according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 11, 2019

1 Identification

· Product identifier

· Trade name: lodide lodate Reagent

· Product code: AR-1012-1000

· Recommended use and restriction on use

· Recommended use: Laboratory chemicals

Restrictions on use: No relevant information available.

Details of the supplier of the Safety Data Sheet

· Manufacturer/Supplier:

AquaPhoenix Scientific, Inc.

860 Gitts Run Road Hanover, PA 17331

Phone: (717)632-1291

Toll-Free: (866)632-1291

info@aquaphoenixsci.com

Distributor:

Aqua Analytics

245 Matheson Blvd East, Units 1 & 2

Mississauga, Ontario Canada L4Z 3C9

(888) 712-4000

· Emergency telephone number:

ChemTel Inc.

(800)255-3924 (North America)

+1 (813)248-0585 (International)

2 Hazard(s) identification

· Classification of the substance or mixture

The substance is not classified as hazardous according to the Globally Harmonized System (GHS).

- · Label elements
- GHS label elements Not regulated.
- · Hazard pictograms: None.
- · Signal word: None
- · Hazard statements: None.
- · Precautionary statements: None.
- Other hazards There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· Chemical characterization: Substances

· Compone	nts:	
	Potassium hydroxide	0.100%
	Met. Corr.1, H290; Skin Corr. 1A, H314 Acute Tox. 4, H302	
7681-11-0	potassium iodide	0.500%
	♦ STOT RE 1, H372	

(Cont'd. on page 2)

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 11, 2019

Trade name: Iodide Iodate Reagent

	(Con	t'd. of page 1)
	potassium iodate	0.045%
	Ox. Sol. 2, H272 Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	
144-55-8	Sodium hydrogencarbonate	0.031%
7732-18-5	Water	99.324%

· Additional information:

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret. For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- · After skin contact:

Rinse with warm water.

If skin irritation is experienced, consult a doctor.

· After eve contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

· Most important symptoms and effects, both acute and delayed:

Gastric or intestinal disorders when ingested.

- · **Danger:** No relevant information available.
- · Indication of any immediate medical attention and special treatment needed:

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- · For safety reasons unsuitable extinguishing agents: No relevant information available.
- Special hazards arising from the substance or mixture

Formation of toxic gases is possible during heating or in case of fire.

- Advice for firefighters
- Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation.
- Environmental precautions

(Cont'd. on page 3)

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 11, 2019

Trade name: Iodide Iodate Reagent

(Cont'd. of page 2)

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of the collected material according to regulations.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- ·Handling
- Precautions for safe handling: No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: No relevant information available.
- · Further information about storage conditions: Keep containers tightly sealed.
- · Specific end use(s) No relevant information available.

8 Exposure controls/personal protection

· Control parameters

· Components with limit values that require monitoring at the workplace):
---	----

1310-58-3 Potassium hydroxide

REL (USA)	Ceiling limit value: 2 mg/m³
TLV (USA)	Ceiling limit value: 2 mg/m³
EL (Canada)	Ceiling limit value: 2 mg/m³
EV (Canada)	Ceiling limit value: 2 mg/m³
LMPE (Mexico)	Ceiling limit value: 2 mg/m³

· Exposure controls

· General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

- **Engineering controls:** Provide adequate ventilation.
- · Breathing equipment: Not required under normal conditions of use.
- · Protection of hands: Not required under normal conditions of use.
- · Material of gloves

Nitrile rubber, NBR

Natural rubber, NR

Butyl rubber, BR

Neoprene gloves

Sensibilization by the components in the glove materials is possible.

· Eye protection:

(Cont'd. on page 4)

Safety Data Sheet according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 11, 2019

Trade name: Iodide Iodate Reagent

(Cont'd. of page 3)



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- · Body protection: Protective work clothing
- Limitation and supervision of exposure into the environment No special requirements.
- · Risk management measures No special requirements.

9 Physical and chemical proper	ties
· Information on basic physical ar · Appearance:	nd chemical properties
Form:	Liquid
Color:	Colorless
Odor:	Odorless
· Odor threshold:	Not determined.
· pH-value:	Not determined.
· Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	100-101 °C (212-213.8 °F)
· Flash point:	The product is not flammable.
· Flammability (solid, gaseous):	Not applicable.
· Auto-ignition temperature:	Not determined.
· Decomposition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits	
Lower:	Not determined.
Upper:	Not determined.
· Oxidizing properties:	Not determined.
· Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
· Density at 20 °C (68 °F):	1.01 g/cm³ (8.43 lbs/gal)
· Relative density:	Not determined.
· Vapor density:	Not determined.
· Evaporation rate:	Not determined.
· Solubility in / Miscibility with	
Water:	Soluble.
· Partition coefficient (n-octanol/wate	er): Not determined.
· Viscosity	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Other information	No relevant information available.

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 11, 2019

Trade name: Iodide Iodate Reagent

(Cont'd. of page 4)

10 Stability and reactivity

- · Reactivity: No relevant information available.
- · Chemical stability: Stable under normal temperatures and pressures.
- · Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

· Possibility of hazardous reactions

Toxic fumes may be released if heated above the decomposition point.

Reacts with strong acids.

Reacts with strong oxidizing agents.

- · Conditions to avoid No relevant information available.
- · Incompatible materials

Strong acids

Oxidizing agents.

· Hazardous decomposition products

Under fire conditions only:

Possible in traces.

11 Toxicological information

- Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification: None.
- · Primary irritant effect:
- · On the skin: Based on available data, the classification criteria are not met.
- · On the eye: Based on available data, the classification criteria are not met.
- · Sensitization: Based on available data, the classification criteria are not met.
- IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

· NTP (National Toxicology Program):

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

· Probable route(s) of exposure:

Ingestion.

Inhalation.

Eye contact.

Skin contact.

- · Acute effects (acute toxicity, irritation and corrosivity): No relevant information available.
- · Repeated dose toxicity: No relevant information available.
- · Germ cell mutagenicity: Based on available data, the classification criteria are not met.
- · Carcinogenicity: Based on available data, the classification criteria are not met.
- · Reproductive toxicity: Based on available data, the classification criteria are not met.
- · STOT-single exposure: Based on available data, the classification criteria are not met.
- · STOT-repeated exposure: Based on available data, the classification criteria are not met.
- Aspiration hazard: Based on available data, the classification criteria are not met.

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 11, 2019

Trade name: Iodide Iodate Reagent

(Cont'd. of page 5)

12 Ecological information

- Toxicity
- · Aquatic toxicity No relevant information available.
- · Persistence and degradability No relevant information available.
- · Bioaccumulative potential: No relevant information available.
- Mobility in soil: No relevant information available.
- Additional ecological information
- · General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

• Other adverse effects No relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Smaller quantities can be disposed of with household waste.

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

- Uncleaned packagings
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information	
· UN-Number · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
· UN proper shipping name · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
Transport hazard class(es)	
· DOT, ADR/RID/ADN, IMDG, IATA · Class	Not regulated.
· Packing group · DOT, ADR/RID/ADN, IMDG, IATA	Not regulated.
· Environmental hazards	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex I MARPOL73/78 and the IBC Code	l of Not applicable.

(Cont'd. on page 7)

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 11, 2019

Trade name: lodide lodate Reagent

(Cont'd. of page 6)

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- · United States (USA)
- ·SARA
- Section 302 (extremely hazardous substances):

None of the ingredients are listed.

· Section 355 (extremely hazardous substances):

None of the ingredients are listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

· TSCA (Toxic Substances Control Act)

7758-05-6 potassium iodate

144-55-8 Sodium hydrogencarbonate

1310-58-3 Potassium hydroxide

7732-18-5 Water

- · Proposition 65 (California)
- · Chemicals known to cause cancer:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

EPA (Environmental Protection Agency):

None of the ingredients are listed.

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

· Canadian Domestic Substances List (DSL):

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

(Cont'd. on page 8)

Page: 8/8

Safety Data Sheet

according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: June 11, 2019

Trade name: Iodide Iodate Reagent

(Cont'd. of page 7)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Ox. Sol. 2: Oxidizing solids – Category 2 Met. Corr.1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4 Skin Corr. 1A: Skin corrosion/irritation – Category 1A Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3 STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

· Sources

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

SDS Prepared by:

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com