

## Section 1 Identification

Page E1 of E2

**INNOVATING SCIENCE**® by Aldon  
 "Cutting edge science for the classroom"  
 221 Rochester Street  
 Avon, NY 14414-9409  
 (585) 226-6177

**CHEMTREC 24 Hour Emergency  
 Phone Number (800) 424-9300**  
 For laboratory and industrial use only.  
 Not for drug, food or household use.

|                |                    |
|----------------|--------------------|
| <b>Product</b> | DIATOMACEOUS EARTH |
|----------------|--------------------|

|                 |           |
|-----------------|-----------|
| <b>Synonyms</b> | Diatomite |
|-----------------|-----------|

## Section 2 Hazards identification

**Signal word:** WARNING**Pictograms:** GHS07 / GHS08**Target organs:** Lungs, Eyes.**GHS Classification:**

STOT-SE (Category 3)

STOT-RE (Category 2)

**GHS Label information: Hazard statement(s):**

H335: May cause respiratory irritation.

H373: May cause damage to organs (*lungs*) through prolonged or repeated exposure (*inhalation*).**Precautionary statement(s):**

P260: Do not breathe dust.

P271: Use only outdoors or in a well-ventilated area.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P314: Get medical advice/attention if you feel unwell

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

**Hazards not otherwise classified:**

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

| Chemical Name  | CAS #      | %    | EINECS    |
|--|------------|------|-----------|
| Diatomaceous earth, flux calcined                      | 68855-54-9 | 100% | 272-489-0 |
| This product may contain up to 54% crystalline silica: |            |      |           |
| Cristobalite   | 14464-46-1 | <50% | 238-455-4 |
| Quartz   | 14808-60-7 | <4%  | 238-878-4 |

## Section 4 First aid measures

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.**INHALATION:** MAY CAUSE IRRITATION AND SORENESS IN THROAT AND NOSE. IN EXTREME EXPOSURES SOME CONGESTION MAY OCCUR. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.**EYE CONTACT:** TEMPORARY IRRITATION OR INFLAMMATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.**SKIN ABSORPTION:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.**Containment and Cleanup:** Minimize dust generation and accumulation. Use a dust suppressant such as water. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.



## Section 1 Identification

Page E1 of E2

**INNOVATING SCIENCE**® by Aldon  
 221 Rochester Street  
 Avon, NY 14414-9409  
 (585) 226-6177

**CHEMTREC 24 Hour Emergency  
 Phone Number (800) 424-9300**  
 For laboratory and industrial use only.  
 Not for drug, food or household use.

|                |                                   |
|----------------|-----------------------------------|
| <b>Product</b> | NEUTRALIZING MIXTURE FOR CAUSTICS |
|----------------|-----------------------------------|

|                 |               |
|-----------------|---------------|
| <b>Synonyms</b> | None assigned |
|-----------------|---------------|

## Section 2 Hazards identification

**Signal word:** WARNING  
**Pictograms:** GHS07  
**Target organs:** None known



**GHS Classification:**  
 Eye irritation (Category 2)

**GHS Label information: Hazard statement(s):**  
 H319: Causes serious eye irritation.

**Precautionary statement(s):**

P264: Avoid breathing dust.  
 P280: Wear protective gloves/protective clothing/eye protection/face protection.  
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337+P313: If eye irritation persists: Get medical advice/attention.

**Hazards not otherwise classified:**

Health hazards not otherwise classified (HHNOC) - Not Known  
 Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

| Chemical Name          | CAS #     | %     | EINECS    |
|------------------------|-----------|-------|-----------|
| Citric acid, anhydrous | 77-92-9   | 99.9% | 201-069-1 |
| Litmus powder          | 1393-92-6 | 0.1%  | 215-739-6 |

## Section 4 First aid measures

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** CAUSES IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Recover for use if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Minimize dust generation.

## Section 8 Exposure controls / personal protection

| Exposure Limits: | Chemical Name | ACGIH (TLV) | OSHA (PEL) | NIOSH (REL) |
|------------------|---------------|-------------|------------|-------------|
|                  | Citric acid   | Not listed  | Not listed | Not listed  |

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical and chemical properties

|  |  |  |
|--|--|--|
| <b>Appearance:</b> Solid. White, deliquescent crystals<br><b>Odor:</b> No odor.<br><b>Odor threshold:</b> Data not available<br><b>pH:</b> 2.2 in 0.1N aqueous solution<br><b>Melting / Freezing point:</b> 153°C (307°F)<br><b>Boiling point:</b> Data not available<br><b>Flash point:</b> Non-flammable | <b>Evaporation rate ( = 1):</b> Not applicable<br><b>Flammability (solid/gas):</b> Not applicable<br><b>Explosion limits: Lower / Upper:</b> Not applicable<br><b>Vapor pressure (mm Hg):</b> Data not available<br><b>Vapor density (Air = 1):</b> Data not available<br><b>Relative density (Specific gravity):</b> 1.665 g/cm <sup>3</sup><br><b>Solubility(ies):</b> 60 g/100 ml water | <b>Partition coefficient:</b> Data not available<br><b>Auto-ignition temperature:</b> 1010°C (1850°F)<br><b>Decomposition temperature:</b> >170°C (338°F)<br><b>Viscosity:</b> Not applicable<br><b>Molecular formula:</b> C <sub>6</sub> H <sub>8</sub> O <sub>7</sub><br><b>Molecular weight:</b> 192.13 |
|--|--|--|

## Section 10 Stability and reactivity

**Chemical stability:** Stable **Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Excessive temperature and heat. Avoid dust formation.

**Incompatible materials:** Strong bases and oxidizing materials.

**Hazardous decomposition products:** Carbon oxides.

## Section 11 Toxicological information

**Acute toxicity:** Oral-rat LD50: 12,000 mg/kg [Citric acid]

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Rabbit-highly irritating [Citric acid]

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: Inhalation may cause irritation to mucous membranes causing sore throat, coughing and shortness of breath.

Ingestion: Ingestion may cause acute gastrointestinal irritation with abdominal pain.

Skin: Contact may cause irritation.

Eyes: Contact with eyes may cause irritation with redness, pain, possible eye burns, conjunctivitis, ulceration and permanent cloudiness.

**Signs and symptoms of exposure:** Long term over-exposure may cause damage to tooth enamel.

**Additional information:** RTECS #: GE7350000 [Citric acid]

## Section 12 Ecological information

**Toxicity to fish:** Lepomis macrochirus (Fish, Fresh water) LC50: 1,516 mg/l/96 hours [Citric acid]

**Toxicity to daphnia and other aquatic invertebrates:** Daphnia magna (Crustacea) EC50: ca. 120 mg/l/72 hours [Citric acid]

**Toxicity to algae:** Scenedesmus quadricauda (Algae) EC3: 640 mg/l/7 days [Citric acid]

**Persistence and degradability:** No data available **Bioaccumulative potential:** No data available

**Mobility in soil:** No data available **PBT and vPvB assessment:** No data available

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport information

**UN/NA number:** Not applicable

**Shipping name:** Not Regulated

**Hazard class:** Not applicable

**Packing group:** Not applicable

**Reportable Quantity:** No

**Marine pollutant:** No

**Exceptions:** Not applicable

**2020 ERG Guide #:** Not applicable

## Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

| Component              | TSCA   | CERLCA (RQ) | RCRA code  | DSL    | NDSL       | CA Prop 65   |
|------------------------|--------|-------------|------------|--------|------------|--|
| Citric acid, anhydrous | Listed | Not listed  | Not listed | Listed | Not listed | This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity. |

## Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

## Section 1 Identification

Page E1 of E2

**INNOVATING SCIENCE**® by Aldon  
 "Cutting edge science for the classroom"  
 221 Rochester Street  
 Avon, NY 14414-9409  
 (585) 226-6177

**CHEMTREC 24 Hour Emergency**  
**Phone Number (800) 424-9300**  
 For laboratory and industrial use only.  
 Not for drug, food or household use.

|                |             |
|----------------|-------------|
| <b>Product</b> | VERMICULITE |
|----------------|-------------|

|                 |               |
|-----------------|---------------|
| <b>Synonyms</b> | None assigned |
|-----------------|---------------|

## Section 2 Hazards identification

Signal word: WARNING

Pictograms: GHS07

Target organs: None known



**GHS Classification:**  
 STOT-SE (Category 3)

**GHS Label information: Hazard statement(s):**  
 H335: May cause respiratory irritation.

**Precautionary statement(s):**

P261: Avoid breathing dust.

P271: Use only outdoors or in a well-ventilated area.

P304+P340: IF INHALED: Remove person to fresh air and keep in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor if you feel unwell.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

**Supplemental information:**

Avoid processes that generate excessive dust and wear appropriate dust protection equipment to minimize potential hazards from chronic inhalation hazards.

**Hazards not otherwise classified:**

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

| Chemical Name       | CAS #      | %     | EINECS        |
|---------------------|------------|-------|---------------|
| Vermiculite         | 1318-00-9  | 100%  | None assigned |
| Contains:<br>Quartz | 14808-60-7 | <0.1% | 238-878-4     |

## Section 4 First aid measures

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** MAY CAUSE IRRITATION AND SORENESS IN THROAT AND NOSE. IN EXTREME EXPOSURES SOME CONGESTION MAY OCCUR. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** TEMPORARY IRRITATION OR INFLAMMATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Minimize dust generation and accumulation. Use a dust suppressant such as water. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Minimize dust generation.

## Section 8 Exposure controls / personal protection

| Exposure Limits: | Chemical Name                         | ACGIH (TLV)                                  | OSHA (PEL) | NIOSH (REL)                            |
|------------------|---------------------------------------|--|------------|--|
|                  | Silica, crystalline, $\alpha$ -quartz | TWA: 0.025 mg/m <sup>3</sup> (A2) respirable | Not listed | TWA: 0.05 mg/m <sup>3</sup> respirable |

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical and chemical properties

|  |  |   |
|--|--|---|
| <b>Appearance:</b> Solid. Tan-brown coarse particles<br><b>Odor:</b> No odor.<br><b>Odor threshold:</b> Data not available<br><b>pH:</b> Data not available<br><b>Melting / Freezing point:</b> 1350°C (2462°F)<br><b>Boiling point:</b> Data not available<br><b>Flash point:</b> Non-flammable | <b>Evaporation rate ( = 1):</b> Data not available<br><b>Flammability (solid/gas):</b> Not applicable<br><b>Explosion limits: Lower / Upper:</b> Not applicable<br><b>Vapor pressure (mm Hg):</b> Data not available<br><b>Vapor density (Air = 1):</b> Data not available<br><b>Relative density (Specific gravity):</b> 2.5<br><b>Solubility(ies):</b> Negligible in water (<1%) | <b>Partition coefficient:</b> Data not available<br><b>Auto-ignition temperature:</b> Not applicable<br><b>Decomposition temperature:</b> Data not available<br><b>Viscosity:</b> Not applicable<br><b>Molecular formula:</b> Mixture<br><b>Molecular weight:</b> Mixture |
|--|--|---|

## Section 10 Stability and reactivity

**Chemical stability:** Stable  
**Conditions to avoid:** None in designed use.  
**Incompatible materials:** Hydrofluoric acid.  
**Hazardous decomposition products:** None known. Toxic silicon tetrafluoride gas will result with contact with hydrofluoric acid.  
**Hazardous polymerization:** Will not occur.

## Section 11 Toxicological information

**Acute toxicity:** Data not available  
**Skin corrosion/irritation:** Data not available  
**Serious eye damage/irritation:** Data not available  
**Respiratory or skin sensitization:** Data not available  
**Germ cell mutagenicity:** Data not available  
**Carcinogenicity:** This product contains less than 0.1% crystalline silica, and few particles of respirable size, hence present very low risk.  
 NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
 IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
 OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.  
 Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.  
**Reproductive toxicity:** Data not available  
**STOT-single exposure:** The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory effects.  
**STOT-repeated exposure:** Data not available  
**Aspiration hazard:** Data not available  
**Potential health effects:**  
 Inhalation: May be harmful if inhaled over long periods.  
 Ingestion: No hazard expected.  
 Skin: No hazard expected.  
 Eyes: Transient irritation.  
**Signs and symptoms of exposure:** This product contains crystalline silica, which is considered to be a hazard by inhalation. Crystalline silica is also a known cause of silicosis, a non-cancerous lung disease. Symptoms may include coughing from excess inhalation and eye irritation from dust particles.  
**Additional information: RTECS #:** Not listed

## Section 12 Ecological information

**Toxicity to fish:** No data available  
**Toxicity to daphnia and other aquatic invertebrates:** No data available  
**Toxicity to algae:** No data available  
**Persistence and degradability:** No data available  
**Mobility in soil:** No data available  
**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
**Bioaccumulative potential:** No data available  
**PBT and vPvB assessment:** No data available

## Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport information

**UN/NA number:** Not applicable  
**Hazard class:** Not applicable  
**Exceptions:** Not applicable  
**Shipping name:** Not Regulated  
**Packing group:** Not applicable  
**2020 ERG Guide #:** Not applicable  
**Reportable Quantity:** No  
**Marine pollutant:** No

## Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

| Component   | TSCA   | CERLCA (RQ) | RCRA code  | DSL        | NDSL       | CA Prop 65   |
|-------------|--------|-------------|------------|------------|------------|--|
| Vermiculite | Listed | Not listed  | Not listed | Not listed | Not listed | This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity. |

## Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

## Section 1 Identification

Page E1 of E2

# INNOVATING SCIENCE® by Aldon

"Cutting edge science for the classroom"

221 Rochester Street  
Avon, NY 14414-9409  
(585) 226-6177

**CHEMTREC 24 Hour Emergency**  
**Phone Number (800) 424-9300**  
For laboratory and industrial use only.  
Not for drug, food or household use.

|                |                                       |
|----------------|---------------------------------------|
| <b>Product</b> | <b>NEUTRALIZING MIXTURE FOR ACIDS</b> |
|----------------|---------------------------------------|

|                 |               |
|-----------------|---------------|
| <b>Synonyms</b> | None assigned |
|-----------------|---------------|

## Section 2 Hazards identification

**Signal word:** DANGER**Pictograms:** GHS05**Target organs:** None known**GHS Classification:**

Skin irritation (Category 2)

Eye damage (Category 1)

**GHS Label information: Hazard statement(s):**

H315: Causes skin irritation.

H318: Causes serious eye damage.

**Precautionary statement(s):**

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P332+P313: If skin irritation occurs: Get medical advice/attention.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor/physician.

P362+P364: Take off contaminated clothing and wash before reuse.

**Hazards not otherwise classified:**

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

| Chemical Name               | CAS #      | %   | EINECS    |
|-----------------------------|------------|-----|-----------|
| Calcium hydroxide           | 1305-62-0  | 50% | 215-137-3 |
| Sodium carbonate, anhydrous | 497-19-8   | 33% | 207-838-8 |
| Calcium carbonate           | 1317-65-3  | 16% | 215-279-6 |
| Litmus powder               | 1393-92-6  | 1%  | 215-739-6 |
| May contain:                |            |     |           |
| Quartz                      | 14808-60-7 |     | 238-878-4 |

## Section 4 First aid measures

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** CAUSES IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY CAUSE IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Recover for use if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Minimize dust generation.

## Section 8 Exposure controls / personal protection

| Exposure Limits: | Chemical Name     | ACGIH (TLV)              | OSHA (PEL)                                   | NIOSH (REL)              |
|------------------|-------------------|--------------------------|--|--------------------------|
|                  | Calcium hydroxide | TWA: 5 mg/m <sup>3</sup> | TWA: 5 mg/m <sup>3</sup> Respirable fraction | TWA: 5 mg/m <sup>3</sup> |

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical and chemical properties

|   |   |  |
|---|---|--|
| <b>Appearance:</b> Solid. White powder with purple specks | <b>Evaporation rate ( = 1):</b> Data not available            | <b>Partition coefficient:</b> Data not available     |
| <b>Odor:</b> No odor.                                     | <b>Flammability (solid/gas):</b> Data not available           | <b>Auto-ignition temperature:</b> Data not available |
| <b>Odor threshold:</b> Data not available                 | <b>Explosion limits: Lower / Upper:</b> Data not available    | <b>Decomposition temperature:</b> Data not available |
| <b>pH:</b> Data not available                             | <b>Vapor pressure (mm Hg):</b> Data not available             | <b>Viscosity:</b> Not applicable                     |
| <b>Melting / Freezing point:</b> Data not available       | <b>Vapor density (Air = 1):</b> Data not available            | <b>Molecular formula:</b> Mixture                    |
| <b>Boiling point:</b> Data not available                  | <b>Relative density (Specific gravity):</b> Approximately 2.6 | <b>Molecular weight:</b> Mixture                     |
| <b>Flash point:</b> Non-flammable                         | <b>Solubility(ies):</b> Approximately 20% in water            |  |

## Section 10 Stability and reactivity

**Chemical stability:** Stable

**Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Absorbs CO<sub>2</sub> from air to form calcium carbonate. Avoid moisture and humidity.

**Incompatible materials:** Acids, fluorine. Contact with water may produce a corrosive caustic soda.

**Hazardous decomposition products:** Contact with acids will produce carbon dioxide that can be hazardous by inhalation when allowed to build up in a confined space.

## Section 11 Toxicological information

**Acute toxicity:** Oral-rat LD50: 7,340 mg/kg [Calcium hydroxide] ; Oral-rat LD50: 4,090 mg/kg [Sodium carbonate] ; Inhalation-rat LC50: 2,300 mg/m<sup>3</sup>/2H [Sodium carbonate]

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Rabbit-severe [Calcium hydroxide]

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ca Prop 65: ⚠️ WARNING! This product can expose you to a chemical, crystalline silica, which is known to the State of California to cause cancer.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: Causes respiratory tract irritation, characterized by coughing, choking and shortness of breath.

Ingestion: Causes severe irritation and possible corrosion of the digestive tract.

Skin: Causes moderate to severe skin irritation. May cause skin sensitization.

Eyes: Causes severe irritation to eyes with possible burns and irreversible damage.

**Signs and symptoms of exposure:** Exercise appropriate procedures to minimize potential hazards.

**Additional information: RTECS #:** EW2800000 [Calcium hydroxide]

## Section 12 Ecological information

**Toxicity to fish:** Gambusia affinis (Fish, Fresh water) LC50: 160 mg/l/96 hours [Calcium hydroxide]

**Toxicity to daphnia and other aquatic invertebrates:** Daphnia magna (Crustacea) EC50: 265 mg/l/48 hours [Sodium carbonate]

**Toxicity to algae:** Nitzschia sp. (Algae) EC50: 242 mg/l/5 days [Sodium carbonate]

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**PBT and vPvB assessment:** No data available

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport information

**UN/NA number:** Not applicable

**Shipping name:** Not Regulated

**Hazard class:** Not applicable

**Packing group:** Not applicable

**Reportable Quantity:** No

**Marine pollutant:** No

**Exceptions:** Not applicable

**2020 ERG Guide #:** Not applicable

## Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

| Component                   | TSCA   | CERLCA (RQ) | RCRA code  | DSL    | NDSL       | CA Prop 65                                      |
|-----------------------------|--------|-------------|------------|--------|------------|---|
| Calcium hydroxide           | Listed | Not listed  | Not listed | Listed | Not listed | ⚠️ WARNING -Cancer -<br>www.P65Warnings.ca.gov. |
| Sodium carbonate, anhydrous | Listed | Not listed  | Not listed | Listed | Not listed |   |
| Calcium carbonate           | Listed | Not listed  | Not listed | Listed | Not listed |   |

## Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.



## Section 1 Identification

Page E1 of E2

**INNOVATING SCIENCE**® by Aldon  
 "Cutting edge science for the classroom"  
 221 Rochester Street  
 Avon, NY 14414-9409  
 (585) 226-6177

**CHEMTREC 24 Hour Emergency**  
**Phone Number (800) 424-9300**  
 For laboratory and industrial use only.  
 Not for drug, food or household use.

|                |             |
|----------------|-------------|
| <b>Product</b> | VERMICULITE |
|----------------|-------------|

|                 |               |
|-----------------|---------------|
| <b>Synonyms</b> | None assigned |
|-----------------|---------------|

## Section 2 Hazards identification

Signal word: WARNING

Pictograms: GHS07

Target organs: None known



GHS Classification:

STOT-SE (Category 3)

GHS Label information: Hazard statement(s):

H335: May cause respiratory irritation.

**Precautionary statement(s):**

P261: Avoid breathing dust.

P271: Use only outdoors or in a well-ventilated area.

P304+P340: IF INHALED: Remove person to fresh air and keep in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor if you feel unwell.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

**Supplemental information:**

Avoid processes that generate excessive dust and wear appropriate dust protection equipment to minimize potential hazards from chronic inhalation hazards.

**Hazards not otherwise classified:**

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

| Chemical Name       | CAS #      | %     | EINECS        |
|---------------------|------------|-------|---------------|
| Vermiculite         | 1318-00-9  | 100%  | None assigned |
| Contains:<br>Quartz | 14808-60-7 | <0.1% | 238-878-4     |

## Section 4 First aid measures

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** MAY CAUSE IRRITATION AND SORENESS IN THROAT AND NOSE. IN EXTREME EXPOSURES SOME CONGESTION MAY OCCUR. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** TEMPORARY IRRITATION OR INFLAMMATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Minimize dust generation and accumulation. Use a dust suppressant such as water. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Minimize dust generation.

## Section 8 Exposure controls / personal protection

| Exposure Limits: | Chemical Name                         | ACGIH (TLV)                                  | OSHA (PEL) | NIOSH (REL)                            |
|------------------|---------------------------------------|--|------------|--|
|                  | Silica, crystalline, $\alpha$ -quartz | TWA: 0.025 mg/m <sup>3</sup> (A2) respirable | Not listed | TWA: 0.05 mg/m <sup>3</sup> respirable |

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical and chemical properties

|  |  |  |
|--|--|--|
| <b>Appearance:</b> Solid. Tan-brown coarse particles | <b>Evaporation rate ( = 1):</b> Data not available     | <b>Partition coefficient:</b> Data not available     |
| <b>Odor:</b> No odor.                                | <b>Flammability (solid/gas):</b> Not applicable        | <b>Auto-ignition temperature:</b> Not applicable     |
| <b>Odor threshold:</b> Data not available            | <b>Explosion limits: Lower / Upper:</b> Not applicable | <b>Decomposition temperature:</b> Data not available |
| <b>pH:</b> Data not available                        | <b>Vapor pressure (mm Hg):</b> Data not available      | <b>Viscosity:</b> Not applicable                     |
| <b>Melting / Freezing point:</b> 1350°C (2462°F)     | <b>Vapor density (Air = 1):</b> Data not available     | <b>Molecular formula:</b> Mixture                    |
| <b>Boiling point:</b> Data not available             | <b>Relative density (Specific gravity):</b> 2.5        | <b>Molecular weight:</b> Mixture                     |
| <b>Flash point:</b> Non-flammable                    | <b>Solubility(ies):</b> Negligible in water (<1%)      |  |

## Section 10 Stability and reactivity

**Chemical stability:** Stable

**Hazardous polymerization:** Will not occur.

**Conditions to avoid:** None in designed use.

**Incompatible materials:** Hydrofluoric acid.

**Hazardous decomposition products:** None known. Toxic silicon tetrafluoride gas will result with contact with hydrofluoric acid.

## Section 11 Toxicological information

**Acute toxicity:** Data not available

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Data not available

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** This product contains less than 0.1% crystalline silica, and few particles of respirable size, hence present very low risk.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory effects.

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: May be harmful if inhaled over long periods.

Ingestion: No hazard expected.

Skin: No hazard expected.

Eyes: Transient irritation.

**Signs and symptoms of exposure:** This product contains crystalline silica, which is considered to be a hazard by inhalation. Crystalline silica is also a known cause of silicosis, a non-cancerous lung disease. Symptoms may include coughing from excess inhalation and eye irritation from dust particles.

**Additional information: RTECS #:** Not listed

## Section 12 Ecological information

**Toxicity to fish:** No data available

**Toxicity to daphnia and other aquatic invertebrates:** No data available

**Toxicity to algae:** No data available

**Persistence and degradability:** No data available

**Bioaccumulative potential:** No data available

**Mobility in soil:** No data available

**PBT and vPvB assessment:** No data available

**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport information

**UN/NA number:** Not applicable

**Shipping name:** Not Regulated

**Hazard class:** Not applicable

**Packing group:** Not applicable

**Reportable Quantity:** No

**Marine pollutant:** No

**Exceptions:** Not applicable

**2020 ERG Guide #:** Not applicable

## Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

| Component   | TSCA   | CERLCA (RQ) | RCRA code  | DSL        | NDSL       | CA Prop 65   |
|-------------|--------|-------------|------------|------------|------------|--|
| Vermiculite | Listed | Not listed  | Not listed | Not listed | Not listed | This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity. |

## Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.