YSI sells this product under agreement with the original manufacturer. YSI assumes no legal liability or responsibility for the accuracy, completeness or usefulness of any information set forth in this MSDS.

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 04/23/2014 Reviewed on 04/23/2014

* 1 Identification

· **Product identifier**

· **Trade name: Vario Potassium Iodide**

· **Catalogue number:** 251396Y

· **Relevant identified uses of the substance or mixture and uses advised against:** No further relevant information available.

· **Application of the substance / the mixture:** Reagent for water analysis

· **Manufacturer/Supplier:**
Tintometer Inc.
6456 Parkland Drive
Sarasota, FL 34243
USA
phone: (941) 756-6410
fax: (941) 727-9654
www.lovibond.us
Made in Germany

Distributor/Supplier: YSI, Inc
Address 1700/1725 Brannum Lane
Yellow Springs, Ohio 45387
Telephone (937) 767-7241
E-mail MSDSinfo@Xyleminc.com

· **Emergency telephone number:** Chemtrec®: (US & Canada) 800-424-9300 (International) +1 (703) 527-3887

* 2 Hazard(s) identification

· **Classification of the substance or mixture**

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

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** none

· **Label elements**
· **GHS label elements** none
· **Hazard pictograms** none
· **Signal word** none
· **Hazard statements** none

· **Canadian Hazard Symbols:**

· **WHMIS classification:**
D2A
Very toxic material causing other toxic effects
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 0
Reactivity = 0

* 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** mixture of inorganic compounds

· **Composition and Information on Ingredients:**

CAS: 7681-11-0 EINECS: 231-659-4 RTECS: TT2975000	potassium iodide	90-100%

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· **REACH - pre-registered substances** All components are REACH pre-registered.

*
4 First-aid measures

· **Description of first aid measures**
· **General information:** Immediately remove any clothing soiled by the product.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Immediately rinse with plenty of water.
· **After eye contact:** Rinse opened eye for several minutes (15 min) under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink 1-2 glasses of water.
If symptoms persist consult doctor.
· **Most important symptoms and effects, both acute and delayed**
after inhalation:
irritations
after swallowing of large amounts:
sickness
vomiting
drop in blood pressure
abdominal pain
resorption
· **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
Iodine compounds
Hydrogen iodide (HI)
Potassium oxide
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:** Do not allow product to reach sewage system or any water course.
· **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Pick up mechanically.
Ensure adequate ventilation.
· **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

· **Precautions for safe handling** Thorough dedusting.
· **Information about protection against explosions and fires:** The product is not flammable.

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· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store in dry conditions.
This product is hygroscopic.
Protect from humidity and water.
Protect from exposure to the light.
· **Recommended storage temperature:** 20 °C +/- 5 °C (approx. 68°F)
· **Storage class:** 13
· **Specific end use(s)** No further relevant information available.

* 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
7681-11-0 potassium iodide (90-100%)	
TLV (USA)	Long-term value: 0.01* ppm *as inhalable fraction and vapor

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Wash hands before breaks and at the end of work.
Do not eat, drink, smoke or sniff while working.

· **Breathing equipment:** Use respiratory protective device against the effects of fumes/dust/aerosol.
· **Recommended filter device for short term use:** Filter P2
· **Protection of hands:** Preventive skin protection by use of skin-protecting agents is recommended.
· **Material of gloves**
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.11 mm
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Value for the permeation: Level ≤ 1 (10 min)
· **Eye protection:**
use against the effects of fumes / dust
Safety glasses
· **Body protection:** Protective work clothing

* 9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
Odor Threshold:	Not applicable.
· **Appearance:**	
Form:	Solid
Color:	White
· **Odor:**	Odorless
· **pH-value at 20 °C (68 °F):**	5.8
· **Melting point/Melting range:**	686 °C (1267 °F)
· **Boiling point/Boiling range:**	1330 °C (2426 °F)
· **Freezing Point:**	Not applicable.
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Product is not flammable.

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· **Danger of explosion:**	Product does not present an explosion hazard.
· **Specific Gravity:**	Not applicable.
· **Density at 20 °C (68 °F):**	3.1 g/cm³ (25.87 lbs/gal)
· **Vapour density**	Not applicable.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with Water at 20 °C (68 °F):**	1430 g/l
· **Coefficient of Water / Oil Distribution:**	Not applicable.
· **Viscosity:**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Solvent content:**	
Organic solvents:	0 %
Solids content:	100.0 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity**
· **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:**
alkali metals
Ammonia (NH3)
halogen compounds
oxidizing agents
· **Hazardous decomposition products:** see chapter 5

* 11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· **LD/LC50 values that are relevant for classification:**		
Oral	CLP $ATE_{(MIX)}$	0 mg/kg (.)
	GHS $ATE_{(MIX)}$	2836 mg/kg (.)

7681-11-0 potassium iodide		
Oral	LD50	2779 mg/kg (rat) (MERCK)

· **Primary irritant effect:**
· **on the skin:** slight irritations possible
· **on the eye:** irritating effect possible
· **Sensitization:** Sensitizing effect by skin contact is possible with prolonged exposure.
· **Subacute to chronic toxicity:** Iodide chronic: hypothyroidism

· **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
The usual precautionary measures for handling chemicals should be followed.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **Carcinogenicity:** **NTP?** **IARC Monographs?** **OSHA Regulated?** see chapter 8 / 15
· **Teratogenicity:** Iodine salts can cause deformity, illness, and death of a fetus.

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· **Mutagenicity:** Not found.
· **Reproductive Toxicity:** Not found.
· **Synergistic Products:** None
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
CAS-No. 7681-11-0:
Bacterial mutagenicity: Salmonella typhimurium - negative (NTP)
Iodine salts can cause birth defects, illness and death of a fetus. (GESTIS)

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**	
7681-11-0 potassium iodide	
Daphnia EC50	2.7 mg/l/24h (Daphnia magna)
LC50	896000 µg/l/96h (Oncorhynchus mykiss) (ECOTOX)

· **Persistence and degradability** No further relevant information available.
· **Bioaccumulative potential** No further relevant information available.

· **Behavior in environmental systems:**	
7681-11-0 potassium iodide	
log P(o/w)	0.04 (.) (MERCK)

· **Mobility in soil** No further relevant information available.

· **Ecotoxical effects:**
· **Protozoen:** CAS-No. 7681-11-0: E. sulcatum toxic > 40 mg/l
· **Additional ecological information:**

· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
· **Results of PBT and vPvB assessment** no further data available
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

* 14 Transport information

· **UN-Number**	
· **DOT, ADR, ADN, IMDG, IATA**	none
· **UN proper shipping name**	
· **DOT, ADR, ADN, IMDG**	none
· **IATA**	none
· **Transport hazard class(es)**	
· **DOT, ADR, ADN**	
· **Class**	none
· **IMDG, IATA**	
· **Class**	none None

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· **Packing group**	
· **DOT, ADR, IMDG, IATA**	none
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	Not dangerous according to the above specifications.
· **Canadian TDG Class:**	none

* 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (Extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Canadian Ingredient Disclosure List**

· **Limit 0,1%**
None of the ingredients is listed.

· **Limit 1%**

7681-11-0	potassium iodide

· **Canadian Domestic Substances List (DSL)**
All ingredients are listed.

· **Canadian Non-domestic Substance List**
None of the ingredients is listed.

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

· **Australian Inventory of Chemical Substances**
All ingredients are listed.

· **European EINECS**
All ingredients are listed.

· **Standard for the Uniform Scheduling of Drugs and Poisons**
None of the ingredient is listed.

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· **Information about limitation of use:** Not required.

· **This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all of the information required by the CPR**

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· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

* 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.

· **Date of preparation / last revision** 04/23/2014 / 7

· **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
EC50: effective concentration, 50 percent (in vivo)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (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
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

· **Sources**
ECOTOX Database
CSST (Service du répertoire toxicologique)
Data arise from manufacturers' data sheets, reference works and literature.

· *** Data compared to the previous version altered.**