MATERIAL SAFETY DATA SHEET

Date Printed: 03/03/2004
Date Updated: 05/23/2003
Version 1.7

Section 1 - Product and Company Information

Product Name	POTASSIUM IODIDE, 99+%, A.C.S. REAGENT
Product Number	221945
Brand	ALDRICH
Company	Sigma-Aldrich
Street Address	3050 Spruce Street
City, State, Zip, Country	SAINT LOUIS MO 63103 US
Technical Phone:	314 771 5765
Emergency Phone:	414 273 3850 Ext. 5996
Fax:	800 325 5052

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
POTASSIUM IODIDE	7681-11-0	No

Formula	KI
Synonyms	K1-N * Knollide * Potide
RTECS Number:	TT2975000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Target organ(s): Thyroid.

HMIS RATING
HEALTH: 0*
FLAMMABILITY: 0
REACTIVITY: 1

NFPA RATING
HEALTH: 0
FLAMMABILITY: 0
REACTIVITY: 1

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT
N/A

AUTOIGNITION TEMP
N/A

FLAMMABILITY
N/A

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Suitable: Keep tightly closed. Store under argon. Store in a cool dry place.

SPECIAL REQUIREMENTS
Air, light, and moisture sensitive. Store under inert gas.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Wear dust mask.
Hand: Protective gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	Physical State: Solid Color: White Form: Fine crystals	
Property	**Value**	**At Temperature or Pressure**
Molecular Weight	166.01 AMU	
pH	6 - 9	
BP/BP Range	1,330 °C	
MP/MP Range	681 °C	
Freezing Point	N/A	
Vapor Pressure	1 mmHg	745 °C
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	3.13 g/cm3	
Bulk Density	1,700 kg/l	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	1.677	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water:1 M in H2O, 20°C complete, colorless	

N/A = not available

Section 10 - Stability and Reactivity

STABILITY
Stable: Stable.
Conditions of Instability: May decompose on exposure to light. May decompose on exposure to air and moisture.
Conditions to Avoid: Tin.
Materials to Avoid: Strong reducing agents, Nickel, Strong acids, and their alloys, Steel, Aluminum, Alkali metals, Brass, Magnesium, Zinc, Cadmium, Copper.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Hydrogen iodide, Potassium oxides.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.

SENSITIZATION

Sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

TARGET ORGAN(S) OR SYSTEM(S)

Thyroid.

SIGNS AND SYMPTOMS OF EXPOSURE

Prolonged exposure to iodides may produce iodism in sensitive individuals. Symptoms of exposure include: skin rash, running nose, headache and irritation of the mucous membrane. For severe cases the skin may show pimples, boils, hives, blisters and black and blue spots. Iodides are readily diffused across the placenta. Neonatal deaths from respiratory distress secondary to goiter have been reported. Iodides have been known to cause drug-induced fevers, which are usually of short duration.

CHRONIC EXPOSURE - TERATOGEN

Result: Exposure to excessive amounts of iodine during pregnancy is capable of producing fetal hypothyroidism. Iodine-containing drugs have been associated with fetal goiter.

Species: Woman
Dose: 2700 MG/KG
Route of Application: Oral
Exposure Time: (1-39W PREG)
Result: Specific Developmental Abnormalities: Endocrine system.

Species: Woman
Dose: 3240 MG/KG
Route of Application: Oral
Exposure Time: (1-39W PREG)
Result: Specific Developmental Abnormalities: Endocrine system. Effects on Newborn: Other neonatal measures or effects. Effects on Newborn: Physical.

CHRONIC EXPOSURE - MUTAGEN

Species: Rat
Dose: 500 MG/KG
Cell Type: Ascites tumor
Mutation test: Cytogenetic analysis

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 10530 MG/KG
Route of Application: Oral
Exposure Time: (1-9D PREG)
Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Rat
Dose: 822 MG/KG
Route of Application: Oral
Exposure Time: (2W MALE/2W PRE-13D POST)
Result: Effects on Newborn: Behavioral.

Species: Rat
Dose: 922 MG/KG
Route of Application: Oral
Exposure Time: (2W MALE/2W PRE-21D POST)
Result: Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive).

Species: Rat
Dose: 300 MG/KG
Route of Application: Oral
Exposure Time: (9D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death.

Species: Hamster
Dose: 3600 MG/KG
Route of Application: Oral
Exposure Time: (5-16D PREG)
Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Species: Mammal
Dose: 294 MG/KG
Route of Application: Oral
Exposure Time: (30D PRE)
Result: Maternal Effects: Parturition.

Species: Mammal
Dose: 1177 MG/KG
Route of Application: Oral
Exposure Time: (30D PRE)
Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

US CLASSIFICATION AND LABEL TEXT
US Statements: Target organ(s): Thyroid.

UNITED STATES REGULATORY INFORMATION
SARA LISTED: No
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.