

SAFETY DATA SHEET

1. Identification

Product identifier	Hi-Cal Pellets
Other means of identification	Pellet Lime. High Cal 90 Plus.
Recommended use	Soil amendment.
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Company	New Frontier Materials
Manufacturer	New Frontier Materials – Bluff City
Address	4007 College Avenue, Alton, IL 62002
Telephone	(314) 473-3434
E-mail	contact@newfrontiermaterials.com
Emergency phone number	(314) 473-3617

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Carcinogenicity	Category 1A
	Specific Target Organ Toxicity, Repeated Exposure	Category 2 (Lung)

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement May cause cancer.
May cause damage to organs (lung) through prolonged or repeated exposure.

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If exposed or concerned: Get medical advice/attention.
Storage	Store in a dry location.
Disposal	Dispose of in accordance with local/regional/federal/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information

Respirable Crystalline Silica (RCS) may cause cancer. Limestone is a naturally occurring mineral complex that contains varying quantities of quartz (crystalline silica). In its natural bulk state, limestone is not a known health hazard. Limestone may be subjected to various natural or mechanical forces that produce small particles (dust) which may contain respirable crystalline silica (particles less than 10 micrometers in aerodynamic diameter). Repeated inhalation of respirable crystalline silica (quartz) may cause lung cancer according to IARC and NTP; ACGIH states that it is a suspected cause of cancer. Other forms of RCS

(e.g., tridymite and cristobalite) may also be present or formed under certain industrial processes.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Limestone	1317-65-3	94-95
Crystalline Silica (Quartz)	14808-60-7	> 1
Calcium lignosulfonate	8061-52-7	3-4
Water	7732-18-5	2-3

4. First-aid measures

Inhalation	Pellet dust: Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Pellet dust: Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Pellet dust: Immediately flush with plenty of water for at least 15 minutes. Hold eyelids apart. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Dusts may irritate the respiratory tract, skin, and eyes. Inhaling dust may cause discomfort in the chest, shortness of breath, and coughing. Prolonged inhalation may cause chronic health effects. This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis and may cause cancer.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Pellets are not flammable. Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	No unusual fire or explosion hazards noted. Not a combustible dust.
Special protective equipment and precautions for firefighters	Use protective equipment appropriate for surrounding materials.
Fire-fighting equipment/instructions	No specific precautions.
Specific methods	Contact with powerful oxidizing agents may cause fire and/or explosions (see Section 10 of SDS).
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment and clothing during clean-up of materials that contain or may liberate dust.

Methods and materials for containment and cleaning up

Spilled material, where dust is generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust. Do not dry sweep or use compressed air for clean-up. Wetting of spilled material and/or use of respiratory protective equipment may be necessary.

Environmental precautions

Avoid discharge of fine particulate matter into drains or water courses.

7. Handling and storage

Precautions for safe handling

Respirable crystalline silica-containing dust may be generated during processing, handling, and storage. Use personal protection and controls identified in Section 8 of this SDS as appropriate.

Conditions for safe storage, including any incompatibilities

Do not store near food, beverages, or smoking materials.

8. Exposure controls/personal protection

Occupational exposure limits

U.S. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Limestone (CAS 1317-65-3)	PEL	5 mg/m ³ 15 mg/m ³	Respirable fraction Total dust

U.S. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.3 mg/m ³ 0.1 mg/m ³ 2.4 mppcf	Total dust Respirable Respirable

US. ACGIH Threshold Limit Values®

Components	Type	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Limestone (CAS 1317-65-3)	TWA	5 mg/m ³ 10 mg/m ³	Respirable Total
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.05 mg/m ³	Respirable dust

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour indoors) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	Use gloves to provide hand protection from abrasion. In dusty conditions, use long-sleeve shirts. Wash work clothes after each use.
Respiratory protection	When handling or performing work with pellets that produces dust or respirable crystalline silica in excess of applicable exposure limits, wear a NIOSH-approved respirator that is properly fitted and is in good condition. Respirators must be used in accordance with all applicable workplace regulations.
Thermal hazards	Not anticipated.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Small, round pellets
Color	White. Gray. Tan.
Odor	None.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash point	Non-combustible.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	Not applicable.
Flammability limit – upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	2.7 – 2.75 @ 73.4 °F (23 °C).
Solubility	
Solubility (water)	100 % @ 68 °F (20 °C)
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.

Explosive properties Not explosive.

10. Stability and reactivity

Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials. Avoid dust formation.

Incompatible materials Powerful oxidizers. Fluorine. Acids.

Hazardous decomposition products No hazardous decomposition products are known.

11. Toxicological information

Likely routes of exposure Inhalation and contact, leading to mechanical abrasion of the eyes and skin.

Symptoms related to the physical, chemical, and toxicological characteristics

Inhalation Dust may irritate the nose, throat, and respiratory tract. Discomfort in the chest. Shortness of breath. Coughing. Sneezing.

Symptoms of silicosis may include shortness of breath, difficulty breathing with or without exertion, coughing, diminished work capacity, diminished chest expansion, reduction of lung volume, right heart enlargement and/or failure. Silicosis increases the risk of contracting pulmonary tuberculosis.

Eye contact Irritation. Tearing. Redness. Stinging or burning feeling. Swelling with blurred vision.

Skin contact Irritation. Redness. Itching or burning feeling. Swelling. Rash.

Ingestion Not likely, due to the form of the product. However, accidental ingestions of the content may cause discomfort.

Chronic effects Prolonged or repeated overexposure to high levels of respirable crystalline silica may be harmful by causing a chronic or acute form of silicosis. There are reports in the literature suggesting that excessive respirable crystalline silica exposure may be associated with autoimmune disorders and other adverse health effects involving the kidney. In particular, the incidence of scleroderma (thickening of the skin caused by swelling and thickening of fibrous tissue) appears to be higher in silicotic individuals. To date, the evidence does not conclusively determine a causal relationship between silica exposure and these adverse health effects.

Acute toxicity Not classified. No specific data on product.

Skin corrosion/irritation Not classified.

Serious eye damage/eye irritation Not classified.

Respiratory or skin sensitization

Respiratory sensitization Not classified.

Skin sensitization Not classified.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

Respirable crystalline silica has been classified by IARC and NTP as a known human carcinogen and classified by ACGIH as a suspected human carcinogen.

Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. 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, in making the overall evaluation, IARC noted that “carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.” (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans, of the inhalation of respirable crystalline silica dust is silicosis. “There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk...” (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits.

IARC Monographs. Overall Evaluation of Carcinogenicity

Crystalline Silica (Quartz) (CAS 14808-60-7)	1 Carcinogenic to humans.
Respirable Tridymite and Cristobalite (other forms of Crystalline) (CAS Mixture)	1 Carcinogenic to humans.

NTP Report on Carcinogens

Crystalline Silica (Quartz) (CAS 14808-60-7)	Known to be human carcinogen.
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OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity

Not classified.

Specific target organ toxicity – single exposure

Not classified.

Specific target organ toxicity – repeated exposure

Respirable crystalline silica: May cause damage to organs (lung) through prolonged or repeated exposure.

Aspiration hazard

Not classified.

12. Ecological information

Ecotoxicity

This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Other adverse effects

No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. Disposal considerations

Disposal instructions Do not allow fine particulate matter to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with fine particulates. Dispose of contents in accordance with local/regional/federal/international regulations.

14. Transport information

DOT Not regulated as dangerous goods.
IATA Not regulated as dangerous goods.
IMDG Not regulated as dangerous goods.

15. Regulatory information

US federal regulations

OSHA Hazard Communication Standard (29 CFR 1910.1200)

This product is defined as a "Hazardous Chemical".

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes.

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

US state regulations

US California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.
US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance
Crystalline Silica (Quartz) (CAS 14808-60-7)

State regulatory lists

Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list or all state regulation. Therefore, the user should review the components listed in Section 2 and consult state or local authorities for specific regulations that apply.

International inventories

Product is listed on the US EPA's Toxic Substances Control Act (TSCA) Inventory.

16. Other information, including date of preparation or last revision

Revision date November 12, 2021

SDS US (GHS HazCom 2012)

To the best of our knowledge the information contained herein is correct. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these will not require responsibility on behalf of the user. Users of any chemical should satisfy themselves that the conditions and method of use assure that the chemical is used safely. No representation or warranties, either express or implied, of merchantability, fitness for a particular purpose or any other nature are made herein or the chemical to which the information refers.