Safety Data Sheet

Expanded Shale and Clay

SECTION 1 - IDENTIFICATION

Product Identifier:
Expanded Shale and Clay

Synonyms:
Lightweight Aggregate

Recommended Use:
Construction purposes

Restrictions on Use:
This product should not be used as an abrasive blasting medium or for foundry applications.

Manufacturer:
Trinity ESC - Erwinville, LA
12652 Airline Highway
Erwinville, LA 70767

Emergency Phone Number:
(205)-652-9688

SECTION 2 - HAZARD(S) IDENTIFICATION

Hazard Classification:
Category 1A Carcinogen
Category 1 Specific Target Organ Toxicity (STOT) following repeated exposures
Category 1 Eye Damage
Category 1 Skin Corrosive

Signal Word:
Danger

Hazard Statements:
H350: May cause cancer by inhalation
H372: Causes damage to lungs, kidneys and autoimmune system through prolonged or repeated exposure by inhalation
H314: Causes severe skin burns and eye damage

Precautionary Statements:
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P260: Do not breathe dusts or mists.
P264: Wash skin thoroughly after manually handling.
P270: Do not eat, drink, or smoke when using this product.
P281: Use personal protective equipment (PPE) as required.
P301+P330+P331: If swallowed: rinse mouth. Do not induce vomiting.
P303+P361+P353: If on skin (or hair): Remove immediately all contaminated clothing. Rinse skin with water/shower.
P304+P112: If inhaled: remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338: If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313: If exposed: concerned, unwell or irritation of the eyes, skin, mouth or throat/nasal passage persist: Get medical attention.

Wear eye protection and respiratory protection following this SDS, NIOSH guidelines and other applicable regulations. Use protective gloves if manually handling this product.

Avoid creating dust when handling, using or storing. Use with adequate ventilation to keep exposure below recommended exposure limits.

Dispose of product in accordance with local, regional, national, or international regulations.

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SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS		
Component(s) Chemical Name	CAS Registry Number	% By Weight (approx.)
Expanded Shale and Clay	68334-37-2	100
Crystalline Silica, Quartz*	14808-60-7	20-50
Cristobalite	14464-46-1	0-3

*Respirable fraction only

SECTION 4 - FIRST-AID MEASURES

INHALATION: If excessive inhalation occurs, remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or develops later.

EYES: Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Remove contact lenses, if present and easy to do, and continue rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or develops later.

SKIN: Rinse skin with soap and water after manually handling and wash contaminated clothing if there is potential for direct skin contact. Contact a physician if irritation persists or develops later.

INGESTION: If swallowed, rinse mouth and do not induce vomiting. If gastrointestinal discomfort occurs, persists or develops later, get medical attention.

SIGNS AND SYMPTOMS OF EXPOSURE: There are generally no signs or symptoms of exposure to respirable crystalline silica. Often, chronic silicosis has no symptoms. The symptoms of chronic silicosis, if present, are shortness of breath, wheezing, cough and sputum production. 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 6 months, are the same as those associated with chronic silicosis; additionally, weight loss and fever may also occur. 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.

Direct skin and eye contact with dust may cause irritation by mechanical abrasion. Some components of the product are also known to cause corrosive effects to skin, eyes and mucous membranes. Ingestion of large amounts may cause gastrointestinal irritation and blockage. Inhalation of dust may irritate nose, throat, mucous membranes and respiratory tract by mechanical abrasion. Coughing, sneezing, chest pain, shortness of breath, inflammation of mucous membrane, and flu-like fever may occur following exposures in excess of appropriate exposure limits. Repeated excessive exposure may cause pneumoconiosis, such as silicosis and other respiratory effects.

SECTION 5 - FIRE-FIGHTING MEASURES

Extinguishing Agent:

Not flammable; Does not apply

Unusual Fire and Explosion Hazard:

Contact with powerful oxidizing agents may cause fire and/or explosion. While individual components are known to react vigorously with water to produce heat, this is not expected from the product.

Special Fire Fighting Procedures:

None known

Hazardous Combustion Products:

None known

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SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Persons involved in cleaning should first follow the precautions defined in Section 7 of the SDS. Spilled materials, where dust can be generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust and other components that may pose inhalation hazards. Do not dry sweep spilled material. Collect the material using a method that does not produce dust such as a High-Efficiency Particulate Air (HEPA) vacuum or thoroughly wetting down the dust before cleaning up. Wear appropriate personal protective equipment as specified in Section 7 including appropriate respirators during and following clean up or whenever airborne dust is present to ensure worker exposures remain below occupational exposure limits (OELs - Refer to Section 7).

Place the dust in a covered container appropriate for disposal. Dispose of the dust according to federal, state and local regulations.

This product is not subject to the reporting requirements of SARA Title III Section 313, and 40 CFR 372.

SECTION 7 - HANDLING AND STORAGE

This product is not intended or designed for and should not be used as an abrasive blasting medium or for foundry applications. Follow protective controls set forth in Section 7 of this SDS when handling this product. Dust containing respirable crystalline silica and other components that may be corrosive/irritant may be generated during processing, handling and storage. Use good housekeeping procedures to prevent the accumulation of dust in the workplace.

Do not breathe dust. Avoid contact with skin and eyes. Do not store near food or beverages or smoking materials.
Do not stand on piles of materials; it may be unstable.

Use adequate ventilation and dust collection equipment and ensure that the dust collection system is adequate to reduce airborne dust levels to below the appropriate OELs. If the airborne dust levels are above the appropriate OELs, use respiratory protection during the establishment of engineering controls. Refer to Section 7 - Exposure Controls/Personal Protection for further information.

In accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200, 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 personal protective equipment and engineering controls, which will reduce their risks of exposure.

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SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION			
Component(s) Chemical Name	MSHA/OSHA PEL	ACGIH TLV-TWA	NIOSH REL
Expanded Shale and Clay* (Respirable Fraction)	5 mg/m³	3 mg/m³	N/A
Expanded Shale and Clay* (Total Dust)	15 mg/m³	10 mg/m³	N/A
Crystalline Quartz (Respirable Fraction)	10 mg/m³/(%SiO_2 +2)	0.025 mg/m³	0.05 mg/m³
Crystalline Quartz (Total Dust)	30 mg/m³/(%SiO_2 + 2)	N/A	N/A
Cristobalite (Respirable Fraction)	5 mg/m³/(%SiO_2 + 2)	0.05 mg/m³	0.05 mg/m³

* Classified as Particulates Not Otherwise Regulated (PNOR) and/or Inert or Nuisance Dust

Engineering Controls:

Ventilation: Use artificial or natural ventilation adequate to maintain exposure levels below appropriate exposure limits.

Other Control Measures: Respirable levels should be monitored regularly. Levels in excess of appropriate exposure limits should be reduced by implementing feasible engineering controls, including (but not limited to) dust suppression (wetting), ventilation, process enclosure and enclosed employee work stations.

Personal Protective Equipment (PPE):

Eye / Face Protection: Safety glasses with side shields should be worn as minimum protection. Dust goggles should be when excessively dusty conditions are present or anticipated. If irritation persists, get medical attention immediately. There is potential for severe eye irritation if exposed to excessive concentrations of dust for those using contact lenses.

Skin Protection: Use appropriate protective gloves if manually handling the product.

Respiratory Protection: For respirable crystalline silica levels that exceed or are likely to exceed appropriate exposure limits, a NIOSH-approved particulate filter respirator must be worn. Respirator use must comply with applicable MSHA or OSHA standards, which include provisions for a user training program, respirator repair and cleaning, respirator fit testing, and other requirements.

Emergency or planned entry into unknown concentrations or IDLH conditions (50 mg/m³ for crystalline silica-quartz): A self-contained breathing apparatus (SCBA) that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode or any supplied-air respirator that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus.

Escape from unknown or IDLH conditions: An air-purifying, full-face piece respirator with a high-efficiency particulate (100-series) filter or any appropriate escape-type, self-contained breathing apparatus.

If the workplace airborne crystalline silica concentration is unknown for a given task, conduct air monitoring to determine the appropriate level of respiratory protection to be worn. Ensure appropriate respirators are worn, as needed, during and following the task, including clean up or whenever airborne dust is present, to ensure worker exposures remain below OELs.

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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES	
Appearance: Fine to coarse granular solid. Dark red to purple to brown.	Solubility: Negligible
Flammability Limits in Air: Does not apply.	Boiling Point: Does not apply.
Odor: None	Flash Point: Will not ignite.
Vapor Pressure: Does not apply.	Evaporation Rate: Does not apply.
Odor Threshold: Does not apply.	Flammability (solid, gas): Does not apply.
Vapor Density: Does not apply.	Partition Coefficient: Does not apply.
pH Does not apply.	Auto-Ignition Temperature: Does not apply.
Specific Gravity: 0.9 to 1.3 ($H_2O = 1$)	Decomposition Temperature: Does not apply.
Melting Point / Freezing Point: Does not apply.	Viscosity: Does not apply.

SECTION 10 - STABILITY AND REACTIVITY

Stability:
Stable
Conditions to Avoid:
Does not apply.
Incompatibility (Materials to Avoid)
None
Hazardous Decomposition or Combustion Products:
None
Hazardous Polymerization:
Will not occur.

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SECTION 11 - TOXICOLOGICAL INFORMATION

Primary Route(s) of Exposure:

Inhalation and Ingestion

Eye Contact:

Direct contact with dust may cause irritation by mechanical abrasion or corrosive action. Conjunctivitis may occur.

Skin Contact:

Direct contact may cause irritation by mechanical abrasion. Some components of material are also known to cause corrosive effects to skin and mucous membranes.

Skin Absorption:

Not expected to be a significant route of exposure.

Ingestion:

Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury. Ingestion of large amounts may cause gastrointestinal irritation and blockage.

Inhalation:

Dust may irritate nose, throat, mucous membranes and respiratory tract by mechanical abrasion. Coughing, sneezing, chest pain, shortness of breath, inflammation of mucous membrane, and flu-like fever may occur following exposures in excess of appropriate exposure limits.

Chronic Overexposure:

Excessive exposure, by inhalation, to dusts of this material, over an extended period of time may result in the development of pulmonary diseases including pneumoconiosis, silicosis, or lung cancer. Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea.

ACGIH, MSHA, and OSHA have determined that adverse effects are not likely to occur in the workplace provided exposure levels do not exceed the appropriate exposure limits. Lower exposure limits may be appropriate for some individuals including persons with pre-existing medical conditions as described under medical conditions aggravated by exposure.

Medical Conditions Aggravated By Exposure:

Inhaling respirable dust and/or crystalline silica may aggravate existing respiratory system disease(s) (e.g., bronchitis, emphysema, chronic obstructive pulmonary disease) and/or dysfunctions. Exposure to dust may aggravate existing skin and/or eye conditions. Smoking and obstructive/restrictive lung diseases may also exacerbate the effects of excessive exposure to this product.

Chemical(s)/Component(s) Listed as Carcinogen:

Crystalline Quartz and Cristobalite are listed as carcinogens by the NTP and IARC.

Acute Toxicity Values:

Silica - LD50 oral rat > 22,500 mg/kg

SECTION 12 - ECOLOGICAL INFORMATION

No data available. This product is not expected to present an environmental hazard.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method:

This product is not classified as a hazardous waste under US EPA RCRA regulations. If uncontaminated, collect and reuse materials, if possible. If not possible and uncontaminated, dispose as an inert, non-metallic mineral. If contaminated, dispose in accordance with all applicable local, state/provincial and federal regulations in light of the contamination present. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

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SECTION 14 - TRANSPORT INFORMATION

U.S. DOT Packaging Requirements:

Does not apply.

UN Proper Shipping Name:

Not regulated.

Transport Hazard Class:

Does not apply.

Environmental Hazards:

Does not apply.

Special precautions:

Transport in a manner to minimize airborne dust where possible. Utilize a tarp cover for truck transport.

SECTION 15 - REGULATORY INFORMATION

OSHA:

Crystalline silica (quartz) is not listed as a carcinogen.

SARA Title III:

Sections 311 and 312: Immediate health hazard and delayed health hazard.

TSCA:

Crystalline silica (quartz), crystalline silica (cristobalite) and expanded shale appear on the EPA TSCA inventory under the CAS No. 14808-60-7, 14808-60-7 and 68334-37-2, respectively.

RCRA:

Crystalline silica (quartz) is **not** classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

CERCLA:

Crystalline silica (quartz) is **not** classified as a hazardous substance under regulations of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 40 CFR §302.4

EPCRA:

Crystalline silica (quartz) is **not** an extremely hazardous substance under regulations of the Emergency Planning and Community Right to Know Act, 40 CFR Part 355, Appendices A and B and is **not** a toxic chemical subject to the requirements of Section 313.

California Proposition 65:

This product contains crystalline silica (respirable) which is known to the State of California to be a carcinogen.

Massachusetts Toxic Use Reduction Act:

Respirable crystalline silica is considered toxic per the Massachusetts Toxic Use Reduction Act when used in abrasive blasting and molding.

Pennsylvania Worker and Community Right to Know Act:

Quartz is considered hazardous for purposes of the Act, but it is not a special hazardous substance.

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SECTION 16 - OTHER INFORMATION

NFPA Hazard Rating:

Health: 1 Fire: 0 Reactivity: 0

HMIS Hazard Rating:

Health: 2* Fire: 0 Reactivity: 0

* Warning - Chronic health effect possible - inhalation of silica dust may cause lung injury/disease (silicosis). Take appropriate measures to avoid breathing dust. See Section 2.

Definition of Acronyms / Abbreviations:

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service
CERCLA: Comprehensive Environmental Response, Compensation and Liability Act
CFR: US Code of Federal Regulations
EPA: Environmental Protection Agency
EPCRA: Emergency Planning and Community Right to Know Act
HEPA: High-Efficiency Particulate Air
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IDLH: Immediately Dangerous to Life and Health
MSHA: Mine Safety and Health Administration
NFPA: National Fire Protection Association
NIOSH: National Institute for Occupational Safety and Health, US Department of Health and Human Services
NIOSH REL: NIOSH Recommended Exposure Limit
NTP: National Toxicology Program
OEL: Occupational Exposure Limit
OSHA: Occupational Safety and Health Administration, US Department of Labor
PEL: Permissible Exposure Limit
RCRA: Resource Conservation and Recovery Act
SARA Title III: Title III of the Superfund Amendments and Reauthorization Act, 1986
SDS: Safety Data Sheet
STOT: Specific Target Organ Toxicity
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act
TWA: Time-Weighted Average

User's Responsibility: The OSHA Hazard Communication Standard 29 CFR 1910.1200 requires that this SDS be made available to 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 in this SDS relates only to the specific product designated herein and does not relate to use in combination with any other material or in any process. The information set forth herein is based on technical data the manufacturer believes reliable. It is intended for use by persons having technical skill and at their own discretion and risk. The suggested precautions and recommendations are based on recognized good work practices and experience as of the date of publication. They are not necessarily all-inclusive or fully adequate in every circumstance as not all use circumstances can be anticipated. Since conditions of use are outside the control of the manufacture, no warranties, express or implied, are made and no liability is assumed in connection with any use of this information. Any use of these data and information must be determined by the user to be in accordance with federal, state, and local laws and regulations.

Date of Preparation:

Aug-15