Nutrien
Feeding the Future™

SAFETY DATA SHEET

MURIATE OF POTASH

Section 1. Identification

Product identifier : MURIATE OF POTASH

Product code : GRA, SOG, STD, SUS, SOL, SOGOS

SDS # : N-2155

Other means of identification : Potassium chloride (KCl)

This safety data sheet applies to the following:

GRA - Muriate of Potash 0-0-60 Granular
SOG - Muriate of Potash 0-0-62 White Granular
STD - Muriate of Potash 0-0-60 Standard
SUS - Muriate of Potash 0-0-60 Suspension
SOL - Muriate of Potash 0-0-62 Soluble
SOGOS - Muriate of Potash 0-0-61 Granular Off Spec

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Fertilizer. Manufacture of specialty fertilizers.

Uses advised against
Not available.

Supplier's details : PCS Sales (Canada), Inc. (A Subsidiary of Nutrien Ltd.)
Suite 1700
211 - 19th Street East
Saskatoon SK S7K 5R6
Canada

Telephone no. : 1-800-524-0132

Email : sds@nutrien.com

Emergency telephone number (with hours of operation) : CHEMTREC (24 hrs) 1-800-424-9300 or +1-703-527-3887

Section 2. Hazard identification

Classification in accordance with the Hazardous Products Regulations (SOR/2015-17; SOR/2022-272)

Classification of the substance or mixture : Not classified.

GHS label elements

Hazard pictograms : Not applicable.

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Section 2. Hazard identification

General : Read carefully and follow all instructions. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	% (w/w)	Identifiers
potassium chloride	90 - 100	CAS: 7447-40-7
sodium chloride	1 - 5	CAS: 7647-14-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

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. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove person to fresh air and keep comfortable for breathing. If exposed person is not breathing, give artificial respiration or oxygen applied by trained personnel. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards. May cause irritation due to mechanical action.

Inhalation : No known significant effects or critical hazards.

Skin contact : Inorganic salt. Prolonged or repeated exposure may dry the skin, causing irritation.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
watering
redness

Inhalation : No specific data.

Section 4. First-aid measures

Skin contact : Adverse symptoms may include the following:
dryness
cracking

Ingestion : No specific data.

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. Decontamination measures may be necessary. Personnel and equipment must be checked and decontaminated prior to leaving the area.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : None known.

Special protective actions for fire-fighters : No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Contain and collect the water used to fight the fire for later treatment and disposal.

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.

Remark : Contain and collect the water used to fight the fire for later treatment and disposal.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency 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 adverse impacts (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

Small spill : Put on appropriate personal protective equipment (see Section 8). Move containers from spill area. Recover the material and use it for the intended purpose.
or
Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Put on appropriate personal protective equipment (see Section 8). Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Use appropriate equipment to put the spilled substance in a container for reuse or disposal. Recycle to process, if possible.
or
Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin and clothing. Do not ingest. Avoid breathing dust.

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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. May form steep piles that can collapse without warning when transported or stored in bulk. This may damage equipment and endanger workers. The risk of cliffing and sudden collapse increases if product is loaded or stored when hot or in high humidity conditions. Avoid forming steep slopes when removing product. If product has caked, cliffed, or has adhered to the storage or transport container, stay out of the potential engulfment zone in case the material collapses. Do not enter bins, railcars or trucks without conducting a risk assessment and following all confined space entry requirements. Ensure that consideration is given to fall protection and mobile equipment securement if applicable. Carefully loosen the set product from outside the container using mechanical vibration, sledge hammers, or other devices.

Ensure that bulk bags or smaller packaged products stored in tiers are stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, rolling, or collapse. Use caution when opening truck or railcar doors as product may have shifted during transport.

Must be stored in a dry location. Absorbs moisture on long-term storage under high humidity conditions. Store away from incompatible materials (see Section 10). When product is stored in sealable containers, keep container tightly closed and sealed until ready for use. Sealable containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
sodium chloride	**CA Quebec Provincial.** (Canada) TWA 8 hours: 10 mg/m³ (Particulates not otherwise regulated (PNOR)). Form: Total.

Section 8. Exposure controls/personal protection

Biological exposure indices

No exposure indices known.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Contact your personal protective equipment supplier to verify the compatibility of the equipment for the intended purpose.

Hygiene measures : 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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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 : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Solid. [Crystalline solid.]

Color : Off-white, pink or red.

Odor : Odorless.

Odor threshold : Not available.

pH : 7 to 9 [Conc. (% w/w): 10%]

Melting point/freezing point : 770°C (1418°F)

Boiling point or initial boiling point and boiling range : 1420°C (2588°F)

Flash point : Not applicable.

Section 9. Physical and chemical properties

Evaporation rate : Not available.

Flammability : Non-flammable.

Lower and upper explosion limit/flammability limit : Not applicable.

Vapor pressure : Not available.

Relative vapor density : Not applicable.

Relative density : Not available.

Density : 1.121 to 1.297 g/cm³

Bulk density : 70 to 81 lb/ft³

Solubility(ies) :

Media	Result
water	Soluble

Solubility in water : 347 to 355 g/l

Partition coefficient: n-octanol/water : <1

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

Viscosity : Not applicable.

Particle characteristics

Median particle size : Not available.

Section 10. Stability and reactivity

Reactivity : Not considered to be reactive.

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 : Absorbs moisture on long-term storage under high humidity conditions. Store in a well-ventilated, dry place. Protect from moisture. May form steep piles that can collapse without warning when stored in bulk. Avoid forming steep slopes when removing product.

Incompatible materials : A mixture of salts. May be corrosive to metals. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment.

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
potassium chloride	**Rat - Oral - LD50** 2600 mg/kg
sodium chloride	**Rat - Oral - LD50** 3000 mg/kg

Conclusion/Summary [Product] : May be harmful if swallowed.

Skin corrosion/irritation

Product/ingredient name	Result
sodium chloride	**Rabbit - Skin - Mild irritant**

Conclusion/Summary [Product] : No significant irritation expected other than possible mechanical irritation.

Serious eye damage/eye irritation

Product/ingredient name	Result
potassium chloride	**Rabbit - Eyes - Mild irritant**

Conclusion/Summary [Product] : No significant irritation expected other than possible mechanical irritation.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : No significant irritation expected other than possible mechanical irritation.

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Respiratory

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Germ cell mutagenicity

Product/ingredient name	Result
potassium chloride	**In vivo - Mammalian-Animal - Somatic** 310 mg/kg [10 days] Result: Negative

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Carcinogenicity

Product/ingredient name	Result
potassium chloride	**Rat - Male - Oral - TDLo** 1820 mg/kg Result: Negative
sodium chloride	**Rat - Male - Oral - TDLo** OECD [Combined Chronic Toxicity/ Carcinogenicity Studies] Result: Negative

Section 11. Toxicological information

Conclusion/Summary [Product] : No evidence of risk to humans. No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on the likely routes of exposure

Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : No known significant effects or critical hazards. May cause irritation due to mechanical action.

Inhalation : No known significant effects or critical hazards.

Skin contact : Inorganic salt. Prolonged or repeated exposure may dry the skin, causing irritation.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
dryness
cracking

Ingestion : No specific data.

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

Short term exposure

Potential immediate effects : See above.

Potential delayed effects : See below.

Long term exposure

Potential immediate effects : See above.

Potential delayed effects : See below.

Section 11. Toxicological information

Potential chronic health effects

Product/ingredient name	Result
potassium chloride sodium chloride	**Chronic - Rat - Male - Oral - NOAEL** 1820 mg/kg **Chronic - Rat - Male - Oral - LOEL** OECD [Combined Chronic Toxicity/Carcinogenicity Studies] 2533 mg/kg [2 years]

Conclusion/Summary [Product] : Not considered to be toxic to humans.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
potassium chloride sodium chloride	2600 3000	N/A N/A	N/A N/A	N/A N/A	N/A N/A

Other information

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
potassium chloride	**Acute - LC50 - Fresh water** Crustaceans - Water flea - *Pseudosida ramosa* - Neonate 9.68 mg/l [48 hours] **Acute - EC50 - Fresh water** ISO Algae - Green algae - *Desmodesmus subspicatus* 9.24 g/l [72 hours] **Acute - LC50 - Fresh water** Fish - Zebra danio - *Danio rerio* 509.65 mg/l [96 hours]
sodium chloride	**Acute - LC50 - Fresh water** Fish - Striped bass - *Morone saxatilis* - Larvae 1000 mg/l [96 hours] **Chronic - NOEC - Fresh water** Daphnia - Water flea - *Daphnia pulex* 0.314 g/l [21 days] **Chronic - NOEC - Fresh water** Fish - Eastern mosquitofish - *Gambusia holbrooki* - Adult 100 mg/l [8 weeks] **Chronic - NOEC - Fresh water** OECD Aquatic plants - Duckweed - *Lemna minor* 6 g/l [96 hours] **Acute - EC50 - Fresh water** OECD Daphnia - Water flea - *Daphnia magna* - Neonate 4.96 µg/l [48 hours] **Acute - EC50 - Fresh water** Algae - Green algae - *Selenastrum capricornutum* 28.85 mg/dm³ [72 hours]

Section 12. Ecological information

Conclusion/Summary [Product] : Practically non-toxic to aquatic organisms. May be harmful to the environment if released in large quantities.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TDG Classification	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.

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.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: All components are listed or exempted.

Japan : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : All components are listed or exempted.

Turkey : Not determined.

United States : All components are active or exempted.

Viet Nam : All components are listed or exempted.

Section 16. Other information

History

Date of issue/Date of revision : 11/27/2025

Date of previous issue : No previous validation

Version : 1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
DOT = Department of Transportation
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods

Section 16. Other information

IMO = International Maritime Organization
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
TDG = Transportation of Dangerous Goods
UN = United Nations

Procedure used to derive the classification

Not classified.

Indicates information that has changed from previously issued version.

Notice to reader

Supply chain partners must ensure they pass this SDS, and all other relevant safety information to their customers.

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