Tintometer[®] Group Water Testing



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Safety data sheet according to 1907/2006/EC, Article 31

Printing date 15.11.2023

Version number 7 (replaces version 6)

Revision: 15.11.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product identifier
- Product name: KS505 0.4N Potassium Iodide/Iodate / Vario Sulphite Iodide/Iodate 0.3998N
- · Catalog number: 56Z050598, 56L050513, 56U050513, 56L050573, 56U050573
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- · Application of the substance / the preparation: Reagent for water analysis
- · 1.3 Details of the supplier of the safety data sheet
- Supplier: Tintometer GmbH Schleefstraße 8-12 44287 Dortmund Made in Germany www.lovibond.com

The Tintometer Limited Lovibond[®]House Sun Rise Way Amesbury Wiltshire SP4 7GR United Kingdom

- Informing department: e-mail: sds@lovibond.com Product Safety Department
- **1.4 Emergency telephone number:** +44 1235 239670 Languages: English

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

STOT RE 1 H372 Causes damage to the thyroid through prolonged or repeated exposure. Route of exposure: Oral.



Eye Irrit. 2 H319 Causes serious eye irritation.

 2.2 Label elements
 Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the GB CLP regulation.
 Hazard pictograms



· Signal word Danger

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Product name: KS505 - 0.4N Potassium Iodide/Iodate / Vario Sulphite Iodide/Iodate 0.3998N

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· Hazard-determining components of labelling: potassium iodide Hazard statements H319 Causes serious eye irritation. H372 Causes damage to the thyroid through prolonged or repeated exposure. Route of exposure: Oral. · Precautionary statements P280 Wear eye protection / face protection. P264 Wash hands thoroughly after handling. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to

do. Continue rinsing.

P337+P313 If eve irritation persists: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell.

· 2.3 Other hazards

The main intake pathways of potassium iodide are: inhalation of dust and solution aerosols, as well as oral ingestion.

• Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

Determination of endocrine-disrupting properties

The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

Description: aqueous solution

 Dangerous components: 			
CAS: 7681-11-0 EINECS: 231-659-4	potassium iodide	🚸 STOT RE 1, H372	10–20%
Reg.nr.: 01-2119966161-40-XXXX			
CAS: 7758-05-6 EINECS: 231-831-9	potassium iodate	🚸 Ox. Sol. 2, H272; 🚸 Eye Dam. 1, H318	1–≤2.5%
Reg.nr.: 01-2119920996-25-XXXX			

• Additional information For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

· General information Instantly remove any clothing soiled by the product.

- After inhalation Supply fresh air; consult doctor in case of symptoms.
- · After skin contact Instantly wash with water and soap and rinse thoroughly.
- After eye contact Rinse opened eye for several minutes (at least 15 min) under running water. Then consult doctor.
- · After swallowing
- Rinse out mouth and then drink 1-2 glasses of water.
- In case of persistent symptoms consult doctor.

4.2 Most important symptoms and effects, both acute and delayed: irritations

after swallowing and inhalation:

- absorption
- after absorption of large amounts:

headache

vomiting

gastric pain

diarrhoea

drop in blood pressure

cardiovascular disorders

weakness

• 4.3 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

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SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- · Suitable extinguishing agents Use fire fighting measures that suit the environment.
- 5.2 Special hazards arising from the substance or mixture
- The product is not combustible.
- Formation of toxic gases is possible during heating or in case of fire.
- Can be released in case of fire:
- Dipotassium oxide

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- Hvdrogen iodide (HI)
- 5.3 Advice for firefighters
- Protective equipment:
- Wear self-contained breathing apparatus.
- Wear full protective suit. Additional information
- Collect contaminated fire fighting water separately. It must not enter drains.
- Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

- · 6.1 Personal precautions, protective equipment and emergency procedures
- · Advice for non-emergency personnel:
- Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
- · Advice for emergency responders: Protective equipment: see section 8
- 6.2 Environmental precautions: Do not allow product to reach sewage system or water bodies.
- · 6.3 Methods and material for containment and cleaning up: Ensure adequate ventilation.
- Absorb with liquid-binding material (sand, diatomite, universal binders).
- Dispose of contaminated material as waste according to item 13.
- 6.4 Reference to other sections
- See Section 8 for information on personal protection equipment.
- See Section 13 for information on disposal.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
- · Advice on safe handling: Prevent formation of aerosols.
- · Hygiene measures:
- Avoid contact with the eyes.
- Take off immediately all contaminated clothing.
- Wash hands during breaks and at the end of the work.
- Do not eat, drink or smoke when using this product.
- · 7.2 Conditions for safe storage, including any incompatibilities
- Requirements to be met by storerooms and containers: Store in cool location.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions:
- Store in a locked cabinet or with access restricted to technical experts or their assistants. Protect from heat and direct sunlight.
- Protect from the effects of light.
- Protect from humidity and keep away from water.
- Recommended storage temperature: 20°C +/- 5°C
- · 7.3 Specific end use(s) No further relevant information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Derived No Effect Level (DNEL)

CAS: 7681-11-0 potassium iodide					
С	Dral	DNEL	0.01 mg/kg /bw/d (Consumer / acute / systemic effects)		
			0.01 mg/kg /bw/d (Consumer / acute / systemic effects) 0.01 mg/kg /bw/d (Consumer / long-term / systemic effects)		
D	Dermal	DNEL	1 mg/kg /bw/d (Worker / long-term /systemic effects) 1 mg/kg /bw/d (Consumer / long-term / systemic effects)		
			1 mg/kg /bw/d (Consumer / long-term / systemic effects)		
Ir	nhalative	DNEL	0.07 mg/m ³ (Worker / long-term /systemic effects)		
			0.035 mg/m ³ (Consumer / long-term / systemic effects)		

Recommended monitoring procedures:

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

· PNECs

Predicted No Effect Concentration (PNEC)

CAS: 7681-11-0 potassium iodide

PNEC 0.007 mg/l (Fresh water)

PNEC 0.075 mg/kg (Aquatic intermittent release)

0.007 mg/kg /sediment (Fresh water sediment)

• Additional information: The lists that were valid during the compilation were used as basis.

· 8.2 Exposure controls

· Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.

· Individual protection measures, such as personal protective equipment

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.

- Eye/face protection
- Safety glasses

Use safety glasses that have been tested and approved in accordance with government standards such as EN 166.

Hand protection

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

Material of gloves

nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

- Penetration time of glove material
- Value for the permeation: Level = 1 (< 10 min)

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Other skin protection (body protection): Protective work clothing.

• Breathing equipment: Use breathing protection against the effects of fumes/dust/aerosol.

Recommended filter device for short term use: Filter P2

· Environmental exposure controls Avoid release to the environment.

SECTION 9: Physical and che	emical properties	
• 9.1 Information on basic physical a	nd chemical properties	
Physical state	Fluid	
· Form:	Solution	
· Colour:	Colourless	
· Odour:	Odourless	
· Odour threshold:	Not determined.	
		(Contd. on page

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		(Contd. of page
Melting point/Freezing point:	Not determined.	
Boiling point or initial boiling point and boiling ran	ige Not determined.	
Flammability	The product is not combustible.	
Explosive properties:	Product is not explosive.	
Lower and upper explosion limit		
Lower:	Not applicable.	
Upper:	Not applicable.	
Flash point:	Not applicable.	
Auto-ignition temperature:	Not applicable.	
Decomposition temperature:	Not determined.	
pH at 20°C	11	
Kinematic viscosity	Not determined.	
Solubility		
Water:	Fully miscible	
Partition coefficient n-octanol/water (log value)	Not applicable (mixture).	
Vapour pressure:	Not determined.	
Density and/or relative density		
Density at 20°C:	1.16 g/cm³	
Relative density:	Not determined.	
Relative gas density	Not determined.	
Particle characteristics	Not applicable (liquid).	
9.2 Other information		
Information with regard to physical hazard classes	6	
Corrosive to metals	Void	
Other safety characteristics		
Oxidising properties:	Oxidising potential	
Additional information	5.	
Solids content:	< 15 %	
Solvent content:		
Organic solvents:	0 %	
Water:	> 85 %	

SECTION 10: Stability and reactivity

· 10.1 Reactivity see section 10.3

- · 10.2 Chemical stability Stable at ambient temperature (room temperature).
- 10.3 Possibility of hazardous reactions
- Reacts with alkaline metals
- Reacts with peroxides
- Reacts with halogenated compounds

Reacts with oxidizing agents

- **10.4 Conditions to avoid** No further relevant information available.
- · 10.5 Incompatible materials: No further relevant information available.

• 10.6 Hazardous decomposition products: see section 5

SECTION 11: Toxicological information

· 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

· LD/LC50 values that are relevant for classification:			
CAS: 7	681-11-0	potassium iodide	
Oral	LD50	2779 mg/kg (rat)	
Dermal	LD50	3160 mg/kg (rabbit)	
	NOAEL	0.01 mg/kg /bw/d (human) organ: Thyroid	
CAS: 7758-05-6 potassium iodate			
Oral	LDLo	531 mg/kg (mouse)	
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(Contd. of page 5) Skin corrosion/irritation Based on available data, the classification criteria are not met. · Serious eye damage/irritation Causes serious eye irritation. · Respiratory or skin sensitisation Based on available data, the classification criteria are not met. • Information on components: The following applies to iodides in general: Sensitation possible at predisposed persons. · 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. Information on components: OECD 414: Teratogenicity testing OECD 473: Mutagenicity testing OECD 471, 474, 476, 487: Germ cell mutagenicity testing CAS: 7681-11-0 potassium iodide OECD 471 (negative) (Bacterial Reverse Mutation Test - Ames test) **OECD 476** (negative) (In Vitro Mammalian Cell Gene Mutation Test) Mouse (lymhoma L5178Y cells) • STOT (specific target organ toxicity) -single exposure Based on available data, the classification criteria are not met. STOT (specific target organ toxicity) -repeated exposure Causes damage to the thyroid through prolonged or repeated exposure. Route of exposure: Oral. · Aspiration hazard Based on available data, the classification criteria are not met. · Information on likely routes of exposure "Main routes of exposure: At workplaces, intake of potassium iodide (KI) is most likely to occur via the respiratory tract. Outside the workplace, iodides are ingested with food (essential) and sometimes with medications. Respiratory tract: KI can be inhaled as dust or aerosol from solutions. Inhalation studies were conducted with particulate aerosols containing sodium iodide using various animal species (monkey, mouse, sheep). Rapid and effective absorption via the respiratory tract was observed. This is also assumed for KI as its solubility is comparable. Skin: From tests on volunteers who had an aqueous KI solution applied to their forearms (12.5 cm²), the amount of iodine absorbed was estimated at 0.1%. Absorption through the skin is therefore considered to be of little relevance. Gastrointestinal tract. Soluble iodide is absorbed almost entirely via the gastrointestinal tract. This has been proven by results of studies with KI on adult volunteers." [GESTIS] Additional toxicological information: CAS: 7681-11-0 potassium iodide (source: GESTIS) Main Toxic Effects: Acute: Irritation to the eves, skin and airways, disturbance of thyroid function, cardiovascular effects, metabolic disturbances, Chronic: Disturbance of thyroid function, systemically conditioned skin damage and inflammation of the mucous membranes. Furter Information (GESTIS, Merck): Small amounts of iodine are essential for the body. However, long-term overdoses of iodine lead to disturbances in the thyroid function (hypo- and/or hyperthyroidism, possibly accompanied by thyroiditis). The effects are very complex. Furthermore, symptoms of chronic iodine poisoning (iodine toxicosis, "iodism") can occur following intake of high doses of predisposed persons. They mainly consist of systemically conditioned irritation/inflammatory changes to the mucous membranes and skin. lodide crosses the placenta and, when administered (orally) to pregnant women in very high doses, can lead to hypothyroidism and/or goiter in the fetus with deaths from tracheal compression · 11.2 Information on other hazards • Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties. Other information Other dangerous properties can not be excluded. According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated. GB

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	FION 12: Ecological information
	oxicity
•	ic toxicity:
CA5:	7681-11-0 potassium iodide
	7.5 mg/l/48h (Daphnia magna) (OECD 202) Merck
LC50	3780 mg/l/96h (rainbow trout) (OECD 203) Merck
CAS:	7758-05-6 potassium iodate
	>100 mg/l/48h (Daphnia magna) (MERCK: OECD 202)
Other Mixtur Metho	ersistence and degradability . information: e of inorganic compounds. ds for the determination of biodegradability are not applicable to inorganic substances. ioaccumulative potential No further relevant information available.

- 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
- This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.
- 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.
- 12.7 Other adverse effects Avoid transfer into the environment.
- · Water hazard:
- Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into soil.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Hand over to disposers of hazardous waste.
- · European waste catalogue

16 05 07* discarded inorganic chemicals consisting of or containing hazardous substances

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

SECTION 14: Transport information	on	
· 14.1 UN number or ID number · ADR, IMDG, IATA	Void	
 14.2 UN proper shipping name ADR, IMDG, IATA 	Void	
· 14.3 Transport hazard class(es)		
· ADR, IMDG, IATA · Class	Void	
· 14.4 Packing group · ADR, IMDG, IATA	Void	
· 14.5 Environmental hazards: · Marine pollutant:	No	
· 14.6 Special precautions for user	Not applicable.	
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 14.7 Maritime transport in bulk according to IM instruments 	D Not applicable.	
· Transport/Additional information:	Not dangerous according to the above specifications.	

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· Poisons Act UK

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Regulated explosives precursors None of the ingredients is listed. Regulated poisons None of the ingredients is listed. Reportable explosives precursors None of the ingredients is listed. Reportable poisons

Products containing less than 1% of any of the reportable substances are in general of no concern.

· Regulation (FU) 2019/1148 on the marketing and use of explosives precursors not regulated

• Regulation (EO) 2019/1146 on the marketing and use of explosives precursors not regulate	u
• Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (P	IC)
None of the ingredients is listed.	
 Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports or technology: 	f dual-use items and
None of the ingredients is listed.	
· Regulation (EC) No 273/2004 on drug precursors	
None of the ingredients is listed.	
 Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Co in drug precursors 	ommunity and third countries
None of the ingredients is listed.	
• Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:	
None of the ingredients is listed.	
· REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)	
None of the ingredients is listed.	
· LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)	
None of the ingredients is listed.	

· Substances of very high concern (SVHC) according to REACH, Article 57 This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w). Substances of very high concern (SVHC) according to UK REACH This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).

· Directive 2012/18/EU (SEVESO III):

· Named dangerous substances - ANNEX I None of the ingredients is listed.

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

• Information about limitation of use: Employment restrictions concerning young persons must be observed (94/33/EC).

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

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

• Training hints Provide adequate information, instruction and training for operators.

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· Relevant phrases	
H272 May intensify fire; oxidiser.	
H318 Causes serious eve damage.	
H372 Causes damage to organs through prolonged or repeated exposure.	
· Abbreviations and acronyms:	
ECS0: effective concentration, 50 percent (in vivo)	
OECD: Organisation for Economic Co-operation and Development	
STOT: specific target organ toxicity	
SE: single exposure	
RE: repeated exposure	
EC50: half maximal effective concentration	
IC50: half maximal inhibitory concentration	
NOEL or NOEC: No Observed Effect Level or Concentration	
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concernin	g the International Carriage of Dangerous
Goods by Road)	
RD: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Con	icerning the International Transport of
Dangerous Goods by Rail)	
IMDG: International Maritime Code for Dangerous Goods	
IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals	
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)	
DNEL: Derived No-Effect Level (UK REACH)	
PNEC: Predicted No-Effect Concentration (UK REACH)	
LC50: Lethal concentration, 50 percent	
LD50: Lethal dose, 50 percent	
PBT: Persistent, Bioaccumulative and Toxic	
SVHC: Substances of Very High Concern	
vPvB: very Persistent and very Bioaccumulative	
Ox. Sol. 2: Oxidizing solids – Category 2	
Eye Dam. 1: Serious eye damage/eye irritation – Category 1	
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2	
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1	
· Sources	
Data arise from safety data sheets, reference works and literature.	

Data arise from safety data sheets, reference works and literature ECHA: European CHemicals Agency http://echa.europa.eu GESTIS- Stoffdatenbank (Substance Database, Germany)

• * Data compared to the previous version altered.