

SAFETY DATA SHEET

Creation Date 24-Nov-2010

Revision Date 24-Apr-2014

Revision Number 1

1. Identification

Product Name Potassium chlorate
Cat No. : NC-11210, C6314, C6315
Synonyms Berthollet's Salt; Chlorate of Potash; Salt of Tarter
Recommended Use Laboratory chemicals
Uses advised against No Information available

Details of the supplier of the safety data sheet

| | |
|---|--|
| Company Science Company 7625 W Hampden Ave #14 Lakewood CO 80227 Tel: 303-777-3777 Fax: 303-777-3331 | Emergency Telephone Number CHEMTREC®, Inside the USA: 800-424-9300 CHEMTREC®, Outside the USA: 001-703-527-3887 |
|---|--|

2. Hazard(s) Identification

Classification

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

| | |
|---|------------|
| Oxidizing solids | Category 1 |
| Acute oral toxicity | Category 4 |
| Acute Inhalation Toxicity - Dusts and Mists | Category 4 |

Label Elements

Signal Word
Danger

Hazard Statements
May cause fire or explosion; strong oxidizer
Harmful if swallowed
Harmful if inhaled



Precautionary Statements**Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep/Store away from clothing/ other combustible materials
 Take any precaution to avoid mixing with combustibles
 Wear protective gloves/protective clothing/eye protection/face protection
 Wear fire/flame resistant/retardant clothing

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Call a POISON CENTER or doctor/physician if you feel unwell

Skin

IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Fire

In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion
 In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage

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

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Toxic to aquatic life with long lasting effects

3. Composition / information on ingredients

Haz/Non-haz

| Component | CAS-No | Weight % |
|--------------------|-----------|----------|
| Potassium chlorate | 3811-04-9 | >95 |

4. First-aid measures

| | |
|--|---|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur. |
| Inhalation | Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required. |
| Ingestion | Do not induce vomiting. Call a physician or Poison Control Center immediately. |
| Most important symptoms/effects | No information available |
| Notes to Physician | Treat symptomatically. |

5. Fire-fighting measures

| | |
|---|---|
| Suitable Extinguishing Media | Cool closed containers exposed to fire with water spray. Water spray. Carbon dioxide (CO ₂). Dry chemical. chemical foam. |
| Unsuitable Extinguishing Media | No information available. |
| Flash Point | No information available. |
| Method - | No information available |
| Autoignition Temperature | No information available. |
| Explosion Limits | |
| Upper | No data available |
| Lower | No data available |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

Oxidizer: Contact with combustible/organic material may cause fire. Containers may explode when heated.

Hazardous Combustion Products Hydrogen chloride gas, Chlorine.

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.

NFPA

| | | | |
|---------------|---------------------|--------------------|-------------------------|
| Health | Flammability | Instability | Physical hazards |
| 2 | 0 | 3 | OX |

6. Accidental release measures

| | |
|---|--|
| Personal Precautions | Use personal protective equipment. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid dust formation. |
| Environmental Precautions | See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage. |
| Methods for Containment and Clean Up | Keep combustibles (wood, paper, oil, etc) away from spilled material. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. |

7. Handling and storage

| | |
|-----------------|--|
| Handling | Use only under a chemical fume hood. Wear personal protective equipment. Keep away from clothing and other combustible materials. Avoid dust formation. Do not breathe dust. Do not breathe vapors or spray mist. Do not ingest. |
| Storage | Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Do not store near combustible materials. |

8. Exposure controls / personal protection

| | |
|-----------------------------|---|
| Exposure Guidelines | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |
| Engineering Measures | Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. |

Personal Protective Equipment

| | |
|---------------------------------|--|
| Eye/face Protection | Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166 |
| Skin and body protection | Wear appropriate protective gloves and clothing to prevent skin exposure |
| Respiratory Protection | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced |
| Hygiene Measures | Handle in accordance with good industrial hygiene and safety practice |

9. Physical and chemical properties

| | |
|---|-------------------------------|
| Physical State | Powder Solid |
| Appearance | White |
| Odor | Odorless |
| Odor Threshold | No information available. |
| pH | 5-6 73 g/l aq. sol. |
| Melting Point/Range | 356 - 368°C / 672.8 - 694.4°F |
| Boiling Point/Range | No information available |
| Flash Point | No information available. |
| Evaporation Rate | No information available. |
| Flammability (solid,gas) | No information available |
| Flammability or explosive limits | |
| Upper | No data available |
| Lower | No data available |
| Vapor Pressure | No information available. |
| Vapor Density | No information available. |
| Relative Density | No information available. |
| Solubility | No information available. |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | No information available. |
| Decomposition temperature | 400 °C |
| Viscosity | No information available. |
| Molecular Formula | Cl K O3 |
| Molecular Weight | 122.55 |

10. Stability and reactivity

| | |
|---|---|
| Reactive Hazard | Yes |
| Stability | Oxidizer: Contact with combustible/organic material may cause fire. |
| Conditions to Avoid | Excess heat. Incompatible products. Combustible material. |
| Incompatible Materials | Acids, Alcohols, Strong reducing agents, Hydrocarbons, Organic materials, Powdered metals |
| Hazardous Decomposition Products | Hydrogen chloride gas, Chlorine |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing |

11. Toxicological information**Acute Toxicity**

Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--------------------|--------------------|-----------------------|-----------------|
| Potassium chlorate | 1870 mg/kg (Rat) | 2000 mg/kg (Rabbit) | Not listed |

Toxicologically Synergistic Products No information available.

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

Irritation No information available.

Sensitization No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|--------------------|-----------|------------|------------|------------|------------|------------|
| Potassium chlorate | 3811-04-9 | Not listed | Not listed | Not listed | Not listed | Not listed |

Mutagenic Effects No information available.

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known.

STOT - repeated exposure None known.

Aspiration hazard No information available.

Symptoms / effects, both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. .

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|--------------------|------------------|---|------------|-----------------------|
| Potassium chlorate | Not listed | 1750 mg/L LC50 96 h 13500 mg/L LC50 96 h | Not listed | 1093 mg/L EC50 = 24 h |

Persistence and Degradability No information available.

Bioaccumulation/ Accumulation No information available

Mobility No information available

13. Disposal considerations

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

14. Transport information

DOT

UN-No UN1485
 Proper Shipping Name POTASSIUM CHLORATE
 Hazard Class 5.1
 Packing Group II

TDG

UN-No UN1485
 Proper Shipping Name POTASSIUM CHLORATE
 Hazard Class 5.1
 Packing Group II

IATA

UN-No 1485
 Proper Shipping Name POTASSIUM CHLORATE
 Hazard Class 5.1
 Packing Group II

IMDG/IMO

UN-No 1485
 Proper Shipping Name POTASSIUM CHLORATE
 Hazard Class 5.1
 Packing Group II

15. Regulatory information

International Inventories

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|--------------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Potassium chlorate | X | X | - | 223-289-7 | - | | X | X | X | X | X |

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

SARA 311/312 Hazardous Categorization

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

Clean Water Act Not applicable

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
 Not applicable

CERCLA
 Not applicable

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

State Right-to-Know

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--------------------|---------------|------------|--------------|----------|--------------|
| Potassium chlorate | X | X | X | - | X |

U.S. Department of Transportation

Reportable Quantity (RQ): N
 DOT Marine Pollutant N
 DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product contains the following DHS chemicals:

| Component | DHS Chemical Facility Anti-Terrorism Standard |
|--------------------|---|
| Potassium chlorate | 2000 lb STQ |

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class C Oxidizing materials
 D1B Toxic materials



16. Other information

| | |
|-------------------------|---|
| Prepared By | Regulatory Affairs Science Company Email: info@sciencecompany.com |
| Creation Date | 24-Nov-2010 |
| Revision Date | 24-Apr-2014 |
| Print Date | 24-Apr-2014 |
| Revision Summary | This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). |

Disclaimer

The information provided on this 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS