



Product: *Norlite Expanded Shale*

Effective Date: 11/05/20

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identity: Norlite Expanded Shale

Recommended use of the chemical or restrictions on use: **Norlite Expanded Shale is used as a raw material in construction products, geotechnical fills, filter media, and horticultural supplements.**

Manufacturer: Norlite, LLC
628 South Saratoga Street
Cohoes, NY 12047

Emergency Phone No. 518-235-0401

SDS Date of Preparation: 11/5/20


2. HAZARDS IDENTIFICATION

GHS Classification:

Physical	Health	Environment
Not Hazardous	Carcinogen Category 1	Not Hazardous

GHS Label Elements:

Danger!



Contains

Statement of Hazard
H350 May cause cancer.

Prevention
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves, protective clothing, eye protection, and face protection during use due to the potential for dust generation.
P314 Get medical advice or attention if you feel unwell.
P308 + P313 If exposed or concerned: Get medical advice or attention.
P501 Dispose of contents and container in accordance with local and national regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount	GHS Classification
Shale	Mixture	90-100%	Not Hazardous
Crystalline Silica Quartz	14808-60-7	~8.5%	Carcinogen Category 1

4. FIRST AID MEASURES

Eye: Flush victim's eyes with water, holding the eyelids apart. Get medical attention if irritation occurs and persists.

Skin: Wash skin thoroughly with water. If irritation or symptoms develop, get medical attention.

Ingestion: No harmful effects are expected. If symptoms occur, get medical attention.

Inhalation: Remove victim to fresh air. If breathing is difficult have qualified personnel administer oxygen. Get medical attention if irritation or symptoms occur.

Most Important Symptoms: Long term exposure can cause silicosis. Silicosis is a respiratory disease, which can result in delayed, disabling and sometimes fatal lung injury. IARC and NTP have determined that crystalline silica can cause lung cancer in humans. Risk of injury is dependent on the duration and level of exposure. A single exposure will not result in serious adverse effects.

Indication of immediate medical attention/special treatment: None known.

5. FIRE FIGHTING MEASURES

Suitable (and Unsuitable) Extinguishing Media: Will not burn. Use media appropriate for surrounding fire.

Special hazards arising from the chemical: Not flammable.

Special Fire-Fighting Instructions: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures: Wear appropriate protective equipment. Avoid generating airborne dust.

Methods and Materials for Containment and Cleaning Up:

Collect in a manner that minimizes airborne dust. Collect dust with a HEPA vacuum or using wet methods to minimize dust generation. Collect for appropriate disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Do not breathe dust. Use normal precautions against bag breakage or spills of bulk material. Avoid creation of respirable dust. Use good housekeeping in storage and use areas to prevent accumulation of dust in work area. To minimize exposure, wear a respirator approved for silica dust when using, handling, storing or disposing of this product or bag. **WARN and TRAIN** employees in accordance with state and federal regulations.

WARN YOUR EMPLOYEES (AND YOUR CUSTOMERS AND USERS IN CASE OF RESALE) BY POSTING, AND OTHER MEANS, OF THE HAZARDS AND OSHA PRECAUTIONS AND ANY OTHER APPLICABLE REGULATORY PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT OSHA PRECAUTIONS.

See also American Society for Testing and Materials (ASTM) Standard Practice E1132-99a, "Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable Crystalline Silica".

Additional information on silica hazards and precautionary measures can be found at the following websites:

- NIOSH Joint Campaign on Silicosis Prevention <http://www.cdc.gov/niosh/topics/silica/#campaign>
- OSHA Crystalline Silica Website <http://www.osha.gov/SLTC/silicacrystalline/index.html>
- MSHA Silicosis Prevention Website <http://www.msha.gov/S&HINFO/SILICO/SILICO.HTM>
- NIOSH Hazard Review – Health Effects of Occupational Exposure to Respirable Crystalline Silica Website <http://www.cdc.gov/niosh/docs/2002-129/02-129a.html>

Conditions for Safe Storage, Including Any Incompatibilities: Store in a manner that will avoid damage that might create dust. Store away from acids and powerful oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Constituent	OSHA		ACGIH	
	TWA	STEL	TWA	STEL
Shale	5 mg/m ³ (Inert or Nuisance Dust, Respirable Fraction) 15 mg/m ³ (Inert or Nuisance Dust, Total Dust)	N/A	N/A	N/A
Respirable crystalline silica	50 µg/m ³ (Permissible Exposure Limit) 25 µg/m ³ (Action Level)	N/A	<u>30 mg/m³</u> (%SiO ₂ + 5) (total dust) <u>10 mg/m³</u> (%SiO ₂ + 2) (Respirable fraction)	N/A

Engineering Controls: Use with adequate local exhaust ventilation to maintain exposures below the occupational exposure limits. See also the ACGIH "Industrial Ventilation – A Manual for Recommended Practice" (current edition). Control of exposure to dust must be accomplished as far as feasible by accepted engineering control measures (for example, enclosure or confinement of the operation, general or local exhaust ventilation).

Respiratory Protection: If the exposure limits are exceeded a NIOSH approved dust respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of

respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.

Skin Protection: Wear protective gloves.

Eye Protection: Safety glasses or goggles recommended.

Other: As appropriate for the work environment. Dusty clothing should be laundered before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance And Odor: Angular particular solid with no odor.

Physical State: Solid, ranging in size from dust to 2"	Odor Threshold: Not determined
Vapor Density: Not applicable	Initial Boiling Point/Range: Not applicable
Solubility In Water: Not soluble	Vapor Pressure: Not applicable
Relative Density: 1.25-1.7	Evaporation Rate: Not applicable
Melting/Freezing Point: Not available	pH: Not applicable
VOC Content: Not available	Octanol/Water Coefficient: Not determined
Solubility: Partial	Decomposition Temperature: Not determined
Viscosity: Not determined	
Flashpoint: Not applicable	Autoignition Temperature: Not applicable
Flammable Limits: LEL: N/A UEL: N/A	

10. STABILITY AND REACTIVITY

Reactivity: Not normally reactive.

Chemical Stability: Stable under normal storage and handling conditions.

Possibility of Hazardous Reactions: None known.

Conditions to Avoid: None known.

Incompatible Materials: Avoid oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, etc.

Hazardous Decomposition Products: Silica will dissolve in hydrofluoric acid producing a corrosive gas, silicon tetrafluoride.

11. TOXICOLOGICAL INFORMATION

HEALTH HAZARDS:

Ingestion: No adverse effects expected for normal, incidental ingestion.

Inhalation: Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects:

Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling and sometimes fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop mycobacterial infections (tuberculous and non-tuberculous) and fungal infections. Inhalation of air with a very high concentration of respirable silica dust can cause the most serious forms of silicosis in a matter of months or a few years. Some epidemiologic studies have concluded that there is significant risk of developing silicosis even at airborne exposure levels that are equal

to the recommended NIOSH REL, the ACGIH TLV, the OSHA PEL, and the MSHA Exposure Limit.

Cancer Status: The International Agency for Research on Cancer has determined that crystalline silica is carcinogenic to humans (Group 1 - carcinogenic to humans). Refer to IARC Monograph 100C, A Review of Human Carcinogens: Arsenic, Fibres, and Dusts (published in 2011) in conjunction with the use of these materials. The National Toxicology Program classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the Twelfth Report on Carcinogens (2011). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

Other Data with Possible Relevance to Human Health:

There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) rheumatoid arthritis, systemic lupus erythematosus, sarcoidosis, chronic bronchitis, chronic obstructive pulmonary disease (COPD), emphysema, chronic kidney disease and end-stage renal disease.

For further information consult "Adverse Effects of Crystalline Silica Exposure" published by the American Thoracic Society Medical Section of the American Lung Association, American Journal of Respiratory and Critical Care Medicine, Volume 155, pages 761-768, 1997, and see also NIOSH Hazard Review – Health Effects of Occupational Exposure to Respirable Crystalline Silica, April 2002 (see Section 7 for NIOSH Hazard Review Website).

Eye: May cause mechanical irritation and possible injury.

Skin: May cause mechanical irritation.

Sensitization: This product is not expected to cause sensitization.

Chronic: See "Inhalation" subsection above with respect to silicosis, cancer status and other data with possible relevance to human health.

Carcinogenicity: Crystalline silica is classified as an IARC Category 1, an NTP Known Human Carcinogen, and an OSHA Carcinogen. None of the other components is listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH or OSHA.

Mutagenicity: No effects expected.

Medical Conditions Aggravated by Exposure: Individuals with respiratory disease, including but not limited to asthma and bronchitis, or subject to eye irritation, should not be exposed to respirable quartz dust.

Numerical Measures of Toxicity:

Silica: LD50 oral rat >22,500 mg/kg.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Silica: LC50 carp >10,000 mg/l/72 hr

This product is not expected to present an environmental hazard.

Persistence and Degradability:

No data available

Bioaccumulative Potential: No data available

Mobility in Soil: No data available

Other Adverse Effects: None known

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal environmental regulations.

14. TRANSPORT INFORMATION

DOT Hazardous Materials Description:

Proper Shipping Name: Not Regulated

Hazard Class/Packing Group: N/A

UN Number: N/A

Labels Required: N/A

IMDG Shipping Name: Not Regulated

IMDG Hazard Class: N/A

UN Number: N/A

IMDG Hazard Labels Required: N/A

IATA Shipping Name: Not Regulated

IATA Hazard Class: N/A

UN Number: N/A

IATA Hazard Labels Required: N/A

15. REGULATORY INFORMATION

CERCLA: This product is not subject to reporting under CERCLA. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA Hazard Category (311/312): Acute Health, Chronic Health, Fire Hazard.

SARA 313: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None.

EPA TSCA Inventory: All of the ingredients in this product are listed on the EPA TSCA Inventory.

California Proposition 65: This product contains the following ingredients known to the state of California to cause cancer and/or reproductive harm: Crystalline Silica (quartz)

16. OTHER INFORMATION

NFPA Rating: Health = 1 Fire = 0 Reactivity = 0

HMIS Rating: Health = 1* Fire = 0 Reactivity = 0

Revision Summary:

4/2/13: New SDS

1/29/15: Revision 1 – Changed Emergency Contact Number

10/4/17: Revised OSHA PEL and Action Level

11/5/20: Reviewed and reapproved

NOTICE

This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide. Tradebe shall not be held liable for any damage resulting from handling or from contact with the above product. This information relates only to the product designated herein and does not relate to its use in combination with any other material or process.