Fisher Scientific

Part of Thermo Fisher Scientific

SAFETY DATA SHEET

Creation Date 24-Nov-2010 **Revision Date** 24-Apr-2014 **Revision Number** 1

1. Identification

Product Name **Potassium chlorate**

Cat No. : **P210-500; P212-100; P212-500**

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
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

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 Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.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