

# Potassium oleate

sc-250763



The Power is Question

## Material Safety Data Sheet

Hazard Alert Code Key:

EXTREME

HIGH

MODERATE

LOW

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

Potassium oleate

### STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

### NFPA



### SUPPLIER

Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, California 95060  
800.457.3801 or 831.457.3800

### EMERGENCY

ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

### SYNONYMS

C18-H33-O2-K, CH<sub>3</sub>-(CH<sub>2</sub>)<sub>6</sub>-CH<sub>2</sub>-CH=CH-CH<sub>2</sub>-(CH<sub>2</sub>)<sub>6</sub>-COOK, CH<sub>3</sub>-(CH<sub>2</sub>)<sub>7</sub>-CH=CH-(CH<sub>2</sub>)<sub>7</sub>-COOH, "potash oleate", "oleic acid, potassium salt", "cis-9-octadecenoic acid, potassium salt", "9-octadecenoic acid (Z)-, potassium salt", "octadec-9-enoic acid, potassium salt", "potassium octadec-9-enoate", "Trenamine D-200", "Trenamine D-201"

## Section 2 - HAZARDS IDENTIFICATION

### CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability:	1	
Toxicity:	2	
Body Contact:	2	
Reactivity:	1	
Chronic:	2	

Min/Nil=0  
Low=1  
Moderate=2  
High=3  
Extreme=4



### CANADIAN WHMIS SYMBOLS



## EMERGENCY OVERVIEW

### RISK

Irritating to eyes, respiratory system and skin.

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

- Accidental ingestion of the material may be damaging to the health of the individual.
- Acute potassium poisoning after swallowing is rare, because vomiting usually occurs and renal excretion is fast. Potassium causes a slow, weak pulse, irregularities in heart rhythm, heart block and an eventual fall in blood pressure.
- Ingestion of anionic surfactants may produce diarrhea, bloated stomach, and occasional vomiting.

##### EYE

- This material can cause eye irritation and damage in some persons.
- Direct eye contact with some anionic surfactants in high concentration can cause severe damage to the cornea. Low concentrations can cause discomfort, excess blood flow, and corneal clouding and swelling.

##### SKIN

- This material can cause inflammation of the skin on contact in some persons.
- The material may accentuate any pre-existing dermatitis condition.
- Skin contact is not thought to have harmful health effects, however the material may still produce health damage following entry through wounds, lesions or abrasions.
- Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.
- Anionic surfactants can cause skin redness and pain, as well as a rash. Cracking, scaling and blistering can occur.
- Open cuts, abraded or irritated skin should not be exposed to this material.
- Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

##### INHALED

- The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
- Not normally a hazard due to non-volatile nature of product.

#### CHRONIC HEALTH EFFECTS

- Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Prolonged or repeated skin contact may cause degreasing with drying, cracking and dermatitis following.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
potassium oleate	143-18-0	100

## Section 4 - FIRST AID MEASURES

### SWALLOWED

· If swallowed do NOT induce vomiting. · If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

### EYE

■ If this product comes in contact with the eyes: · Wash out immediately with fresh running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

### SKIN

■ If skin contact occurs: · Immediately remove all contaminated clothing, including footwear · Flush skin and hair with running water (and soap if available).

### INHALED

· If fumes or combustion products are inhaled remove from contaminated area. · Lay patient down. Keep warm and rested.

### NOTES TO PHYSICIAN

- Treat symptomatically.

## Section 5 - FIRE FIGHTING MEASURES

Vapour Pressure (mmHG):	Negligible
Upper Explosive Limit (%):	Not Available
Specific Gravity (water=1):	Not available.
Lower Explosive Limit (%):	Not Available

## EXTINGUISHING MEDIA

- Water spray or fog.
- Foam.

## FIRE FIGHTING

- Alert Emergency Responders and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.

## GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

- Combustible.
  - Slight fire hazard when exposed to heat or flame.
- Combustion products include: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), other pyrolysis products typical of burning organic material.  
May emit poisonous fumes.  
May emit corrosive fumes.

## FIRE INCOMPATIBILITY

- Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result.

## PERSONAL PROTECTION

Glasses:

Chemical goggles.

Gloves:

Respirator:

Type A-P Filter of sufficient capacity

## Section 6 - ACCIDENTAL RELEASE MEASURES

### MINOR SPILLS

- Slippery when spilt.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Wear impervious gloves and safety goggles.
- Trowel up/scrape up.
- Place spilled material in clean, dry, sealed container.
- Flush spill area with water.

### MAJOR SPILLS

- Clear area of personnel and move upwind.
  - Alert Emergency Responders and tell them location and nature of hazard.
- Slippery when spilt.

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.

### RECOMMENDED STORAGE METHODS

- Glass container.
- Metal can or drum
- Packing as recommended by manufacturer.

### STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>	TWA F/CC	Notes
US - Alaska Limits for Air Contaminants	potassium oleate (Tin oxide (as Sn))		2						
US OSHA Permissible Exposure Levels (PELs) - Table Z2	potassium oleate (Cadmium dust (b) (Z37.5-1970))		0.2				0.6		
US ACGIH Threshold Limit Values (TLV)	potassium oleate (Cadmium - Metal &		0.01						TLV Basis: kidney damage

	compounds (as Cd))				
US ACGIH Threshold Limit Values (TLV)	potassium oleate (Cadmium - Metal & compounds (as Cd))	0.002			TLV Basis: kidney damage
Canada - Prince Edward Island Occupational Exposure Limits	potassium oleate (Cadmium - Metal & compounds (as Cd))	0.002			TLV Basis: kidney damage
Canada - Quebec Permissible Exposure Values for Airborne Contaminants (English)	potassium oleate (Cadmium elemental and compounds (as Cd))	0.025			
US OSHA Permissible Exposure Levels (PELs) - Table Z2	potassium oleate (Cadmium fume (b) (Z37.5-1970))	0.1		0.3	
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants	potassium oleate (Cadmium dust (as Cd))	0.2		0.6	
Canada - British Columbia Occupational Exposure Limits	potassium oleate (Cadmium and compounds, as Cd)	0.01			A2, 1
Canada - British Columbia Occupational Exposure Limits	potassium oleate (Cadmium and compounds, Respirable, as Cd)	0.002			A2, 1
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	potassium oleate (Cadmium, and compounds, (as Cd): (respirable fraction++))	0.002	0.006		T20
US - Hawaii Air Contaminant Limits	potassium oleate (Cadmium fume (as Cd))			0.05	
Canada - Yukon Permissible Concentrations for Airborne Contaminant Substances	potassium oleate (Cadmium, dust and salts (as Cd))	0.05		0.15	
US - Washington Permissible exposure limits of air contaminants	potassium oleate (Cadmium dust and salts (as Cd) (see WAC 296-62-074 and 296-155-174))	0.005			
Canada - Saskatchewan Occupational Health and Safety Regulations - Contamination Limits	potassium oleate (Cadmium, and compounds, (as Cd): (total fraction))	0.01	0.03		T20

Canada - Nova Scotia Occupational Exposure Limits	potassium oleate (Cadmium - Metal & compounds (as Cd))	0.01			TLV Basis: kidney damage
Canada - Nova Scotia Occupational Exposure Limits	potassium oleate (Cadmium - Metal & compounds (as Cd))	0.002			TLV Basis: kidney damage
Canada - Prince Edward Island Occupational Exposure Limits	potassium oleate (Cadmium - Metal & compounds (as Cd))	0.01			TLV Basis: kidney damage
US - Hawaii Air Contaminant Limits	potassium oleate (Cadmium dust (as Cd))	0.05		0.2	
Canada - Northwest Territories Occupational Exposure Limits (English)	potassium oleate (Cadmium, dust & salts (as Cd))	0.05		0.2	
Canada - Northwest Territories Occupational Exposure Limits (English)	potassium oleate (Cadmium oxide fume (as Cd))				0.05
Canada - Ontario Occupational Exposure Limits	potassium oleate (Particles (Insoluble or Poorly Soluble) Not Otherwise)	10 (I)			
Canada - British Columbia Occupational Exposure Limits	potassium oleate (Particles (Insoluble or Poorly Soluble) Not Otherwise Classified (PNOC))	10 (N)			
Canada - Ontario Occupational Exposure Limits	potassium oleate (Specified (PNOS) / Particules (insolubles ou peu solubles) non précisées par ailleurs)	3 (R)			
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	potassium oleate (Particulates not otherwise regulated Respirable fraction)	5			
US - California Permissible Exposure Limits for Chemical Contaminants	potassium oleate (Particulates not otherwise regulated Respirable fraction)	5			(n)
US - Oregon Permissible Exposure Limits (Z-1)	potassium oleate (Particulates not otherwise regulated (PNOR) (f) Total Dust)	10			Bold print identifies substances for which the Oregon Permissible

				Exposure Limits (PELs) are different than the federal Limits. PNOR means "particles not otherwise regulated."
US - Michigan Exposure Limits for Air Contaminants	potassium oleate (Particulates not otherwise regulated, Respirable dust)		5	
US - Oregon Permissible Exposure Limits (Z-1)	potassium oleate (Particulates not otherwise regulated (PNOR) (f) Respirable Fraction)	-	5	Bold print identifies substances for which the Oregon Permissible Exposure Limits (PELs) are different than the federal Limits. PNOR means "particles not otherwise regulated."
US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants	potassium oleate (Particulates not otherwise regulated (PNOR)(f)-Respirable fraction)		5	
Canada - Prince Edward Island Occupational Exposure Limits	potassium oleate (Particles (Insoluble or Poorly Soluble) [NOS] Inhalable particles)		10	See Appendix B current TLV/BEI Book

ENDOELTABLE

**PERSONAL PROTECTION**



**RESPIRATOR**

• type a-p filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)  
 Consult your EHS staff for recommendations

**EYE**

- Safety glasses with side shields.
- Chemical goggles.

**HANDS/FEET**

- Wear chemical protective gloves, eg. PVC.

**OTHER**

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

**ENGINEERING CONTROLS**

- General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### PHYSICAL PROPERTIES

Liquid.

Mixes with water.

State	Non slump paste	Molecular Weight	320.56
Melting Range (°F)	Not available.	Viscosity	Not Applicable
Boiling Range (°F)	Not available.	Solubility in water (g/L)	Miscible
Flash Point (°F)	Not Available	pH (1% solution)	Not available
Decomposition Temp (°F)	Not available.	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available.	Vapour Pressure (mmHG)	Negligible
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	Not available.
Lower Explosive Limit (%)	Not Available	Relative Vapor Density (air=1)	Not applicable
Volatile Component (%vol)	Negligible.	Evaporation Rate	Not applicable

### APPEARANCE

Yellowish or brownish soft solid; may also be crystalline. Tallow-like odour. Soluble in water and alcohol and has surfactant properties.

No experimental bioaccumulation data appear to be available but log Kow data from various sources are higher than 4, which indicates that fatty acids and natural lipids have a potential for bioaccumulating in aquatic organisms

Material	Value
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## Section 10 - CHEMICAL STABILITY

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Product is considered stable and hazardous polymerization will not occur.

### STORAGE INCOMPATIBILITY

- Avoid reaction with oxidizing agents.

For incompatible materials - refer to Section 7 - Handling and Storage.

## Section 11 - TOXICOLOGICAL INFORMATION

potassium oleate

### TOXICITY AND IRRITATION

POTASSIUM OLEATE:

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
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Eye (rabbit): 12 mg/48h

■ Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

Fatty acid salts are of low acute toxicity. Their skin and eye irritation potential is chain length dependent and decreases with increasing chain length - they are poorly absorbed through the skin nor are they skin sensitisers. The available repeated dose toxicity data demonstrate the low toxicity of the fatty acids and their salts. Also, they are not considered to be mutagenic, genotoxic or carcinogenic, and are not reproductive or developmental toxicants. Accidental ingestion of fatty acid salt containing detergent products is not expected to result in any significant adverse health effects. This assessment is based on toxicological data demonstrating the low acute oral toxicity of fatty acid salts and the fact that not a single fatality has been reported in the UK following accidental ingestion of detergents containing fatty acid salts. Also in a report published by the German Federal Institute for Health Protection of Consumers and Veterinary Medicine, detergent products were not mentioned as dangerous products with a high incidence if poisoning. The estimated total human exposure to fatty acid salts, from the different exposure scenarios for the handling and use of detergent products containing fatty acid salts, showed a margin of exposure (MOE) of 258,620. This extremely large MOE is large enough to be reassuring with regard to the relatively small variability of the hazard data on which it is based. Also, in the UK, the recommended dietary fatty acid intake by the Department of Health is about 100 g of fatty acids per day or 1.7 g (1700 mg) of fatty acids per kilogram body weight per day. This exposure is several orders of magnitude above that resulting from exposure to fatty acid salts in household cleaning products. Based on the available data, the use of fatty acid salts in household detergent and cleaning products does not raise any safety concerns with regard to consumer.

**CARCINOGEN**

Cadmium and cadmium compounds	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	1
Barium and Compounds	US EPA Carcinogens Listing	Carcinogenicity	D
Barium and Compounds (Inhalation Route)*	US EPA Carcinogens Listing	Carcinogenicity	CBD
Barium and Compounds (Oral Route)*	US EPA Carcinogens Listing	Carcinogenicity	NL
Barium and Compounds	US ACGIH Threshold Limit Values (TLV) - Carcinogens	Carcinogen Category	D
Barium and Compounds (Inhalation Route)*	US ACGIH Threshold Limit Values (TLV) - Carcinogens	Carcinogen Category	CBD
Barium and Compounds (Oral Route)*	US ACGIH Threshold Limit Values (TLV) - Carcinogens	Carcinogen Category	NL
Cadmium - Metal & compounds (as Cd)	US ACGIH Threshold Limit Values (TLV) - Carcinogens	Carcinogen Category	A2
potassium oleate	US - Rhode Island Hazardous Substance List	IARC	C
CADMIUM COMPOUNDS	US Environmental Defense Scorecard Recognized Carcinogens	Reference(s)	P65
CADMIUM COMPOUNDS	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	P65
ESTROGENS, NONSTEROIDAL	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	IARC
Cadmium (and compounds)	US Air Toxics Hot Spots TSD for Describing Available Cancer Potency Factors	IARC Class	1
Cadmium and its Compounds - Dust (as Cd)	US NIOSH Recommended Exposure Limits (RELs) - Carcinogens	Carcinogen	Ca
potassium oleate	US - Maine Chemicals of High Concern List	Carcinogen	D
potassium oleate	US - Maine Chemicals of High Concern List	Carcinogen	CBD
potassium oleate	US - Maine Chemicals of High Concern List	Carcinogen	NL
TWAPPM~	US - Maine Chemicals of High Concern List	Carcinogen	A2
VPVB_(VERY~	US - Maine Chemicals of High Concern List	Carcinogen	IARC
PBIT_(PERS~	US - Maine Chemicals of High Concern List	Carcinogen	

**Section 12 - ECOLOGICAL INFORMATION**

No data

**Ecotoxicity**

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
potassium oleate	No Data Available	No Data Available		

**GESAMP/EHS COMPOSITE LIST - GESAMP Hazard Profiles**

Name / EHS TRN A1a A1b A1 A2 B1 B2 C1 C2 C3 D1 D2 D3 E1 E2 E3 Cas No / RTECS No \_\_\_\_\_  
 \_\_\_\_\_ Potassium 149 617 3 3 R 4 NI (0) (0) (1) 1 1 FD 1 oleate / 7 CAS:143- 18- 0 /

Legend: EHS=EHS Number (EHS=GESAMP Working Group on the Evaluation of the Hazards of Harmful Substances Carried by Ships) NRT=Net Register Tonnage, A1a=Bioaccumulation log Pow, A1b=Bioaccumulation BCF, A1=Bioaccumulation, A2=Biodegradation, B1=Acuteaquatic toxicity LC/ECIC50 (mg/l), B2=Chronic aquatic toxicity NOEC (mg/l), C1=Acute mammalian oral toxicity LD50 (mg/kg), C2=Acutemammalian dermal toxicity LD50 (mg/kg), C3=Acute mammalian inhalation toxicity LC50 (mg/kg), D1=Skin irritation & corrosion, D2=Eye irritation& corrosion, D3=Long-term health effects, E1=Tainting, E2=Physical effects on wildlife & benthic habitats, E3=Interference with coastal amenities, For column A2: R=Readily biodegradable, NR=Not readily biodegradable. For column D3: C=Carcinogen, M=Mutagenic, R=Reprotoxic, S=Sensitising, A=Aspiration hazard, T=Target organ systemic toxicity, L=Lunginjury, N=Neurotoxic, I=Immunotoxic. For column E1: NT=Not tainting (tested), T=Tainting test positive. For column E2: Fp=Persistent floater, F=Floater, S=Sinking substances. The numerical scales start from 0 (no hazard), while higher numbers reflect increasing hazard. (GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships)



## Section 13 - DISPOSAL CONSIDERATIONS

### Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult Waste Management Authority for disposal.

## Section 14 - TRANSPORTATION INFORMATION

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: DOT, IATA, IMDG

## Section 15 - REGULATORY INFORMATION

## Section 16 - OTHER INFORMATION

### LIMITED EVIDENCE

- Ingestion may produce health damage\*.
- Cumulative effects may result following exposure\*.
- Repeated exposure potentially causes skin dryness and cracking\*.

\* (limited evidence).

### Ingredients with multiple CAS Nos

Ingredient Name CAS potassium oleate 143-18-0, 8026-70-8

*Reasonable care has been taken in the preparation of this information, but the author makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The author makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.*

- Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

[www.chemwatch.net/references](http://www.chemwatch.net/references).

- The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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