg/m^3 TWA (respirable dust)
Kaolinite $Al^2O^3.2SiO^2.2H^2O$	CAS#1332-58-7	ACGIH TLV: TWA 2 mg/ m^3 (respirable) / particulate matter containing no asbestos and <1% crystalline silica (respirable) OSHA PEL: TWA 5 mg/m^3 (respirable) OSHA PEL: TWA 15 mg/m^3 (total) CAL OSHA PEL: TWA 2 mg/ m^3 (respirable) NIOSH REL: 10 mg/m^3 TWA (total dust); 5 mg/m^3 TWA (respirable dust)

Appropriate engineering Controls

Clay in moist form poses no health risk and no inhalation risk.

In the event that dust is generated, use local exhaust ventilation or other engineering controls as required to maintain exposures below applicable occupational exposure limits (TLV).

Ensure that dust handling systems are designed in a manner to prevent the escape of dust into the work area. Ensure compliance with applicable exposure limits.

Recommendations for personal protective measures

Local Exhaust: When mixing, dry sanding or grinding clay products, use sufficient local exhaust to reduce the level of respirable dust to the applicable standards set forth in Section III. See ACGIH "Industrial Ventilation, A Manual of Recommended Practice," latest edition.

Respiratory Protection: Dust is generated when working with dry kaolin. To minimize exposure to dust and/or crystalline silica, the mixing of dry kaolin products should be conducted with sufficient ventilation.

Respirable dust and quartz levels should be monitored regularly. Dust and quartz levels in excess of appropriate exposure limits should be reduced by feasible engineering controls, including (but not limited to) wet suppression, ventilation, and process enclosure. When such controls are not feasible, NIOSH/MSHA approved respirators must be worn in accordance with a respiratory protection program which meets OSHA/MSHA requirements as set forth at 29 CFR1910.134 and ANSI Z88.2-2015"Practices for Respiratory Protection".

Eye Protection: Use safety glasses with side shields that are compliant with ANSI Z87.1-1989. Face shields can also be used when mixing dry kaolin. Wear tight fitting dust goggles when excessively (visible) dusty conditions are present or are anticipated. NIOSH recommends that contact lenses not be worn when working with material containing crystalline silica dust.

Skin Protection: Use gloves and/or protective clothing if abrasion or allergic reactions are experienced.

Work/Hygienic Practices: Avoid creating and breathing dust. Always observe good personal hygiene measures, such as washing after handling material and before eating, drinking and/or smoking. Routinely wash work clothes and protective equipment to remove contaminates.

Protective Clothing Pictograms

Section 9. Physical & Chemical Properties

Physical State	Powder or prill
Appearance	Buff color in dry form
Odor	Earthy odor when wet
Odor Threshold	Not Applicable
pH	5.5-6.5
Solubility in Water	None
Melting Point	1740-1785°C
Freezing Point	< 0 °C (<32°F)
Specific Gravity / Relative Density	2.65 g/cc
Evaporation Rate	No data available
Flash Point	Not Applicable
Auto-Ignition Temperature	Not Applicable
Decomposition Temperature	Not Applicable
Flammability	Not Applicable
Vapor Pressure	Not Applicable
Vapor Density	Not Applicable
Explosive Limits	Not Applicable
Viscosity	Not Applicable
Partition Coefficient: n-octanol/water	Not Applicable
Initial Boiling Point & Boiling Range	Not Applicable

Section 10. Stability & Reactivity

Reactivity Hazardous reactions will not occur under normal conditions.

Chemical stability Stable at standard temperature and pressure.

Possibility of hazardous reactions Hazardous polymerization will not occur.

Conditions to avoid Avoid generating dust

Incompatible materials None known

Hazardous decomposition products None known

Section 11. Toxicological Information

Routes of Exposure	Inhalation of dry clay dust, Ingestion
Acute Effects	
Inhalation	Aspiration of high concentrations of dry clay dust may cause mechanical irritation and discomfort. Long term exposure may cause chronic effects.
Eye Contact	Not a primary eye irritant. May cause mechanical irritation.
Skin Contact/Irritation	Not a skin irritant. Not absorbed through skin.
Sensitization	Not a sensitizer
Ingestion	Ingestion may cause gastrointestinal irritation

Section 11. Toxicological Information

Chronic Effects	
OSHA Carcinogen	Lung cancer – Silica has been classified by OSHA as a human lung carcinogen.
Mutagenic Effects	None Known
Teratogenic Effects	None Known
Developmental Toxicity	None Known
Effects of Silicosis	**Symptoms of Silicosis**
Bronchitis/Chronic Obstructive Pulmonary Disorder. Tuberculosis – Silicosis makes an individual more susceptible to TB. Scleroderma – a disease affecting skin, blood vessels, joints and skeletal muscles. Possible renal disease.	Shortness of breath; possible fever. Fatigue; loss of appetite. Chest pain; dry, nonproductive cough. Respiratory failure, which may eventually lead to death.
Remarks	
Carcinogenicity	"Calcined kaolin is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). The American Conference of Governmental Industrial Hygienists (ACGIH) lists kaolin as Not Classifiable as a Human Carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals." "The International Agency for Research on Cancer has determined that crystalline silica (quartz) is carcinogenic to humans (Group 1). Refer to IARC Monograph 100C (2011). The National Toxicology Program classifies respirable crystalline silica as "known to be a human carcinogen" (12th Report on Carcinogens, 2011). The ACGIH classifies crystalline silica, quartz, as a suspected human carcinogen (A2)."
Numerical Measures of toxicity	None Known

OSHA, IARC, and NTP Carcinogen Classifications					
Chemical with Carcinogen Potential		**CAS#**	**OSHA**	**IARC**	**NTP**
Quartz, (Crystalline Silica)	SiO2	CAS # 14808-60-7	Yes	Yes - Group 1	Yes

Section 12. Ecological Information (non-mandatory)

Ecotoxicity	None Known
Biochemical oxygen demand (BOD5)	None Known
Chemical oxygen demand(COD)	None Known
Products of Biodegradation	None Known
Toxicity of the products of Biodegradation	None Known
Bioaccumulation Potential	None Known
Potential to move from soil to groundwater	None Known
Other adverse effects	None Known

13. Disposal Considerations

Personal Protection

Refer to Section 8: "Recommendations for Personal Protective Measures" when disposing of ceramic waste.

Appropriate disposal containers

Standard waste disposal containers – no specials requirements.

Appropriate disposal methods

Disposal of this product should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. In most cases, this is normal waste disposal. The generation of waste should be avoided or minimized. Dispose of non-recyclable products via a licensed waste disposal contractor. Waste packaging should be recycled. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.

Physical and chemical properties that may affect disposal

Dry clay dust should be placed in a sealed container or in a manner that reduces or eliminates the release of the product. Packaging should be recycled before disposal.

Sewage disposal

Do not dispose of into sinks or toilets. They will clog. Never dispose of this product into a sewer system.

Special precautions for landfills or incineration activities

There are no special precautions for disposal in a landfill. This product is non-combustible and is not suitable for incineration.

Section 14. Transportation Information

Regulatory Information	UN Number	UN Proper Shipping Name	Transport Hazard Class	Packing Group Number	Bulk Transport Guidance	Special Precautions
DOT Classification	Not regulated	-	-	-	-	-
TDG Classification	Not regulated	-	-	-	-	-
ADR/RID Class	Not regulated	-	-	-	-	-
IMDG Class	Not regulated	-	-	-	-	-
IATA-DGR Class	Not regulated	-	-	-	-	-

Section 15. Regulatory Information

TSCA – Toxic Substances Control Act - EPA	Quartz and other chemicals are listed in the TSCA Chemical Substance Inventory
California Prop. 65	**WARNING:** This product contains a chemical known to the State of California to cause cancer. (Prop. 65 - Calif. Health & Safety Code Section 2549 Et Seq.)
SARA/Title lll (Emergency Planning & Community Right-to-Know Act)	This material contains no substances at or above the reporting threshold under Section 313, Based on available data.

Section 16. Other Information

Definitions

ASTM means American Society for Testing and Materials
IARC means International Agency for Research on Cancer
NTP means National Toxicology Program
HCS means Hazard Communication Standard
CAS means Chemical Abstract Service
ACGIH means American Conference of Governmental Industrial Hygienists
CAL-OSHA means California OSHA, most CAL-OSHA standards defer to the federal OSHA standards
OSHA means Occupational Safety & Health Administration
OSHA PEL means OSHA Permissible Exposure Limit
OSHA STEL means short term exposure limit. Limit exposure to a duration of 15 minutes, that cannot be repeated more than 4 times per day, with at least 60 minutes between exposure periods
TWA means Time Weighted Average (average exposure on the basis of an 8h/day, 40h/week work schedule)
TLV means Threshold Limit Value - American Conference of Governmental Industrial Hygienists (ACGIH)
NFPA Hazard Rating: Health 1 Fire 0 Reactivity: 0
Three types of TLVs for chemical substances as defined by the ACGIH are:

1. **TLV-TWA** - Time weighted average - average exposure on the basis of an 8h/day, 40h/week work schedule.
2. **TLV-STEL** - Short-term exposure limit - spot exposure for a duration of 15 minutes, that cannot be repeated more than 4 times per day, with at least 60 minutes between exposure periods.
3. **TLV-C** - Ceiling limit - absolute exposure limit that should not be exceeded at any time.

This SDS is in compliance with The Globally Harmonized System of Classification and Labeling of Chemicals (GHS) – June 1, 2015. This data sheet is subject to change without notice.

Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patent or in violation of any law or regulation. It is the user's responsibility to determine for himself the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.

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