SAFETY DATA SHEET

1. Identification

Product identifier **Trap Rock**

Other means of identification Aggregate, Flexible Base, Manufactured Sand

Recommended use Trap Rock is used in the manufacture of bricks, mortar, cement, concrete, plasters, paving materials, other construction materials, steel, consumer products, and other goods. Trap Rock aggregate may be distributed in bags, totes, and bulk shipments.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company	New Frontier Materials
Manufacturer	New Frontier Materials – Iron Mountain
Address	1325 Highway N, Iron Mountain MO 63650
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

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 (inhalation).

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 Restrict or control access to stockpile areas. Do not walk on stockpiles. Engulfment hazard: To prevent burial or suffocation, do not enter a confined space, such as a silo, bulk truck or other storage container or vessel that stores or contains aggregates without an effective procedure for assuring safety.

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. Trap rock is a naturally occurring mineral complex that contains varying quantities of quartz (crystalline silica). In its natural bulk state, trap rock is not a known health hazard. Trap rock 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	%
Trap rock	None	100
Crystalline Silica (Quartz)	14808-60-7	> 1

4. First-aid measures

Inhalation

Trap rock dust: Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Trap rock dust: Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Trap rock 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 or persists.

Ingestion

Trap rock dust: Rinse mouth and drink plenty of water. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms/effects, acute and delayed

Dust may irritate the eyes, skin, and respiratory tract. 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 liberated 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

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Pre-existing medical conditions that may be aggravated by exposure include disorders of the eye, skin and lung (including asthma and other breathing disorders). If addicted to tobacco, smoking will impair the ability of the lungs to clear themselves of dust.

5. Fire-fighting measures

Suitable extinguishing media

Trap rock is 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, and emergency procedures	Wear appropriate protective equipment and clothing during clean-up of materials that contain or may liberate trap rock 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

(1) Value equivalent to OSHA formulas (29 CFR 1910.1000; 29 CFR 1917; 29 CFR 1918)
(2) Value also applies to MSHA Metal / Non-Metal (1973 TLVs at 30 CFR 56/57.5001)
(3) OSHA enforces 0.250 mg/m³ in construction and shipyards (CPL-03-00-007)
(4) Value also applies to OSHA construction (29 CFR 1926.55 Appendix A) and shipyards (29 CFR 1915.1000, Table Z)
(5) MSHA limit = 10 mg/m³

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

Components	Type	Value	Form
Particulates not otherwise classified (CAS SEQ250)	PEL	5 mg/m³ 15 mg/m³	Respirable fraction Total dust (4)

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/m³ 0.1 mg/m³	Total dust (1,2) Respirable (1,2,3)
Tridymite and Cristobalite (other forms of crystalline silica) (CAS Mixture)	TWA	0.15 mg/m³ 0.05 mg/m³	Total dust (1) Respirable
Particulates not otherwise classified (CAS SEQ250)	TWA	5 mg/m³ 15 mg/m³	Respirable fraction (1) Total dust (1,4,5)

US. ACGIH Threshold Limit Values®

Components	Type	Value	Form
Crystalline Silica (all forms; CAS mixture)	TWA	0.025 mg/m³	Respirable fraction

Particulates not otherwise classified (CAS Mixture)	TWA	3 mg/m³ 10 mg/m³	Respirable particles (2) Inhalable particles (2)

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Crystalline Silica (all forms; CAS mixture)	TWA	0.05 mg/m³	Respirable dust

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

Exposure guidelines OSHA PELs, MSHA PELs, and ACGIH TLVs are 8-hr TWA values. NIOSH RELs are for TWA exposures up to 10-hr/day and 40-hr/wk. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. Terms including “Particulates Not Otherwise Classified,” “Particulates Not Otherwise Regulated,” “Particulates Not Otherwise Specified,” and “Inert or Nuisance Dust” are often used interchangeably; however, the user should review each agency’s terminology for differences in meanings.

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 trap rock 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 Angular particles ranging in size from sand to boulders.

Color Maroon to black.

Odor None.

Odor threshold 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.
Specific gravity	2.65
pH	Not applicable.
Solubility	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.
Explosive properties	Not applicable.

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 "carcinogenity 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.

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	Not expected to be harmful to aquatic organisms. Discharging trap rock dust and fines into waters may increase total suspended particulate (TSP) levels that can be harmful to certain aquatic organisms.
Persistence and degradability	Not applicable.
Bioaccumulative potential	Not applicable.
Mobility in soil	Not applicable.
Other adverse effects	No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, 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.