

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **CALCIUM STEARATE [ALL GRADES]**

Other means of identification

Biogenix Product Code 10210, 10279, 10916, 13082, 14440, 21415, 24052, 40036, 40102, 40225, 40230, 40399, 4051051, 4052029, 4052029, 4052288, 4053009

SDS Code CASTEALL

Chemical Name Octadecanoic acid, calcium salt (2:1)

Recommended use of the chemical and restrictions on use

Recommended Use Lubricant. Chemical intermediate.

Uses advised against Consumer use

Details of the supplier of the safety data sheet

Supplier Address

PMC Biogenix, Inc.
1231 Pope Street
Memphis, TN 38108
USA

Manufacturer Address

PMC Biogenix, Inc.
1231 Pope Street
Memphis, TN 38108
USA

Emergency telephone number

Company Phone Number PMC Biogenix Customer Service: 1-800-641-2152

24 Hour Emergency Phone Number Chemtrec 1-800-424-9300

Emergency Telephone Biogenix Environmental Health and Safety Department +1-901-320-5820

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Combustible dust

Label elements

Emergency Overview

Warning

May form combustible dust concentrations in air

Appearance powder

Physical state Solid

Odor Slight

Hazards not otherwise classified (HNOC)

Dust can form an explosive mixture with air

Other Information

Unknown Acute Toxicity 0 % of the mixture consists of Ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula

C₁₈ H₃₆ O₂ * 1/2 Ca

Chemical Name	CAS No	Weight-%	Trade Secret
Calcium stearate	1592-23-0	96-100	*
Water	7732-18-5	0-3	*
Octadecanoic acid	57-11-4	0-3	*

*The percentage listed represents batch to batch variability in the production of this product; it does not represent any specification.

4. FIRST AID MEASURES

First aid measures

Eye contact	Molten product can cause thermal burns. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. (Call a physician if irritation persists).
Skin Contact	Molten product can cause thermal burns. In case of burns, immediately cool affected skin for as long as possible with cold water. Wash off immediately with plenty of water for at least 15 minutes. (Get medical attention immediately if symptoms occur).
Inhalation	Remove to fresh air. (Get medical attention immediately if symptoms occur).
Ingestion	Molten product can cause thermal burns. Clean mouth with water and drink afterwards plenty of water. (Get medical attention immediately if symptoms occur).

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

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

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Avoid creating dust. Dust can form an explosive mixture with air. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous combustion products Carbon dioxide (CO₂). Carbon monoxide. Hydrocarbons.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge Fine dust dispersed in air, in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas. Avoid creating dust. Dust can form an explosive mixture with air.

Environmental precautions

Environmental precautions See section 12 for additional ecological information. The product is insoluble and floats on water. Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid creating dust. Pick up and transfer to properly labeled containers. Where possible allow molten material to solidify naturally.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid creating dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines Exposure limits are listed below, if they exist.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	PMC OEL
Dust DUST	TWA: 10 mg/m ³ Inh TWA: 3 mg/m ³ Resp	TWA: 5 mg/m ³ Resp TWA: 15 mg/m ³ Total 29CFR1910.1000	-	-
Calcium stearate 1592-23-0	TWA: 10 mg/m ³ inhalable particulate matter except stearates of toxic metals TWA: 3 mg/m ³ respirable particulate matter except stearates of toxic metals	-	-	-

Appropriate engineering controls

Engineering Controls Showers, Eyewash stations, Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Heat resistant gloves are recommended when handling molten materials.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Avoid contact with skin, eyes or clothing. Avoid breathing (dust, vapor, mist, gas). Wash face, hands and any exposed skin thoroughly after handling. Use personal protective equipment as required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Solid		
Appearance	powder	Odor	Slight
Color	white	Odor threshold	No information available
<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>	
pH	Not applicable	Not applicable	
Melting point / freezing point	145-165 °C / 293-329 °F		
Boiling point / boiling range	Decomposes	Decomposes	
Flash point	176 °C / 349 °F	Cleveland Open Cup	
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		
Flammability Limit in Air			
Upper flammability limit:	No information available		
Lower flammability limit:	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Specific Gravity	No information available		
Water solubility	Insoluble in water		
Solubility in other solvents	No information available		
Partition coefficient	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Kinematic viscosity	No information available	Not applicable	
Dynamic viscosity	No information available	Not applicable	
Explosive properties	Dust can form an explosive mixture with air		
Oxidizing properties	Not applicable		

Other Information

Softening point	No information available
Molecular weight	607
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available
Minimum ignition energy (MIE)	100 mJ

10. STABILITY AND REACTIVITY

Reactivity

No known effects under normal use conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Avoid creating dust. Dust can form an explosive mixture with air. Extremes of temperature and direct sunlight.

Incompatible materials

Strong oxidizing agents.

Hazardous Decomposition Products

Carbon dioxide (CO2), Carbon monoxide, Hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information.
Inhalation	Inhalation of dust in high concentration may cause irritation of respiratory system. Vapors may be irritating to eyes, nose, throat, and lungs.
Eye contact	Dust contact with the eyes can lead to mechanical irritation. Molten product can cause thermal burns.
Skin Contact	Substance may cause slight skin irritation. Molten product can cause thermal burns.
Ingestion	None known.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Calcium stearate	5000-10000 mg/kg (Rat) >10gm/kg (Mouse)	5000 mg/kg (Rabbit)	>1.243 mg/L (Unspecified)
Octadecanoic acid	> 4600 mg/kg (Rat)	>5000 mg/kg (Rabbit)	

Information on toxicological effects

Symptoms No information available.

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

Sensitization	None known.
Germ cell mutagenicity	No known effect.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity	This product does not contain any known or suspected reproductive hazards.
STOT - single exposure	None known
STOT - repeated exposure	None known
Aspiration hazard	Not applicable.

Numerical measures of toxicity - Product Information

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

ATEmix (oral)	5209 mg/kg
ATEmix (dermal)	5209 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Calcium stearate 1592-23-0	>3.5 mg/L Algae	>100 mg/l		>100 mg/l (Daphnia magna)
Octadecanoic acid 57-11-4		12000 ug/L >4 d Oncorhynchus kisutch		

Persistence and degradability

No information available.

Bioaccumulation

Not Likely.

Chemical Name	Partition coefficient
Octadecanoic acid 57-11-4	8.23

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container. Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
IATA	Not regulated.
Proper shipping name	Not regulated
IMDG	Not regulated.

15. REGULATORY INFORMATION

All of the components in the product are on the following Inventory lists
Canada DSL.

International Inventories

EINECS/ELINCS	Complies or Exempt
TSCA	Complies
AICS	Complies
DSL/NDSL	Complies
ENCS	Complies
KECL	Complies
PICCS	Complies
IECSC	Complies
NZIoC	Complies
TCSI	Complies

Legend:

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AICS** - Australian Inventory of Chemical Substances
- NZIoC** - New Zealand Inventory of Chemicals
- TCSI** - Taiwan Chemical Substance Inventory

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). Any Substance regulated Title 40 of the Code of Federal Regulations, Part 372 is listed below, if it exists.

SARA 311/312 Hazard Categories Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

CWA (Clean Water Act)
Any Substance regulated as a pollutant pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42) is listed below, if it exists.

CERCLA
Any Substance regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) is listed below, if it exists.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA	Health hazards 1	Flammability 1	Instability 0	Physical and Chemical Properties - Personal protection X
HMIS	Health hazards 1	Flammability 1	Physical hazards 0	

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Revision Note

(M)SDS sections updated 11 15
This material safety data sheet complies with the requirements of 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Disclaimer
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet