INTEROCEANIC

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SAFETY DATA SHEET

Potash, 0-0-60

Section 1. Identification

Product identifier : Potash, 0-0-60

Chemical name : Potassium Chloride

Formula : KCl

Other means of identification : Muriate of Potash, MOP, Potassium chloride, KCl

Product type : Solid

Relevant uses of the substance or mixture and uses advised against

Identified uses

Fertilizer, manufacturing of specialty fertilizers

Uses advised against

None identified

Supplier's details

Interoceanic Corporation
7 Renaissance Square, 7th Floor
White Plains, NY 10603 United States
Non-Emergency Phone: 1-914-762-7800
Email: TradeExecution@ioccorp.com
www.ioccorp.com

Emergency telephone number (with hours of operation)

24 HOUR EMERGENCY TELEPHONE 1-800-424-9300
CHEMTREC (Canada & US)

Note: CHEMTREC number to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals.

Section 2. Hazard Identification

Classification of the substance or mixture : Not classified

OSHA/ HCS Status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

GHS label elements

Hazard pictograms : Not applicable

Signal word : Not applicable

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General : Read label before use. 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

Supplemental label elements : Not applicable

Other hazards : Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

Section 3. Composition/Information on Ingredients

Substance/Mixture : Multi-constituent substance

Ingredient Name	% (w/w)	CAS Number
Potassium chloride	95 – 99	7447-40-7
Sodium chloride	1 – 4	7647-14-5

Section 4. First-aid Measures

Description of necessary first aid measures

Eye contact : May cause irritation due to mechanical action. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Get medical attention if irritation occurs.

Inhalation : Remove person to fresh air. No known significant effects. Seek medical attention for any signs of wheezing and/or breathing difficulties. For additional advice call the medical emergency number on this SDS or your poison center or medical provider.

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/effect, acute and delayed

Potential acute health effects

Eye contact : 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 : No specific data. Adverse symptoms may include the following: irritation, watering, redness

Inhalation : No specific data.

Skin contact : No specific data. 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. Mouth-to-mouth resuscitation of oral exposure patients is not recommended. First-aiders with contaminated clothing should be properly decontaminated.

See toxicological information in 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: Not applicable

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

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.

Remarks : 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

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and Storage

Precautions for safe handling

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

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
Canadian Regulations Muriate of Potash	**CA Alberta Provincial. Alberta TWA:** 10 mg/m3 Inhalable, 3 mg/m3 Respirable, for Particles Not Otherwise Regulated.: 10 mg/m³ 8 hours. **CA Quebec Provincial. Quebec TWAEV:** for Particles Not Otherwise Regulated: 10 mg/m³ 8 hours as Total Dust.
U.S. Federal Regulations Muriate of Potash	**OSHA:** TWA: 15 mg/m³, (Particulates not otherwise regulated (PNOR) Total particulates) 8 hours.

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

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. 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: sealed eyewear

Skin protection

Hand protection : The personal protective equipment required varies, depending upon your risk assessment. 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. No special measures are typically indicated.

Body protection : The personal protective equipment required varies, depending upon your risk assessment. Cotton or cotton/synthetic overalls or coveralls are normally suitable.

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. For U.S. work sites where respiratory protection is required, ensure that a respiratory protection program meeting 29 CFR 1910.134 requirements is in place.

Section 9. Physical and Chemical Properties

Appearance

Physical state : Solid (crystalline)

Color : Off-white or Pink or Red

Odor : Odorless

Odor threshold : Not available

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

Melting point : 770°C (1418°F)

Boiling point : 1420°C (2588°F)

Flash point : Product does not sustain combustion

Evaporation rate : Not available

Flammability (solid, gas) : Non-combustible

Lower and upper explosive (flammable) limits : Not applicable

Vapor pressure : Not available

Vapor density : Not applicable

Bulk density : 993 - 1,201 kg/m³ (62 - 75 lbs/ft^3)

Solubility : Soluble in water (347 - 355 g/l)

Partition coefficient: n-octanol/water : Not available

Auto-ignition temperature : Not applicable

Decomposition temperature : Not available

Viscosity : Not applicable

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. 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

Ingredient Name	Result	Species	Dose	Exposure
Potassium chloride	LD50 Oral	Rat	2600 mg/kg	-
Sodium chloride	LD50 Oral LDLo Intra-arterial LDLo Intraperitoneal LDLo Oral	Rat Guinea pig Rat Man – Male	3000 mg/kg 300 mg/kg 3720 mg/kg 1 g/kg	- - - -

Conclusion/Summary : Not considered to be acutely toxic.

Irritation/Corrosion

Ingredient Name	Result	Species	Score	Exposure	Observation
Potassium chloride	Eyes	Rabbit	0	24 hours, 500 milligrams	-
Sodium chloride	Eyes Skin	Rabbit Rabbit	0 0	- 24 hours, 500 milligrams	- -

Conclusion/Summary

Skin : No significant irritation expected other than possible mechanical irritation.

Eyes : No significant irritation expected other than possible mechanical irritation.

Respiratory : No significant irritation expected other than possible mechanical irritation.

Sensitization

Conclusion/Summary : Not available

Mutagenicity

Ingredient Name	Test	Experiment	Result
Potash	-	Subject: Bacteria	Negative
Potassium chloride	-	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Negative

Conclusion/Summary : Not mutagenic in Ames test.

Carcinogenicity

Ingredient Name	Result	Species	Dose	Exposure
Potassium chloride	Negative – Oral – TDLo	Rat – Male	1820 mg/kg	-
Sodium chloride	Negative – Oral – TDLo	Rat – Male	-	-

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

Reproductive toxicity

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

Teratogenicity

Ingredient Name	Result	Species	Dose	Exposure
Potassium chloride	Negative – Oral	Rat – Female	310 mg/kg	-

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

Specific target organ toxicity (single exposure) : Not available

Specific target organ toxicity (repeated exposure) : Not available

Aspiration hazard : Not available

Information on the likely routes of exposure : Inhalation, skin contact, oral

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 : No specific data. Adverse symptoms may include the following: irritation, watering, redness

Inhalation : No specific data.

Skin Contact : No specific data. 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 above.

Long term exposure

Potential immediate effects : See above.

Potential delayed effects : See below.

Potential chronic health effects

Conclusion/Summary : 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.

Section 12. Ecological Information

Toxicity

Ingredient Name	Result	Species	Exposure
Potassium chloride	Acute EC50 1337000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 9.24 g/L Fresh water	Algae – Desmodesmus Subspicatus	72 hours
	Acute EC50 83000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 9.68 mg/l Fresh water	Crustaceans – Pseudosida ramosa – Neonate	48 hours
	Acute LC50 435000 µg/l Fresh water	Fish - Gambusia affinis - Adult	96 hours
Sodium chloride	Acute EC50 2430000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute EC50 28.85 mg/dm3 Fresh water	Algae – Pseudokirchneriella Subcapitata	72 hours
	Acute EC50 519.6 mg/l Fresh water	Crustaceans – Cypris Subglobosa	48 hours
	Acute IC50 6.87 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Acute LC50 1661 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 1000000 µg/l Fresh water	Fish - Morone saxatilis – Larvae	96 hours
	Chronic LC10 781 mg/l Fresh water	Crustaceans - Hyalella azteca - Juvenile (Fledgling, Hatchling, Weanling)	3 weeks
	Chronic NOEC 6 g/L Fresh water	Aquatic plants - Lemna minor	96 hours
	Chronic NOEC 0.314 g/L Fresh water	Daphnia - Daphnia pulex	21 days
	Chronic NOEC 100 mg/l Fresh water	Fish - Gambusia holbrooki - Adult	8 weeks

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

Persistence and degradability

Conclusion/Summary : Readily biodegradable

Bioaccumulative potential

LogPow : < 1 (low potential)

Mobility in soil

Soil/water partition coefficient (Koc) : 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. 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport Information

In accordance with DOT : Not regulated for transport.

In accordance with IMDG : Not regulated for transport.

In accordance with IATA : Not regulated for transport.

In accordance with TDG : Not regulated for transport.

Section 15. Regulatory Information

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

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.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : **Japan inventory (CSCL): All components are listed or exempted.**
Japan inventory (ISHL): Not determined.

Malaysia : 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.

Turkey : Not determined.

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined
TSCA 8(b) Active inventory: All components are listed or exempted.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)

Not listed

Clean Air Act Section 602 Class I Substances

Not listed

Clean Air Act Section 602 Class II Substances

Not listed

DEA List I Chemicals (Precursor Chemicals)

Not listed

DEA List II Chemicals (Essential Chemicals)

Not listed

SARA 302/304

Classification : Not applicable

SARA 311/312

Classification : Not applicable

State regulations

Massachusetts	:	None of the components are listed.
New York	:	None of the components are listed.
New Jersey	:	None of the components are listed.
Pennsylvania	:	None of the components are listed.

California Prop. 65

This product, as manufactured, does NOT contain any substance in concentrations known to the state of California to cause cancer, birth defects or other reproductive harm.

Section 16. Other Information

Key to abbreviations :

ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
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)
UN = United Nations
HPR = Hazardous Products Regulations

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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