

Product Name: @ease® SmartChlor® Cartridge

Revision Date: October 1, 2016 Revision: 1

Supersedes: Rev 0, 05/21/2015

1. Identification

**Product Identifier:** @ease® SmartChlor® Cartridge

Other Means of Identification: 1,3-dichloro-5,5-dimethylhydantoin

**Recommended Use:** Spa and hot tub sanitizer

**Supplier:** King Technology, Inc.

530 11th Ave S, Hopkins, MN USA

Phone (952) 933-6118

**EPA Registration Number:** 53735-14

Emergency Telephone: Chemtrec (800) 424-9300

2. Hazards identification

GHS Classification: Eye Damage: Category 1

Skin Irritation: Category 1 Oxidizing Solids: Category 2

Specific Target Organ Toxicity (Single Exposure): Category 3

Acute Toxicity (Inhalation): Category 4 Acute Toxicity (Oral): Category 4 Acute Toxicity (Dermal): Category 4

**GHS Label Elements:** 

– Signal Word: DANGER

- Pictograms:



- Hazard Statements: Causes severe skin burns and eye damage

May intensify fire; oxidizer May cause respiratory irritation

Harmful if inhaled Harmful if swallowed Harmful in contact with skin

- Precautionary Statements: Keep away from heat.

Keep away from clothing or other combustible materials. Take any precaution to avoid mixing with combustibles. In case of fire: Use large amounts of water to extinguish.

Do not breathe dusts or mists.

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing, and eye and face protection.

Wash exposed areas thoroughly after handling. Do not eat, drink or smoke when using this product.

In in eyes: Rinse cautiously with water for several minutes. Remove contact



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lenses, if present and easy to do. Continue rinsing.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin

with water.

Immediately call a poison center or doctor.

Specific treatment (see First-aid Measures on this safety data sheet).

Take off contaminated clothing and wash it before reuse.

Store locked up in a well-ventilated place. Keep container tightly closed.

Dispose of contents and container in accordance with

local/regional/national/international regulations.

Unclassified Hazards: None

Percentage of Ingredients with

**Unknown Toxicity:** 

Zero

3. Composition / Information on Ingredients							
Components CAS  Weight %  ACGIH-TLV Data OSHA (PEL) D							
1,3-dichloro-5,5-dimethylhydantoin 118-52-5	81.1	0.2 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>				
1,3-dichloro-5-ethyl-5-methylhydantoin 89415-87-2	16.1	NE	NE				

### 4. First-aid Measures

**Eye contact:** Hold eye open and rinse slowly and gently with water for 15-20 minutes.

Remove contact lenses, if present, after the first 5 minutes then continue rinsing the eye. Immediately call a poison control center or doctor for treatment

advice.

**Skin contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for

15-20 minutes. Immediately call a doctor for treatment advice.

**Inhalation:** Move person to fresh air. If person is not breathing call 911 or an ambulance,

then give artificial respiration, preferably mouth-to-mouth, if breathing is difficult, give oxygen. Immediately call a poison control center or doctor for

further treatment advice.

**Ingestion:** Call poison control center or doctor immediately for treatment advice. Drink

plenty of water in small gulps. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an

unconscious person.

Most Important Symptoms, Acute and Delayed:

Causes severe skin burns and eye damage. May cause respiratory irritation.

Harmful if inhaled, swallowed, or in contact with skin.

**Immediate Medical Attention** 

Required:

If in eyes, immediately call a poison center or doctor. Otherwise, get medical

attention if you feel unwell.



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### 5. Fire-fighting Measures

**General hazard:** In large fires fueled by other materials, this product may smolder for prolonged

periods emitting a dense black smoke. Any spilled material should be considered contaminated. Neutralize to a non-oxidizing material for safe disposal. Material which appears undamaged except for being damp on the outside should be opened and inspected immediately. If the material is damp,

it should be neutralized to a non-oxidizing material for safe disposal.

Suitable Extinguishing Media: In case of fire or smoke, call the fire department. Do not attempt to extinguish

the fire without a self-contained breathing apparatus (SCBA). Do not let the

fire burn. Flood with copious amounts of water.

**Unsuitable Extinguishing** 

Media:

DO NOT use ABC or other dry chemical extinguishers since there is the

potential for a violent reaction.

**Special Protective Equipment and Precautions for Fire-**

fighters:

Fires fueled by other materials may release hydrogen bromide, bromine, hydrogen chloride or chlorine. Wear self-contained breathing apparatus. Ammonium phosphate (ABC) fire extinguishers should not be used.

**Specific Hazards Arising From** 

the Chemical:

A dust explosion severity determination was performed using the Hartmann Dust Explosibility Bomb designed at the U.S. Bureau of Mines. The product was determined not to be ignitable.

# 6. Accidental Release Measures

Personal Precautions: Using appropriate protective clothing and safety equipment, contain spilled

material.

Methods for Cleaning Up: Do not add water to spilled material. Using clean dedicated equipment, sweep

and scoop all spilled material, contaminated soil, and other contaminated material and place into clean dry containers for disposal. Do not use floor sweeping compounds to clean up spills. Do not close containers containing wet or damp material. They should be left open to disperse any hazardous gases that may form. Do not transport wet or damp material. Keep product out of sewers, watersheds and water systems. Do not contaminate water, food, or feed by storage, disposal or cleaning of equipment. Dispose of according to

local, state and federal regulations.

#### 7. Handling and Storage

**Handling:** STRONG OXIDIZING AGENT: Do not mix with other chemicals. Mix only with

water. Never add water to product. Always add product to large quantities of water. Use clean dry utensils. Do not add this product to any dispensing device containing remnants of any other product. Such use may cause a violent reaction leading to fire or explosion. Contamination with moisture, organic matter or other chemicals will start a chemical reaction and generate heat, hazardous gas, possible fire and explosion. In case of contamination or decomposition, do not reseal container. If possible, isolate container in open

air or well ventilated area. Flood area with large volumes of water.



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**Storage:** Keep this product in original closed container when not in use. Store in a cool,

dry, well ventilated area away from heat or open flame. Do not contaminate water, food or feed by storage or disposal or cleaning of equipment. Do not

store above 125 F (52 C).

8. Exposure Controls / Personal Protection

**Exposure Limits:** See Section 3.

Appropriate Engineering General

**Controls:** 

General room ventilation plus local exhaust should be used to minimize

exposure to dust/vapors.

Personal protective equipment:

- Respiratory protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2

requirements must be followed whenever workplace conditions warrant a

respirator's use.

**– Hand protection:** Wear rubber gloves when handling this product. Avoid contact with skin.

Eye protection: Wear goggles or safety glasses with side shields when handling this product.

Skin and body protection:
 Wear rubber gloves when handling this product. Avoid contact with skin.

**Hygiene measures:** Remove and wash contaminated clothing before reuse.

Other Precautions: Facilities using or storing this material should be equipped with an eyewash

and safety shower.

9. Physical and Chemical Properties

Appearance: White granules Odor: Not available Odor threshold: Not available Not available Melting point / range: **Boiling point / range:** Not available Flash point: Not available Not available **Evaporation rate:** Flammability: Not available Vapor pressure: Not available Vapor density: Not available **Bulk density:** Not available Solubility in water: Not available Specific gravity: Not available pH: Not available Flammability limits: Not available Partition coefficient: Not available **Auto-ignition temperature:** Not available Not available **Decomposition temperature:** Viscosity: Not available



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### 10. Stability and Reactivity

**Reactivity:** Not reactive under normal conditions.

Stability: This product is stable under normal conditions

**Incompatible materials:** Avoid contact with water on concentrated material in the container. Avoid

contact with easily oxidizable material; ammonia, urea, or similar nitrogen containing compounds; inorganic reducing compounds; floor sweeping compounds; calcium hypochlorite; other swimming pool/spa chemicals in their

concentrated form; alkalis. Avoid contact with all other chemicals.

**Conditions to avoid:** High temperature. Poor ventilation. Contamination. Moisture / high humidity.

Hazardous decomposition

products:

Hydrogen bromide, bromine, hydrogen chloride, chlorine.

Possibility of hazardous

reactions:

Hazardous polymerization will not occur under normal conditions.

#### 11. Toxicological Information

Acute toxicity: No data available

**Carcinogenicity:** This product is not listed as a carcinogen by IARC.

This product is not listed as a carcinogen by NTP. This product is not listed as a carcinogen by OSHA

### 12. Ecological Information

**Ecotoxicological Information:** This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent

containing this product into lakes, streams, ponds or estuaries, oceans, or their waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water

Board or Regional Office of the EPA.

### 13. Disposal Considerations

Waste disposal: Use or reuse if possible. Pesticide wastes are toxic. Improper disposal of

excess pesticide or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, Contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance. Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. Contact with incompatible materials could cause a reaction or fire. The user of the material has the



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responsibility to dispose of unused material, residues, and containers in compliance with all relevant local, state, and federal laws and regulations

regarding treatment, storage, and disposal of hazardous waste.

**Empty container:** Do not reuse container. Rinse thoroughly before discarding in trash.

### 14. Transportation Information

DOT:

Proper shipping name: Oxidizing Solid, N.O.S. (1,3-dichloro-5,5-dimethylhydantoin)

Primary hazard class:
UN/NA Number:
Packing group
II

### 15. Regulatory Information

**EPA FIFRA Information:** This chemical is a pesticide product registered by the Environmental

Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as

required on the pesticide label:

**DANGER** 

Corrosive. Causes irreversible eye and skin damage. May be fatal if swallowed. Irritating to nose and throat. Avoid breathing dust and fumes. Do not get in eyes, on skin or on clothing. Wear goggles or safety glasses and rubber gloves when handling product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

USA:

- Sara (311, 312) hazard class: This product or its components are not listed.

CERCLA: This product or its components are not listed.

TSCA Regulatory: This product or its components are not subject to export notification.
 TSCA Status: This product or its components are listed on the TSCA Inventory.

- **OSHA Hazard Comm. Rule:** Product is hazardous by definition of the Hazardous Communication Standard.

- Clean Water Act: Not listed

FIFRA: This product is a registered pesticide.

- SDWA: Not listed

Clean Air Act:40 CFR Part 68 – Not listed

**State Regulations:** Proposition 65 statement: This product or its components are not listed on any

Proposition 65 lists of carcinogens or reproductive toxicants.

### 16. Other information

Date of preparation: October 1, 2016

#### Details of change from previous version:

Updated Corporate Logo



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Factors pertaining to certain conditions of storage, handling, and/or use of this product may involve other or additional safety considerations. This information is given without a warranty or guarantee. No suggestions for use are intended or shall be construed as a recommendation to infringe any existing patents or violate any Federal, State or local laws. Safe handling and use is the responsibility of the customer. Read the label before using this product. This information is true and accurate to the best of our knowledge.

King Technology, Inc. 530 11<sup>th</sup> Ave S Prepared by:

Hopkins, MN 55343 USA Phone (952) 933-6118

End of safety data sheet



Product Name: FROG® Jump Start
Revision Date: October 1, 2016
Supersedes: Rev 2, 05/20/2015

October 1, 2016 Revision: 3 Rev 2, 05/20/2015

#### 1. Identification

Product Identifier: FROG® Jump Start

Other Means of Identification: Sodium dichloroisocyanurate; NaDCCA Dichlor; Sodium dichloro-s-

triazinetrione; Chloroisocyanurate

**Recommended Use:** Swimming pools, spas, hot tubs disinfectant; spa and hot tub shock

Supplier: King Technology, Inc

530 11th Ave S, Hopkins, MN 55343, USA

Phone (952) 933-6118

**EPA Registration Number:** 53735-12

Emergency Telephone: Chemtrec (800) 424-9300

#### 2. Hazards Identification

GHS Classification: Eye Damage: Category 1

Skin Irritation: Category 2 Oxidizing Solids: Category 2

Specific Target Organ Toxicity (Single Exposure): Category 3

Acute Toxicity (Inhalation): Category 4
Acute Toxicity (Oral): Category 4
Acute Toxicity (Dermal): Category 4

**GHS Label Elements:** 

– Signal Word: DANGER

- Pictograms:



Hazard Statements: Causes serious eye damage

Causes skin irritation May intensify fire; oxidizer May cause respiratory irritation

Harmful if inhaled Harmful if swallowed Harmful in contact with skin

- Precautionary Statements: Keep away from heat.

Keep away from clothing or other combustible materials. Take any precaution to avoid mixing with combustibles. In case of fire: Use large amounts of water to extinguish.

Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing, and eye and face protection.

Wash exposed areas thoroughly after handling. Do not eat, drink or smoke when using this product.

In in eyes: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.



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Revision: 3

Immediately call a poison center or doctor.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

Call a poison center or doctor if you feel unwell.

If swallowed: Call a poison center or doctor if you feel unwell.

Rinse mouth.

If on skin: Wash with plenty of water.

If skin irritation occurs: Get medical attention. Call a poison center or doctor if you feel unwell.

Specific treatment (see First-aid Measures on this safety data sheet).

Take off contaminated clothing and wash it before reuse.

Store locked up in a well-ventilated place. Keep container tightly closed.

Dispose of contents and container in accordance with

local/regional/national/international regulations.

Unclassified Hazards:

Percentage of Ingredients with

**Unknown Toxicity:** 

Zero

None

3. Composition / Information on Ingredients						
Components CAS	Weight %	ACGIH-TLV Data	OSHA (PEL) Data			
Sodium dichloroisocyanurate 2893-78-9	33.3	Not Established	Not Established			
Citric acid 77-92-9	35.5	10 mg/m3 total dust	15 mg/m3 total dust			
Inerts	31.2					

The specific chemical identities have been withheld as trade secrets.

#### 4. First-aid Measures

**Eye contact:** Hold eye open and rinse slowly and gently with water for 15-20 minutes.

Remove contact lenses, if present, after the first 5 minutes then continue rinsing the eye. Immediately call a poison control center or doctor for treatment

advice.

**Skin contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for

15-20 minutes. If irritation persists, call a doctor for treatment advice.

**Inhalation:** Move person to fresh air. If person is not breathing call 911 or an ambulance,

then give artificial respiration, preferably mouth-to-mouth, if breathing is difficult, give oxygen. Call a poison control center or doctor for further

treatment advice.

**Ingestion:** Call poison control center or doctor immediately for treatment advice. Drink

plenty of water in small gulps. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an

unconscious person.

Most Important Symptoms, Acute and Delayed:

Causes serious eye damage. Causes skin irritation. May cause respiratory

irritation. Harmful if inhaled, swallowed, or in contact with skin.



Product Name: FROG® Jump Start Revision Date: October 1, 2016

Supersedes: Rev 2, 05/20/2015

**Immediate Medical Attention** 

Required:

Revision: 3

If in eyes, immediately call a poison center or doctor. Otherwise, get medical

attention if you feel unwell.

5. Fire-fighting Measures

Flash point: Not applicable

Suitable Extinguishing Media: Extinguish with large amounts of water.

Not applicable

**Unsuitable Extinguishing** 

**Auto-ignition temperature:** 

Media:

For safety reasons DO NOT use dry chemical extinguisher containing ammonia compounds, dry chemicals, carbon dioxide, halogenated agents.

**Special Protective Equipment and Precautions for Fire-**

fighters:

As in any fire, wear self-contained breathing apparatus with pressure demand (MSHA/NIOSH approved or equivalent) and full protection clothing. Use water

spray to cool fire exposed containers.

**Specific Hazards Arising From** 

the Chemical:

When heated to decomposition, may release poisonous and corrosive fumes

of nitrogen trichloride, chlorine, and carbon monoxide.

6. Accidental Release Measures

**Personal Precautions:** For small spills in well ventilated areas wear respiratory protection and wear

clothing, chemical resistant gloves, chemical resistant footwear, and chemical  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left($ 

resistant headgear for overhead exposure.

For cleanup of large spills, or small dry spills in confined areas, wear full-face respirator with chlorine cartridges or a positive pressure supplied air respirator. Additionally, body protection should be impervious clothing covering the entire

body to prevent personal contact with the material.

Methods for Cleaning Up: If spill material is still dry, do not put water directly on this product as a gas

evolution may occur. Do not contaminate spill material with any organic materials, ammonia, ammonium salts, or urea. Clean up all spill material with

clean, dry dedicated equipment and place in a clean dry container.

CAUTION: Do not use floor sweeping compounds.

7. Handling and Storage

**Handling:** Use with adequate ventilation. Do not get in eyes, on skin, or on clothing.

Wash thoroughly after handling.

**Storage:** Prevent formation of dust. Keep container tightly closed when not in use.

Protect from atmospheric moisture and water. Store in a cool, dry, well-

ventilated area from heat sources.

8. Exposure Controls and Personal Protection

Exposure Limits – DUST LIMITS FOR AIR CONTAMINANTS (OSHA)

Particulates not otherwise regulated – total dust – TWA 15 mg/m<sup>3</sup>

LIMITS FOR AIR CONTAMINANTS (OSHA)



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Particulates not otherwise regulated – Respirable fraction – TWA 5 mg/m<sup>3</sup>

LIMITS FOR AIR CONTAMINANTS (ACGIH)

Revision: 3

Particulates (insoluble or poorly soluble) respirable particles – TWA 3 mg/m<sup>3</sup>

LIMITS FOR AIR CONTAMINANTS (ACGIH)

Particulates (insoluble or poorly soluble inhalable particles- TWA 10 mg/m<sup>3</sup>

**Appropriate Engineering** 

Controls:

Set up ventilation to effectively remove and prevent buildup of any dust

generated from the handling of this product.

Personal protective equipment:

- Respiratory protection:

If ventilation is not sufficient to effectively prevent build up of dust, appropriate

NIOSH/OSHA respiratory protection must be provided.

Hand protection: Wear chemical resistant gloves, such as rubber, neoprene, or nitrile.

**– Eye protection:** Use chemical safety glasses and face shield to avoid eye contact.

Skin and body protection:
 Prevent contact with skin & clothing by using protective garments.

**Hygiene measures:** Flowing water source should be available. Avoid contact with skin, eyes, and

clothing. Do not inhale dust. Remove soiled or soaked clothing immediately.

## 9. Physical and Chemical Properties

Appearance: White granular solid Chlorine like bleach

Odor threshold:

Melting point / range:

Boiling point / range:

Flash point:

Evaporation rate:

Flammability:

Vapor pressure:

Not available

Not available

Not available

Not available

Vapor density: Granular (tap) 1.05 g/ml (pour)0.958 g/ml

Solubility in water: Not available

Specific gravity: >1

pH: 4.75 (25°C)
Flammability limits: Not available
Partition coefficient: Not available
Auto-ignition temperature: Not available
Decomposition temperature: Not available
Viscosity: Not available

#### 10. Stability and Reactivity

**Reactivity:** Not reactive under normal conditions.

**Chemical stability:** Stable under normal conditions.

**Incompatible materials:** Organic materials; combustible materials; ammonia; ammonium compounds;

Alkali. Oxidizing agents; reducing agents; acids. Strong bases, alkali metals,



Product Name: FROG® Jump Start Revision Date: October 1, 2016

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metallic nitrates, oxides of sulfur and potassium tartrate.

**Conditions to avoid:** Avoid conditions that favor the formation of excessive dust. Avoid excessive

heat and sources of ignition. Avoid conditions of moisture.

**Hazardous decomposition** 

products:

Nitrogen. HCl gas. Chlorine gas. Isocyanic acid. Metal oxide. Nitrogen

trichloride. Carbon oxides.

Possibility of hazardous

reactions:

Will not occur

### 11. Toxicological Information

No information available.

#### 12. Ecological Information

Adverse effects: Toxic to fish and aquatic life forms. Do not dispose by drainage or into lakes,

ponds or public water.

### 13. Disposal Considerations

Waste disposal: Observe all federal, state, and local regulations. The responsibility for proper

waste disposal is with the owner of the waste.

#### 14. Transportation Information

**US DOT:** Class: 5.1 – Oxidizing substances

Packing Group: II Label: OXIDIZER (5.1) UN/NA number: UN2465

Proper shipping name: Dichloroisocyanurate acid, dry, mixture

**Transport IMDG:** Class: 5.1 – Oxidizing substances

Packing Group: II UN number: UN2465

Proper shipping name: Dichloroisocyanurate acid, dry, mixture

EmS: F-A+S-Q

Label: OXIDIZING AGENT (5.1)

Marine pollutant mark: Symbol "fish and tree"

Transport ICAO/IATA: Class: 5.1

Packing Group: II UN number: UN2465

Proper shipping name: Dichloroisocyanurate acid, dry, mixture

Label: OXIDIZER (5.1)

#### 15. Regulatory Information

**US Federal Regulations:** 

**EPA FIFRA Information:** This chemical is a pesticide product registered by the Environmental



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Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace

required on the pesticide label:

#### **DANGER**

Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through skin. May be fatal if inhaled. Do not breathe dust or vapors. Irritating to nose and throat. Do not get in eyes, on skin or on clothing. Wear goggles or face shield, protective clothing and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the restroom. Remove and wash contaminated clothing before reuse.

labels of non-pesticide chemicals. Following is the hazard information as

-Toxic Substances Control Act (TSCA): Hazardous Component(s) subject to reporting on the TSCA List.

**-HMIS Classification:** Health = 3

Flammability = 1 Reactivity = 0 PPE = F

**-NFPA Rating:** Health = 3

Fire Hazard = 1 Reactivity = 0

– WHMIS hazard class: Hazardous Components(s) subject to WHMIS Ingredient Disclosure

#### 16. Other information

Date of preparation: October 1, 2016

#### Details of change from previous version:

• Updated Corporate Logo

The information in this Safety Data Sheet should be provided to all who use, handle, store, transport, or otherwise be exposed to this product. This information has been prepared for the guidance of plant engineering, operations and management, and for persons working with or handling this product. Additionally, if this Material Safety Data Sheet is more than three years old you should contact King Technology to make certain that this sheet is current.

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, King Technology makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its safety and suitability for their purposes prior to use.

In no event will King Technology be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. Factors pertaining to certain conditions of storage, handling, and/or use of this product may involve other or additional safety considerations.

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANT ABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE, ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.



FROG® Jump Start **Product Name: Revision Date:** October 1, 2016 Rev 2, 05/20/2015 Revision: 3 Supersedes:

Prepared by:

King Technology, Inc. 530 11<sup>th</sup> Ave S Hopkins, MN 55343 USA Phone (952) 933-6118

End of safety data sheet

**Specifically Designed for Mineral Treated Spas** 

## SAFETY DATA SHEET

Product name Mineral Buddies™ Shock Treatment

Revision date 10-10-16

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

Product ID: Shock Treatment

Chemical Name and Synonyms: Potassium Monopersulfate Compound

Chemical Formula: Proprietary
Chemical Family: Peroxygen Salt

Product Use: Safe, Effective, Shock Oxidizer Treatment

Supplier: Oreg Corporation Distributor: Carefree Stuff

42306 Remington Ave. 5220 4<sup>th</sup> Street, Ste 2 Temecula, CA 92532 Irwindale, CA 91706 951-296-5076 626-337-0611

Emergency Telephone# CHEMTREC 800-424-9300

**Product hazard category** 

Acute toxicity (Oral)

Skin corrosion

Serious eye damage/eye irritation

Category 1

Category 1

Category 1

SIGNAL WORD: DANGER

**HAZARD PICTOGRAMS:** 



Hazardous prevention: P2

measures

P260- Do not breathe dust or mist.

P264- Wash skin thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection. P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel

unwell.

P301+330+331- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353- IF ON SKIN (or hair): Remove/ Take off immediately all contaminated

clothing. Rinse skin with water/ shower.

P304+312- IF INHALED: Remove victim to fresh air and keep comfortable for breathing. P305+351+338- IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

P307+311- Immediately call a POISON CENTER or doctor/ physician. P362+364- Take off contaminated clothing and wash it before reuse.

P405- Store locked up.

P501- Dispose of contents/ container to an approved waste disposal plant.

**Specifically Designed for Mineral Treated Spas** 

## SAFETY DATA SHEET

**Product name** Mineral Buddies™ Shock Treatment

Revision date 10-10-16

COMPONENT	%	CAS#
Potassium Monopersulfate	32.18%	70693-62-8
Inert ingredients	67.82%	Proprietary

The exact formulation is being withheld as a trade secret.

While some substances are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.12009i), all known hazards are clearly communicated within this document.

**General advice :** When symptoms persist or in all cases of doubt seek medical advice.

**Inhalation:** Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial

respiration, preferably by mouth to mouth, if possible. Call a poison control center or doctor

for further treatment advice.

**Skin contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20

minutes. Call a poison control center or doctore for treatment advice.

immediately. Wash contaminated clothing before re-use.

**Eye contact :** Hold Eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact

lenses, if present after the first 5 minutes, then continue rinsing eye. Call a poison control

center or doctor for treatment advice.

**Ingestion:** Call a poison control center or doctor immediately for treatment advice. Have person sip a

glass of water if able to swallow. Do NOT induce vomiting. Do not give anything by mouth to

an unconscious person.

Most important:

symptoms/effects, acute

and delayed

No applicable data available.

**Protection of first-aiders**: No applicable data available.

**Notes to physician :** No applicable data available.

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and

the surrounding environment.

Unsuitable extinguishing

media:

Carbon dioxide (CO2)

**Specific hazards:** The product itself does not burn.

Hazardous decomposition products Oxygen, Sulphur dioxide, Sulfur trioxide

Special protective equipment

for firefighters:

Wear self-contained breathing apparatus and protective suit.

Further information : No applicable data available.

**Specifically Designed for Mineral Treated Spas** 

## SAFETY DATA SHEET

**Product name** Mineral Buddies™ Shock Treatment

Revision date 10-10-16

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with

clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

**Safeguards (Personnel):** Evacuate personnel to safe areas. Use personal protective equipment.

**Environmental precautions:** Try to prevent the material from entering drains or water courses.

**Spill Cleanup:** Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

After cleaning, flush away traces with water.

Accidental Release Measures: Try to prevent the material from entering drains or water courses. Dispose of in

accordance with local regulations.

**Handling:** Use only in well-ventilated areas. Do not breathe dust. Avoid dust formation in

confined areas. Avoid contact with skin and eyes. Keep away from heat and flame.

Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice

**Handling (Physical Aspects):** No applicable data available.

**Dust explosion class:**No applicable data available.

. .

**Storage:** Keep in a dry, cool and well-ventilated place. Protect from contamination.

Store in original container.

Keep away from: Combustible material Never allow product to get in contact with

water during storage.

Stable under recommended storage conditions.

**Storage period:**Storage temperature:
No applicable data available.
No applicable data available.

**Engineering controls:** Ensure adequate ventilation.

Personal protective equipment

**Respiratory protection:** When workers are facing concentrations above the exposure limit they must use

appropriate certified respirators.

Hand protection: Material: Impervious gloves

**Eye protection :** Wear safety glasses or coverall chemical splash goggles.

**Skin and body protection:** Where there is potential for skin contact, have available and wear as appropriate, impervious

gloves, apron, pants, jacket, hood and boots. Remove and wash contaminated clothing

before re-use.

**Protective measures:** When using do not eat or drink. Do not breathe dust.

**Exposure Guidelines** 

**Exposure Limit Values** 

Potassium Monopersulfate-

Pentapotassium bis(peroxymonosulphate) bis(sulphate) AEL \* (DUPONT) 1 mg/m3 15 minute TWA

**Specifically Designed for Mineral Treated Spas** 

# SAFETY DATA SHEET

**Product name** Mineral Buddies™ Shock Treatment

Revision date 10-10-16

Dipotassium peroxodisulphate

TLV (ACGIH) 0.1 mg/m3 TWA as persulfate

Potassium sulfate

AEL\* (DUPONT) 10 mg/m3 8 hr. TWA

#### Appearance (Physical state, form, colour, etc.)

Form : Solid form, granular

Color : white Odor : none

Odor threshold : No applicable data available.

**pH** : 2.1 at 30 g/l 20 °C (68 °F)

Melting point/freezing point : Melting point

Decomposes before melting.

**Boiling point/boiling range** : Boiling point Not applicable

Flash point : does not flash

**Evaporation rate** : No applicable data available.

Flammability (solid, gas) : The product itself does not burn, but it is slightly oxidising (active oxygen

content ca. 2%).

The product is not flammable.

: No applicable data available.

: No applicable data available.

**Vapor pressure** : < 0.0000017 hPa **Vapour density** : No applicable data available.

**Density** : No applicable data available.

Specific gravity (Relative : 2.35 at 20 °C (68 °F)

density)

**Bulk density** : 1,100 - 1,400 kg/m3

**Water solubility** : 297 - 357 g/l at 22 °C (72 °F)

**Solubility(ies)** : No applicable data available.

**Partition coefficient: n-** : No applicable data available.

octanol/water

**Upper explosion limit** 

Lower explosion limit

**Ignition temperature** : no data available

**Auto-ignition temperature**: No applicable data available. **Decomposition temperature**: No applicable data available. **Viscosity**: No applicable data available.

Oxidizing Substance : The substance or mixture is not classified as oxidizing.

**Reactivity:** Stable under recommended storage conditions.

**Stability:** Stable under normal conditions.

**Possibility of hazardous reactions**No applicable data available.

<sup>\*</sup> AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

**Specifically Designed for Mineral Treated Spas** 

## SAFETY DATA SHEET

**Product name** Mineral Buddies™ Shock Treatment

Revision date 10-10-16

Conditions to avoid: Temperature > 50 °C (> 122 °F) Avoid extreme heat.

Incompatibility: Halogenated compounds Cyanides, Heavy metal salts

**Hazardous decomposition products:** Oxygen , Sulfur dioxide, Sulfur trioxide products

**Potassium Monopersulfate** 

Monopersulfate compound

Inhalation 4 h LC50: > 5 mg/l, rat

**Skin irritation:** Species: rabbit, Causes burns. **Eye irritation:** Species: rabbit, Severe eye irritation

**Sensitisation:** Species: guinea pig, Did not cause sensitization on laboratory animals.

May cause sensitization of susceptible persons by skin contact or by inhalation of

dust.

Pentapotassium bis(peroxymonosulphate) bis(sulphate)

**Dermal LD50:** > 11,000 mg/kg, rabbit

**Oral LD50:** 200 - 2,000 mg/kg, rat Gastrointestinal ulceration Internal bleeding

Repeated dose toxicity: Inhalation

Eyes, corneal damage, Reversible

Oral

Stomach, Pathologic changes

Mutagenicity: Did not cause genetic damage in cultured bacterial cells., Tests on mammalian cell cultures showed

mutagenic effects., Evidence suggests this substance does not cause genetic damage in animals.

**Teratogenicity:** Animal testing showed effects on embryo-fetal development at levels equal to or above those

causing maternal toxicity.

Dipotassium peroxodisulphate

**Dermal LD50:** > 10,000 mg/kg, Rabbit **Oral LD50:** 1,130 mg/kg, Rat

Repeated dose toxicity: Oral Rat-

NOAEL: 131.5 mg/kgMethod: OECD Test Guideline 407

No toxicologically significant effects were found.

**Carcinogenicity:** Not classifiable as a human carcinogen.

Animal testing did not show any carcinogenic effects. Information given is based on

data obtained from similar substances.

Mutagenicity: Animal testing did not show any mutagenic effects. Tests on bacterial or

mammalian cell cultures did not show mutagenic effects. Information given is based

on data obtained from similar substances.

**Reproductive toxicity:** No toxicity to reproduction Animal testing showed no reproductive toxicity.

Information given is based on data obtained from similar substances.

**Teratogenicity:** Animal testing showed no developmental toxicity. Information given is based on

data obtained from similar substances.

Tetra[carbonato(2-)]dihydroxypentamagnesium

**Oral LD50:** > 2,000 mg/kg , Rat

**Specifically Designed for Mineral Treated Spas** 

## SAFETY DATA SHEET

**Product name** Mineral Buddies™ Shock Treatment

Revision date 10-10-16

Information given is based on data obtained from similar substances.

Repeated dose toxicity: Oral, Rat

- 90 d

NOAEL: 1,531 mg/kgMethod: OECD Test Guideline 408

No toxicologically significant effects were found., Information given is based on data

obtained from similar substances.

Carcinogenicity: Not classifiable as a human carcinogen. Information given is based on data

obtained from similar substances. Animal testing did not show any carcinogenic

effects.

**Mutagenicity:** Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Evidence suggests this substance does not cause genetic damage in animals.

Information given is based on data obtained from similar substances.

Reproductive toxicity: No toxicity to reproduction Information given is based on data obtained from similar

substances. Animal testing showed no reproductive toxicity.

**Teratogenicity:** Information given is based on data obtained from similar substances. Animal testing

showed no developmental toxicity.

#### Carcinogenicity

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

#### **Potassium Monopersulfate**

#### **Aquatic Toxicity**

Pentapotassium bis(peroxymonosulphate) bis(sulphate)

**96 h LC50:** Cyprinodon variegatus (sheepshead minnow) 1.09 mg/l Directive 67/548/EEC, Annex V, C.1.

**96 h ErC50:** Selenastrum capricornutum (green algae) > 1 mg/l OECD Test Guideline 201

**72 h NOEC:** Selenastrum capricornutum (green algae) 0.5 mg/l

**48 h EC50:** Daphnia magna (Water flea) 3.5 mg/l OECD Test Guideline 202 NOEC Cyprinodon variegatus (sheepshead minnow) 0.222 mg/l

28 d: NOEC Americamysis bahia (mysid shrimp) 0.267 mg/l

Dipotassium peroxodisulphate

96 h LC50: Oncorhynchus mykiss (rainbow trout) 76.3 mg/l US EPA Test Guideline OPP 72-1

Information given is based on data obtained from similar substances.

72 h EbC50: Pseudokirchneriella subcapitata (green algae) 83.7 mg/l OECD Test Guideline 201

Information given is based on data obtained from similar substances.

72 h NOEC: Pseudokirchneriella subcapitata (green algae) 39.2 mg/l OECD Test Guideline 201

Information given is based on data obtained from similar substances.

**48 h EC50:** Daphnia magna (Water flea) 120 mg/l US EPA Test Guideline OPP 72-2

Information given is based on data obtained from similar substances.

Tetra[carbonato(2-)]dihydroxypentamagnesium

**96 h LC50:** Pimephales promelas (fathead minnow) 2,120 mg/l

**Specifically Designed for Mineral Treated Spas** 

# SAFETY DATA SHEET

**Product name** Mineral Buddies™ Shock Treatment

Revision date 10-10-16

Information given is based on data obtained from similar substances.

**72 h EC50:** Desmodesmus subspicatus (green algae) > 100 mg/l OECD Test Guideline 201

Information given is based on data obtained from similar substances.

72 h NOEC: Desmodesmus subspicatus (green algae) 100 mg/l OECD Test Guideline 201

Information given is based on data obtained from similar substances.

**48 h EC50:** Daphnia magna (Water flea) 140 mg/l

Information given is based on data obtained from similar substances.

Physico-chemical

removability: hydrolyses

**Environmental Fate** 

Dipotassium peroxodisulphate

**Biodegradability:** Readily biodegradable.

Tetra[carbonato(2-)]dihydroxypentamagnesium

**Biodegradability:** The methods for determining biodegradability are not applicable to inorganic substances.

**Waste Disposal Methods:** Dispose of in accordance with local regulations.

**Contaminated Packaging:** If recycling is not practicable, dispose of in compliance with local regulations.

DOT UN-Number: 3260

Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s.

(Monopersulfate Compound)

Class: 8

Packaging group: II Labeling No.: 8

IATA C UN number: 3260

Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s.

(Monopersulfate Compound, )

Class: 8

Packaging group: || Labeling No.: 8

IMDG UN number: 3260

Proper shipping name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

(Monopersulfate Compound, )

Class: 8

Packaging group: II Labeling No.: 8

**Specifically Designed for Mineral Treated Spas** 

## SAFETY DATA SHEET

Mineral Buddies™ Shock Treatment **Product name** 

Revision date 10-10-16

Title III hazard

Classification

**TSCA** : On the inventory, or in compliance with the inventory

Other regulations : Active Ingredient in this composition is POTASSIUMPEROXYMONOSULFATE,

> CAS. No. 10058-23-8, Concentration: 43-47% (Typical 45%) Active ingredient may also be described by the synonym POTASSIUM MONOPERSULFATE. : This material does not contain any chemical components with known CAS

**SARA 313 Regulated** numbers that exceed the threshold (De Minimis) reporting levels established Chemical(s)

by SARA Title III, Section 313.

**PA Right to Know** : Substances on the Pennsylvania Hazardous Substances List present at a Regulated Chemical(s)

concentration of 1% or more (0.01% for Special Hazardous Substances):

Dipotassium peroxodisulphate

NJ Right to Know : Substances on the New Jersey Workplace Hazardous Substance List present

Regulated Chemical(s) at a concentration of 1% or more (0.1% for substances identified as

carcinogens, mutagens or teratogens): Dipotassium peroxodisulphate,

Potassium hydrogensulphate : Acute Health Hazard: Yes

Chronic Health Hazard: No

Fire: No.

Reactivity/Physical hazard: No

Pressure: No

California Prop. 65: Chemicals known to the State of California to cause cancer, birth defects or any

other harm: none known

### DATE OF PREPARATION 10-10-2016

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**Specifically Designed for Mineral Treated Spas** 

# SAFETY DATA SHEET

Product name Mineral Buddies™ pH & Alk Up

Revision date 10-10-16

Section 1 Identification

Product ID: pH Plus

Chemical Name: Sodium Carbonate, Anhydrous

Synonyms: Sodium carbonate; Carbonic acid, disodium salt; Disodium carbonate

Chemical Formula: NA2CO3 CAS Number: 497-19-8

Product Use: Raises pH, Prevents Corrosion

Supplier: Oreg Corporation Distributor: Carefree Stuff

42306 Remington Ave. 5220 4<sup>th</sup> Street, Ste 2 Temecula, CA 92590 Irwindale, CA 91702 951-296-5076 626-337-0611

Emergency Telephone# Chemtrec: 1-800-424-9300

### Section 2 Hazards identification

#### **OSHA Regulatory Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 FR 1910.1200)

GHS CLASSIFICATION: Serious eye damage/eye irritation- Category 2

GHS SIGNAL WORD: WARNING



#### **HAZARD PICTOGRAMS:**

### **HAZARD STATEMENT(S):**

H319 - Causes serious eye irritation

#### PRECAUTIONARY STATEMENT(S)- Prevention:

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear eye protection/ face protection

### PRECAUTIONARY STATEMENT(S)- Response:

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several 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 (HNOC)

No hazards not otherwise classified were identified.

### Other Information

May be harmful if swallowed

## Section 3 Composition / Information on ingredients

Ingredients

Chemical Name	CAS-No	Weight %	
Sodium carbonate	497-19-8	100	

Formula NA2CO3
Chemical Family Alkali salt

**Specifically Designed for Mineral Treated Spas** 

## SAFETY DATA SHEET

Product name Mineral Buddies™ pH & Alk Up

Revision date 10-10-16

Section 4 First - aid measures

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms

persist, call a physician.

**Skin contact** Wash off with warm water and soap. Get medical attention if irritation develops and persists.

Remove and wash contaminated clothing before re-use.

**Inhalation** Remove person to fresh air. If signs/symptoms continue, get medical attention.

**Ingestion** Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed:

Causes serious eye damage / eye irritation.

Indication of immediate medical attention and special treatment needed, if necessary:

Treat symptomatically

## Section 5 Fire - fighting measures

Suitable extinguishing media

Use extinguishing agent suitable for type of surrounding fire.

**Specific Hazards Arising from the** 

Chemical

Non-combustible, substance itself does not burn but may decompose upon

heating to produce corrosive and/or toxic fumes.

Fumes of sodium oxide. Carbon oxides (COx)

**Hazardous combustion products** 

**Explosion Data** 

Sensitivity to Mechanical Impact Not sensitive. Sensitivity to Static Discharge Not sensitive.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure demand

MSHA/NIOSH (approved or equivalent) and full protective gear

### Section 6 Accidental release measures

**Personal precautions** Avoid dust formation. Sweep up to prevent slipping hazard.

Other For further clean-up instructions, call Emergency Hotline number listed in Section 1 "Product

and Company Identification" above.

**Environmental Precautions** Do not flush into surface water or sanitary sewer system.

Methods for containment Prevent large quantities of this product from contacting vegetation or waterways. Cover

with plastic sheet to prevent spreading. Pick up and transfer to properly labeled containers.

Keep in suitable and closed containers for disposal.

**Methods for cleaning up** Pick up and transfer to properly labeled containers. Keep in suitable and closed containers

for disposal. Dispose of waste as indicated in Section 13.

## Section 7 Handling and storage

**Handling** Use air conveying/mechanical systems for bulk transfer to storage. Provide appropriate exhaust

ventilation at places where dust is formed. In case of insufficient ventilation, wear suitable respiratory

equipment if release of airborne dust is expected.

**Storage** Store in original container. Keep in properly labeled containers. Keep containers tightly closed.

**Incompatible products** Aluminum. Powdered aluminum. Acids

**Specifically Designed for Mineral Treated Spas** 

## SAFETY DATA SHEET

Product name Mineral Buddies™ pH & Alk Up

Revision date 10-10-16

## Section 8 Exposure controls / personal protection

#### **Control parameters**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies Local nuisance dust standards apply.

#### Appropriate engineering controls

**Engineering measures** Where reasonably practicable this should be achieved by the use of local exhaust ventilation

and good general extraction.

#### Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Tightly fitting safety goggles.

**Skin and Body Protection** Wear suitable protective clothing. Protective shoes or boots.

Hand Protection Nitrile rubber, Neoprene gloves

**Respiratory Protection** In case of inadequate ventilation wear respiratory protection.

**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice.

**General information** These recommendations apply to the product as supplied

## Section 9 Physical and chemical properties

Appearance Granules
Color White
Physical state Solid
Odor odorless
Odor Threshold not applicable

**pH** 11.4 (as aqueous solution)

Melting Point/Range 851 °C

Freezing point No information available

Boiling Point/Range not applicable
Flash Point Not combustible
Evaporation rate Not applicable

Flammable (solid, gas)

Non-combustible, substance itself does not burn but may decompose upon heating to

produce corrosive and/or toxic fumes

Flammability Limit in Air

Upper flammabilitylimit:No information availableLower flammabilitylimit:No information availableVapor pressureNo information availableVapor densityNo information availableDensityNo information available

Specific gravity 2.52

Water solubility 212.5 g/L @ 20 °C Solubility in other solvents No information available

Partition coefficient: Not applicable
Autoignition Temperature Not combustible

**Decomposition Temperature** 400 °C

# SAFETY DATA SHEET

# mineral buddies

**Specifically Designed for Mineral Treated Spas** 

Product name Mineral Buddies™ pH & Alk Up

Revision date 10-10-16

## Section 9 Physical and chemical properties (Continued)

Viscosity. kinematic
Viscosity, dynamic
No information available
No information available

Explosive properties Not explosive Oxidizing properties Non-oxidizing

Molecular Weight 105.99

**Bulk density** 0.86 - 1.12 g/cm³ (Dense grades) 0.70 - 0.90 g/cm³ (Light Grades)

Kst 0 bar m/s

## Section 10 Stability and reactivity

**Reactivity** None under normal use conditions.

Chemical Stability Stable. Decomposes by reaction with strong acid.

**Possibility of Hazardous Reactions**None under normal processing.

**Hazardous polymerization**Hazardous polymerization does not occur.

**Conditions to avoid** Exposure to air or moisture over prolonged periods.

Incompatible materials Aluminium. Powdered aluminum. Acids.

Hazardous Decomposition Products Sodium oxides. Carbon oxides (COx).

## Section 11 Toxicological information

### **Product Information**

**LD50 Oral** 2,800 mg/kg (rat) **LD50 Dermal** > 2,000 mg/kg (rabbit)

LC50 Inhalation 2.3 mg/L (rat)

**Eye Contact** Irritating to eyes. **Skin Contact** Non-irritating

**Sensitization** Patch test on human volunteers did not demonstrate sensitization properties.

#### Information on toxicological effects

**Symptoms** No information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity No known effect.

Mutagenicity No information available

**Carcinogenicity** Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).

Reproductive toxicity
STOT - single exposure
STOT - repeated exposure
Aspiration hazard
No information available.
No information available.
No information available.

**Specifically Designed for Mineral Treated Spas** 

# SAFETY DATA SHEET

Product name Mineral Buddies™ pH & Alk Up

Revision date 10-10-16

## Section 12 Ecological information

#### **Ecotoxicity**

Sodium carbonate (497-19-8)						
Active Ingredient(s)	Duration	Species	Value	Units		
Sodium Carbonate	96 h LC50	Bluegill sunfish	300	mg/L		
Sodium Carbonate	48 h EC50	Ceriodaphnia	200-227	mg/L		

Persistence and degradability Biodegradability does not pertain to inorganic substances. .

**Bioaccumulation** Does not bioaccumulate. **Mobility** Dissociates into ions.

Other adverse effects None known

## Section 13 Disposal considerations

Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40

CFR 261). Dispose of in accordance with local regulations.

**Contaminated Packaging** Dispose of in accordance with local regulations.

# Section 14 Transport information

**DOT** Not regulated

**TDG** Not regulated

ICAO/IATA Not regulated

IMDG/IMO Not regulated

## Section 15 Regulatory information

## **U.S. Federal Regulations**

### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

## SARA 311/312 Hazard Categories

Acute Health Hazard YES
Chronic Health Hazard NO
Fire Hazard NO
Sudden Release of Pressure Hazard NO
Reactive Hazard NO

#### **Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**Specifically Designed for Mineral Treated Spas** 

# SAFETY DATA SHEET

Product name Mineral Buddies™ pH & Alk Up

Revision date 10-10-16

## Section 15 Regulatory information (Continued)

### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

#### **US State Regulations**

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### **U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations

### **International Inventories**

COMPONENT	TSCA (United States)	DSL (Canada)	EINECS/ELI NCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Sodium Carbonate 497-19-8 (100)	Х	X	X	X	X	Х	X	X

#### International Regulations

Mexico – Grade Moderate risk, Grade 2

WHMIS Hazard Class D2B Toxic materials, Eye irritation

Class E: Corrosive to aluminum. Not corrosive to animal skin or carbon steel.

#### Section 16 Other information

NFPA	Health Hazard 2	Flammability 0	Stability 0	Special Hazards -
HMIS	Health Hazard 2	Flammability 0	Stability 0	Special Protection X

NFPA/HMIS Ratings Legend Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

### DATE OF PREPARATION 5-15-15

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**Specifically Designed for Mineral Treated Spas** 

# SAFETY DATA SHEET

5220 4<sup>th</sup> Street, Ste 2

Irwindale, CA 91702

Product name Mineral Buddies™ pH & Alk Down

Revision date 10-10-16

Section 1 Identification

Product ID: pH & Alk Down

**Synonyms:** Sodium bisulfate, anhydrous.

Nitre cake, GBS, Sodium hydrogen sulphate

Product Use: Lowers pH, Prevents Scaling

Supplier: Oreg Corporation Distributor: Carefree Stuff

42306 Remington Ave. Temecula, CA 92590

951-296-5076 626-337-0611

Emergency Phone# CHEMTREC, U.S.: 1-800-424-9300

Section 2 Hazards identification

OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard

(29 CFR 1910.1200).

Classification of the

substance or mixture:

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

GHS label elements Hazard pictograms:



Signal word: Danger

**Hazard statements:** H318 - Causes serious eye damage.

Precautionary statements

**Prevention :** P280 - Wear eye or face protection.

P264 - Wash hands thoroughly after handling.

Response: P305 + P351 + P338 + P310 - 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 or physician.

Storage: Not applicable.

Disposal: Not applicable.

Hazards not otherwise

Classified : None known.

## Section 3 Composition / Information on ingredients

#### **United States - Mexico**

Name	%	CAS number
Sodium bisulfate	>90	7681-38-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section

**Specifically Designed for Mineral Treated Spas** 

# SAFETY DATA SHEET

Product name Mineral Buddies™ pH & Alk Down

Revision date 10-10-16

## Section 4 First - aid measures

#### Description of necessary first aid measures

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower

eyelids. If redness or irritation persists, get prompt medical attention.

**Inhalation**: Move exposed person to fresh air. If not breathing, if breathing is irregular or if

respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

If irritation or discomfort persists, seek medical attention.

**Skin contact**: In case of contact, immediately flush skin with plenty of water for at least 20 minutes.

If skin irritation occurs, seek medical attention.

**Ingestion**: Wash out mouth with water. Do not induce vomiting unless directed to do so by

medical personnel. Never give anything by mouth to an unconscious person. Call

medical doctor or poison control center immediately.

### Most important symptoms/effects, acute and delayed

### Potential acute health effects

**Eye contact**: Causes serious eye damage.

**Inhalation**: Inhalation of dust may irritate nose, throat and/or lungs.

**Skin contact**: Prolonged exposure may cause skin irritation.

**Ingestion** : Small amounts (tablespoonful) swallowed are not likely to cause injury; however,

swallowing large amounts may irritate or burn digestive tract.

#### Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

pain watering redness

Inhalation :No known significant effects or critical hazards.

Skin contact :Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur if repeated exposure

Ingestion :Adverse symptoms may include the following:

stomach pains

#### Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

**Specific treatments**: No specific treatment.

**Protection of first-aiders**: No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

**Specifically Designed for Mineral Treated Spas** 

# SAFETY DATA SHEET

**Product name** Mineral Buddies™ pH & Alk Down

**Revision date** 10-10-16

#### Fire - fighting measures Section 5

Extinguishing media

Suitable Extinquishing

Media

: Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable Extinquishing** 

Media

: None known.

Specific hazards arising

from the chemical

: No specific fire or explosion hazard.

**Hazardous thermal** decomposition products : Decomposition products may include the following materials:

Sulfur oxides

Special protective actions

for fire-fighters

: No special measures are required.

Special protective equipment

for fire-fighters

: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure

mode.

#### Section 6 Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

For non-emergency

personnel

: Do not breathe dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders

: If specialized clothing is required to deal with the spillage, take note of any information inSection 8 on suitable and unsuitable materials. See also the

information in "For nonemergency personnel".

**Environmental precautions** 

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused

environmental pollution (sewers, waterways, soil or air).

#### Methods and materials for containment and cleaning up

**Small Spill** : Vacuum or sweep up material and place in a designated, labeled waste container.

Dispose of via a licensed waste disposal contractor.

Large Spill : Prevent entry into sewers, water courses, basements or confined areas. Vacuum

or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact

information and Section 13 for waste disposal.

**Specifically Designed for Mineral Treated Spas** 

# SAFETY DATA SHEET

Product name Mineral Buddies™ pH & Alk Down

Revision date 10-10-16

Section 7 Handling and Storage

# Precautions for safe handling

Protective measures :Put on appropriate personal protective equipment (see Section 8). Avoid breathing

dusts. Wash thoroughly after handling.

Advice on general Occupational hygiene

:Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene

measures.

Conditions for safe storage, Including any incompatibilities

:Material is hygroscopic and will readily absorb moisture. DO NOT store dry product

where exposed to moist conditions. Keep container tightly closed.

## Section 8 Exposure controls / personal protection

### Control parameters

Occupational exposure limits

None Mexico None

Appropriate engineering

controls

: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure** 

controls

**:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

### Individual protection measures

**Hygiene measures** : Ensure that eyewash stations and safety showers are close to the workstation

location. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the

working period.

**Eye/face protection** : Safety eyewear should be used when there is a likelihood of exposure.

Recommended: Safety glasses with side shields.

Skin protection

**Hand protection**: Use gloves appropriate for work or task being performed. Recommended: Rubber

gloves.

**Body protection** : Cotton-blend coveralls

Other skin protection :Appropriate footwear and any additional skin protection measures should be

selected based on the task being performed and the risks involved and should be

approved by a specialist before handling this product.

**Respiratory protection**: In dusty atmospheres (>10 mg/m³), use a NIOSH-approved dust respirator.

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# SAFETY DATA SHEET

Product name Mineral Buddies™ pH & Alk Down

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## Section 9 Physical and chemical properties

#### **Appearance**

Physical state : Dry (Anhydrous) crystalline solid spherical shape beads.

Color : Off-white.

Odor : Fresh to pungent.
Odor Threshold : Not available

**pH** : <1 [Conc. (% w/w): 5%]

Boiling point : Not available.
Flash point : Not available.
Evaporation rate : Not available.
Flammability (solid, gas) : Not available.
Lower and upper explosive : Not available.

(flammable) limits

Vapor pressure: Not available.Vapor density: Not available.

Relative density :1.28

**Solubility** : Partially soluble in the following materials: cold water and hot water.

Viscosity : Not available.
Volatility : Not available.

## Section 10 Stability and reactivity

**Reactivity**: No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions**: Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : DO NOT store dry product where exposed to moist conditions.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials, acids

and alkalis. DO NOT MIX dry or concentrated solutions of this product with concentrated solutions of chlorine bleach, ammonia cleansers or similar products.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

## Section 11 Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Sodium bisulfate	LD50 Oral	Rat	2800 mg/kg	-

Irritation/Corrosion -There is no data availableSensitization -There is no data availableCarcinoαenicity -There is no data available

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## SAFETY DATA SHEET

Product name Mineral Buddies™ pH & Alk Down

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## Section 11 Toxicological information (Continued)

Specific target organ toxicity (single exposure) - There is no data available Specific target organ toxicity (repeated exposure) - There is no data available

Aspiration hazard- There is no data available

Information on the likely

: Dermal contact. Eye contact. Inhalation. Ingestion.

routes of exposure

Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation**: Inhalation of dust may irritate nose, throat and/or lungs.

**Skin contact**: Prolonged exposure may cause skin irritation.

**Ingestion** : Small amounts (tablespoonful) swallowed are not likely to cause injury; however,

swallowing large amounts may irritate or burn digestive tract.

Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : Adverse symptoms may include the following:

pain watering redness

**Inhalation** :No known significant effects or critical hazards.

**Skin contact** :Adverse symptoms may include the following:

pain or irritation

redness

blistering may occur if repeated exposure

**Ingestion** :Adverse symptoms may include the following:

stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

**Potential immediate** : No known significant effects or critical hazards.

effects

**Potential delayed effects**: No known significant effects or critical hazards.

Long term exposure

Potential immediate : No known significant effects or critical hazards.

effects

Potential delayed effects : No known significant effects or critical hazards

Potential chronic health effects

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.

Septility effects : No known significant effects or critical hazards.

**Fertility effects**: No known significant effects or critical hazards.

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## SAFETY DATA SHEET

**Product name** Mineral Buddies™ pH & Alk Down

**Revision date** 10-10-16

#### **Toxicological information (Continued)** Section 11

## Acute toxicity estimates

Route	ATE value
Oral	3080.3 mg/kg

## Section 12 Ecological information

**Toxicity** There is data available. Persistence and degradability : There is no data available. Bioaccumulative potential : There is no data available.

Mobility in soil

Soil/water partition coefficient (Koc)

: There is no data available.

Other adverse effects

: This product readily dissolves in water to form a weak acid solution. A 0.05 percent or greater (by weight) solution of this product will likely be acutely harmful to aquatic

life.

#### Section 13 **Disposal considerations**

**Disposal Methods** 

: The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Empty containers or liners may retain some product residues. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

#### Section 14 **Transport information**

	DOT/MEX Classification	IMDG	IATA
UN number	Not regulated	Not regulated	Not regulated
UN proper	-	-	-
Shipping name			
Transport	-	-	-
Hazard class			
Packing group	-	-	-
Environmental	No	No	No
hazards			
Additional	-	-	-
information			

Special precautions for user

:Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not available.

#### Section 15 Regulatory information

U.S. Federal regulations

: TSCA 8 (a) CDR Exempt Partial exemption: Not determined United States inventory (TSCA 8b): All components are listed or exempted.

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## SAFETY DATA SHEET

Mineral Buddies™ pH & Alk Down Product name

**Revision date** 10-10-16

Clean Air Act Section 112

(b) Hazardous Air **Pollutants (HAPs)** 

: Not Listed

Clean Air Act Section 602

Class I Substances

: Not Listed

Clean Air Act Section 602

Class II Substances

: Not Listed

**DEA List I Chemicals** 

: Not Listed

(Precursor Chemicals)

**DEA List II Chemicals** (Essential Chemicals) : Not Listed

#### SARA 302/304

## Composition/information on ingredients

No products were found.

**SARA 304 RQ:** :Not applicable

**SARA 311/312** 

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire Hazard	Sudden Release of Pressure	Reactive	Immediate (acute) Health	Delayed (chronic) Health
			11000010		hazard	hazard
Sodium Bisulfate	>90	No.	No.	No.	Yes.	No.

#### State regulations

Massachusetts : None of the components are listed. : None of the components are listed. **New York** : None of the components are listed. **New Jersey** Pennsylvania : None of the components are listed.

#### California Prop. 65

No products were found.

<u>Mexico</u>

Classification Health **Flammability** Reactivity 0 0

### Section 16 Other information

#### **DATE OF PREPARATION** 5-15-2015

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**Specifically Designed for Mineral Treated Spas** 

## SAFETY DATA SHEET

Product name Mineral Buddies™ Calcium Up

Revision date 10-10-16

Section 1 Identification

Product ID: Calcium Up

Chemical Name: Calcium Chloride
Synonyms: Calcium Chloride Flake

**CAS Number:** 10043-52-4

Product Use: Raises Calcium, Prevents Corrosion

Supplier: Oreg Corporation Distributor: Carefree Stuff

42306 Remington Ave. 5220 4<sup>th</sup> Street, Ste 2 Temecula, CA 92590 Irwindale, CA 91702 951-296-5076 626-337-0611

Emergency Phone# - CHEMTREC: 800-424-9300

Section 2 Hazards identification

GHS CLASSIFICATION: Acute Oral Toxicity Category 4

Serious Eye Damage/Eye Irritation Category 2

GHS SIGNAL WORD: WARNING

**HAZARD PICTOGRAMS:** 

 $\langle \rangle$ 

Appearance: White Physical State: Flake Odor: Odorless

Hazard Statement(s)

H302 Harmful if swallowed H316 Causes mild skin irritation H319 Causes serious eye irritation

**Precautionary Statement(s):** 

P264: Wash ... thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention.

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if

you feel unwell P330 - Rinse mouth

P280 - Wear protective gloves/protective clothing/eye protection/face protection

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# SAFETY DATA SHEET

Product name Mineral Buddies™ Calcium Up

Revision date 10-10-16

## Section 3 Composition / Information on ingredients

Chemical Name	CAS-No	Weight %
Calcium Chloride	10043-52-4	74-100
Water	7732-18-5	0-26
Sodium Chloride	7647-14-5	< 3
Potassium Chloride	7447-40-7	< 3
Magnesium Chloride	7786-30-3	< 0.5

### Section 4 First - aid measures

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye

wide open while rinsing. Obtain medical attention if irritation persists.

Skin Contact: Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and

persists.

**Inhalation:** Move to fresh air. Get medical attention immediately if symptoms occur.

**Ingestion:** IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell Rinse mouth.

Notes to Physician: Treat symptomatically and supportively.

## Section 5 Fire - fighting measures

### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable Extinguishing Media

#### Specific Hazards Arising from the Chemical

Avoid generating dust, under certain conditions may cause respiratory irritation. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

None

#### **Explosion Data**

Sensitivity to Mechanical Impact None Sensitivity to Static Discharge None

#### **Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### Section 6 Accidental release measures

#### **Personal Precautions:**

Avoid contact with the skin and the eyes. Use personal protective equipment. Avoid dust formation.

#### **Environmental Precautions:**

Prevent large spills from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12,

**Specifically Designed for Mineral Treated Spas** 

## SAFETY DATA SHEET

Product name Mineral Buddies™ Calcium Up

Revision date 10-10-16

## Section 6 Accidental release measures (Continued)

Ecological Information.

### Methods and Materials for Containment and Cleaning Up:

Small and large spills: Contain spilled material if possible. Collect in suitable and properly labeled containers. Flush residue with plenty of water. See Section 13, Disposal considerations, for additional information.

### Section 7 Handling and storage

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and

accumulation. Keep container tightly closed. Do not get on skin or in eyes. Do not ingest or inhale. Wash clothing before reuse. Always use cool water when dissolving Calcium Chloride. Heat evolved is

significant.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away

from incompatible substances. Store protected from moisture. Store below melting point.

**Incompatible Products:** Zinc, Bromine tri-fluoride, Methyl vinyl ether

## Section 8 Exposure controls / personal protection

#### **Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Calcium Chloride	ACGIH - (TLV-TWA) Guidelne	OSHA (PEL-TWA) - Z-3 Mineral	-
10043-52-4	for nuisance particulate	Dusts, Inert or Nuisance dusts,	
	(inhalable particulate): 10 mg/m3	(respirable fraction): 5 mg/m3	

**Engineering Measures** Provide local exhaust ventilations system. When there is a potential for exposure, an

emergency eyewash and safety shower should be provided within the immediate work area.

### Individual protection measures, such as personal protective equipment

**Eye/Face Protection** Wear safety glasses with non-flexible side shields or chemical goggles

Skin and Body Protection Hands and Feet:

Wear appropriate protective non-leather protective gloves and boots. Chemical protective gloves and boots such as PVC, Neoprene, or Heavy Nitrile are recommended. Leather products do not offer adequate protection and will dehydrate with resultant shrinkage and

possible destruction.

**Body:** Wear appropriate protective, impervious clothing.

**Respiratory Protection** A respirator is not indicated under normal operating conditions. Use of a NIOSH - approved

respirator (N95 or greater) should be based on the presence of nuisance dusts.

Hygiene Measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-

use. Provide regular cleaning of equipment, work area and clothing.

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# SAFETY DATA SHEET

Product name Mineral Buddies™ Calcium Up

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## Section 9 Physical and chemical properties

Physical State: Flake Appearance: white Odor: odorless

pH: 8-10 100 g/l aq.sol.Vapor Pressure: Not available.Vapor Density: Not available.Evaporation Rate: Not available.

Viscosity: Not available.

**Boiling Point:** > 1600 deg C @ 760.0 **Freezing/Melting Point:** 782 deg C

**Decomposition Temperature:** Not available.

**Solubility:** 740 g/l water (20°C)

Specific Gravity/Density: Not available.

Molecular Formula: CaCl2 Molecular Weight: 110.99

## Section 10 Stability and reactivity

Chemical Stability: Stable.

**Conditions to Avoid:** Dust generation, excess heat, exposure to moist air or water. **Incompatibilities with Other Materials:** Zinc, Bromine tri-fluoride, Methyl vinyl ether

Hazardous Decomposition Products: Hydrogen chloride, calcium oxide.

Hazardous Polymerization: Will not occur.

## Section 11 Toxicological information

#### Information on likely routes of exposure

**Inhalation** May cause irritation of respiratory tract.

**Skin Contact** Irritating to eyes. **Skin Contact** May cause irritation. **Ingestion** Harmful if swallowed.

#### **Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium Chloride	= 1000 mg/kg ( Rat )	= 2630 mg/kg ( Rat )	-
Potassium Chloride	= 2600 mg/kg ( Rat )	-	-
Sodium chloride	= 3 g/kg ( Rat )	> 10 g/kg ( Rabbit )	> 42 g/m3 ( Rat ) 1 h

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** May cause irritation to the respiratory system.

### Delayed and immediate effects and also chronic effects from short and long term exposure

Eye damage/irritation Irritating to eyes.

**Sensitization**Mutagenic Effects
No information available.
No information available.

Carcinogenicity Contains no ingredients above reportable

quantities listed as a carcinogen.

**Reproductive Toxicity**STOT - single exposure
No information available.
No information available.

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## SAFETY DATA SHEET

Product name Mineral Buddies™ Calcium Up

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## Section 11 Toxicological information (Continued)

STOT - repeated exposure
Chronic Toxicity
Aspiration Hazard
No information available.
No information available.

Numerical measures of toxicity - Product

Acute Toxicity 0% of the mixture consists of ingredient(s) of

unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document:

LD50 Oral

979 mg/kg; Acute toxicity estimate

LD50 Dermal

2630 mg/kg; Acute toxicity estimate

## Section 12 Ecological information

**Ecotoxicity** 

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Calcium Chloride 10043-52-4		LC50 96 h: = 10650 mg/L static (Lepomis macrochirus)		LC50 48 h: = 2400 mg/L (Daphnia magna)
Potassium Chloride 7447-40-7	EC50 72 h: = 2500 mg/L (Desmodesm us subspicatus)	LC50 96 h: 750-1020 mg/L static (Pimephales promelas) LC50 96 h: = 1060 mg/L static (Lepomis macrochirus)		EC50 48 h: = 825 mg/L (Daphnia magna) EC50 48 h: = 83 mg/L Static (Daphnia magna)
Sodium chloride 7647-14-5		LC50 96 h: 5560 - 6080 mg/L flow-through (Lepomis macrochirus) LC50 96 h: = 12946 mg/L static (Lepomis macrochirus) LC50 96 h: 6020 - 7070 mg/L static (Pimephales promelas) LC50 96 h: = 7050 mg/L semi-static (Pimephales promelas) LC50 96 h: 6420 - 6700 mg/L static (Pimephales promelas) LC50 96 h: 4747 - 7824 mg/L flow-through (Oncorhynchus mykiss)		EC50 48 h: = 1000 mg/L (Daphnia magna) EC50 48 h: 340.7 - 469.2 mg/L Static (Daphnia magna)

## Section 13 Disposal considerations

Waste Disposal Methods This material, as supplied, is not a hazardous waste according to Federal regulations (40

CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local

regulations for additional requirements.

**Contaminated Packaging** Do not re-use empty containers.

### **Section 14** Transport information

US DOT –Not RegulatedTDG –Not RegulatedMEX –Not Regulated

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## SAFETY DATA SHEET

Product name Mineral Buddies™ Calcium Up

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## Section 15 Regulatory information

#### **International Inventories**

TSCA Complies
DSL Complies

#### Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

#### **U.S. Federal Regulations**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

#### SARA 311/312 Hazard Categories

Acute Health Hazard Yes
Chronic Health Hazard No
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

#### **Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### **U.S. State Regulations**

### California Proposition 65

This product does not contain any Proposition 65 chemicals.

## **U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations.

#### **U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

### Section 16 Other information

HMIS Rating
Health hazard: 1
Flammability: 0
Physical Hazard 1

NFPA Rating
Health hazard: 1
Fire Hazard: 0
Reactivity Hazard: 1

#### DATE OF PREPARATION 10-10-16

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