


SAFETY DATA SHEET

1. Identification

| | | |
|---|---|--|
| Product identifier | VitaCal ® H Food Codex Grade Calcium Hydroxide | |
| Other means of identification | None. | |
| Recommended use | For all direct and indirect food contact applications of calcium hydroxide by 21 CFR 184.1205 and related global regulations. | |
| Recommended restrictions | None known. | |
| Manufacturer/Importer/Supplier/Distributor information | | |
| Manufacturer: | Silver Fern Chemical, Inc. | |
| Address: | 2226 Queen Anne Avenue North Seattle, WA 98109, USA / PH: 866-282-3384 | |
| 24 Hour Emergency Contact Number: | Infotrac: 800-535-5053 Outside USA & Canada: 352-323-3500 | |

2. Hazard(s) identification

| | | |
|------------------------------|---|---|
| Physical hazards | Not classified. | |
| Health hazards | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 1 |
| | Specific target organ toxicity, single exposure | Category 3 respiratory tract irritation |
| Environmental hazards | Hazardous to the aquatic environment, acute hazard | Category 3 |
| OSHA defined hazards | Not classified. | |
| Label elements |  | |

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| Signal word | Danger |
| Hazard statement | Causes skin irritation. Causes serious eye damage. May cause respiratory irritation. Harmful to aquatic life. |
| Precautionary statement | |
| Prevention | Avoid breathing dust. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. |
| Response | If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. |
| Storage | Store in a well-ventilated place. Keep container tightly closed. Store locked up. |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Hazard(s) not otherwise classified (HNOC) | None known. |
| Supplemental information | None. |

3. Composition/information on ingredients

Mixtures

| Chemical name | CAS number | % |
|-------------------|------------|----------|
| Calcium hydroxide | 1305-62-0 | 97 - 100 |

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|---|---|
| Composition comments | All concentrations are in percent by weight. Components not listed are either non-health-hazardous or are below reportable limits. |
| 4. First-aid measures | |
| Inhalation | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. |
| Skin contact | Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse. |
| Eye contact | Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately. |
| Ingestion | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. |
| Most important symptoms/effects, acute and delayed | Skin irritation. May cause redness and pain. Dermatitis. Rash. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Coughing. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. 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 | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). |
| Unsuitable extinguishing media | None known. |
| Specific hazards arising from the chemical | During fire, gases hazardous to health may be formed. |
| Special protective equipment and precautions for firefighters | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| Fire fighting equipment/instructions | Use water spray to cool unopened containers. Move containers from fire area if you can do so without risk. |
| Specific methods | Use standard firefighting procedures and consider the hazards of other involved materials. |
| General fire hazards | Product is nonflammable and does not support combustion. |
| 6. Accidental release measures | |
| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| Methods and materials for containment and cleaning up | Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. Prevent product from entering drains. Stop the flow of material, if this is without risk. Large Spills: Wet down with water and dike for later disposal. Absorb in vermiculite, dry sand or earth and place into containers. Shovel the material into waste container. Following product recovery, flush area with water. Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. |
| Environmental precautions | Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

Precautions for safe handling

Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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

| Components | Type | Value | Form |
|-----------------------------------|------|----------------------|----------------------|
| Calcium hydroxide (CAS 1305-62-0) | PEL | 5 mg/m ³ | Respirable fraction. |
| | | 15 mg/m ³ | Total dust. |

US. ACGIH Threshold Limit Values

| Components | Type | Value |
|-----------------------------------|------|---------------------|
| Calcium hydroxide (CAS 1305-62-0) | TWA | 5 mg/m ³ |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value | Form |
|---|------|----------------------|-------------|
| Calcium carbonate, synthetic (CAS 471-34-1) | TWA | 5 mg/m ³ | Respirable. |
| | | 10 mg/m ³ | Total |
| Calcium hydroxide (CAS 1305-62-0) | TWA | 5 mg/m ³ | |

Biological limit values

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

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) 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. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear chemical splash goggles.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Skin protection

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

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

Powder.

Color

White.

Odor

None.

Odor threshold

Not available.

pH

12.5 In aqueous solution or slurry form

| | |
|---|------------------|
| Melting point/freezing point | Not available. |
| Initial boiling point and boiling range | Not available. |
| Flash point | Does not flash |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Non flammable. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Vapor pressure | Not available. |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | |
| Solubility (water) | 1.7 g/l (25 °C) |
| Solubility (solvents) | None |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Does not ignite. |
| Decomposition temperature | 1004 °F (540 °C) |
| Viscosity | Not available. |
| Other information | |
| Explosive properties | Not explosive. |
| Oxidizing properties | Not oxidizing. |

10. Stability and reactivity

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| Reactivity | Reacts violently with strong acids. |
| Chemical stability | Material is stable under normal conditions. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials. Do not mix with other chemicals. |
| Incompatible materials | Acids. Phosphorus. Maleic anhydride. Nitroethane. Nitromethane. Nitroparaffins. Nitropropane. |
| Hazardous decomposition products | No hazardous decomposition products are known. |

11. Toxicological information

Information on likely routes of exposure

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| Inhalation | Dust may irritate respiratory system. Prolonged inhalation may be harmful. |
| Skin contact | Causes skin irritation. |
| Eye contact | Causes serious eye damage. |
| Ingestion | Causes digestive tract burns. |

Symptoms related to the physical, chemical and toxicological characteristics Skin irritation. May cause redness and pain. Dermatitis. Rash. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Dusts may irritate the respiratory tract, skin and eyes. Coughing.

Information on toxicological effects

Acute toxicity Not expected to be acutely toxic. This product is GRAS (Generally Recognized As Safe) for its intended uses.

| Components | Species | Test Results |
|---|--|--------------|
| Calcium carbonate, synthetic (CAS 471-34-1) | | |
| Acute | | |
| Oral | | |
| LD50 | Rat | 6450 mg/kg |
| Calcium hydroxide (CAS 1305-62-0) | | |
| Acute | | |
| Oral | | |
| LD50 | Rat | 7340 mg/kg |
| Skin corrosion/irritation | Causes skin irritation. | |
| Serious eye damage/eye irritation | Causes serious eye damage. | |
| Respiratory or skin sensitization | | |
| Respiratory sensitization | Not a respiratory sensitizer. | |
| Skin sensitization | This product is not expected to cause skin sensitization. | |
| Germ cell mutagenicity | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. | |
| Carcinogenicity | Not classifiable as to carcinogenicity to humans. | |
| IARC Monographs. Overall Evaluation of Carcinogenicity | | |
| Not listed. | | |
| NTP Report on Carcinogens | | |
| Not listed. | | |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) | | |
| Not regulated. | | |
| Reproductive toxicity | This product is not expected to cause reproductive or developmental effects. | |
| Specific target organ toxicity - single exposure | May cause respiratory irritation. | |
| Specific target organ toxicity - repeated exposure | Not classified. | |
| Aspiration hazard | Not an aspiration hazard. | |
| Chronic effects | Prolonged inhalation may be harmful. | |

12. Ecological information

| Components | Species | Test Results |
|---|---|---|
| Ecotoxicity | | |
| Harmful to aquatic life. | | |
| Calcium carbonate, synthetic (CAS 471-34-1) | | |
| Aquatic | | |
| <i>Acute</i> | | |
| Fish | LC50 | Western mosquitofish (<i>Gambusia affinis</i>) > 56000 mg/l, 96 Hours |
| Calcium hydroxide (CAS 1305-62-0) | | |
| Aquatic | | |
| <i>Acute</i> | | |
| Fish | LC50 | Zambezi barbel (<i>Clarias gariepinus</i>) 33.9 mg/l, 96 hours |
| Persistence and degradability | The product contains inorganic compounds for which biodegradability is not applicable. | |
| Bioaccumulative potential | No data available. | |
| Mobility in soil | This product is slightly water soluble and may disperse in soil. | |
| 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 component. | |

13. Disposal considerations

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|------------------------------|--|
| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. |
|------------------------------|--|

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| Local disposal regulations | Dispose in accordance with all applicable regulations. |
| Hazardous waste code | The waste code should be assigned in discussion between the user, the producer and the waste disposal company. D002: Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel] |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| Contaminated packaging | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. |

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
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 California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. Massachusetts RTK - Substance List

Calcium hydroxide (CAS 1305-62-0)

US. New Jersey Worker and Community Right-to-Know Act

Calcium hydroxide (CAS 1305-62-0)

US. Pennsylvania Worker and Community Right-to-Know Law

Calcium hydroxide (CAS 1305-62-0)

US. Rhode Island RTK

Calcium hydroxide (CAS 1305-62-0)

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| Taiwan | Taiwan Chemical Substance Inventory (TCSI) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date 11-October-2017

Revision date -

Version # 01

HMIS® ratings Health: 3
Flammability: 0
Physical hazard: 0

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