SAFETY DATA SHEET

According to regulations (CE) No. 1907/2006 and 2015/830

Revision date : 14/11/2016 Version 16.3

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

1.1 Product identifier

Catalogue N°: **921**

Product name: **Iodide/iodate solution N/64**

REACH registration number: This product is a mixture. REACH Registration Number see section 3.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Reagent for analysis

1.3 Details of the supplier of the safety data sheet

Company: Laboratoires Dujardin-Salleron 37210 Noizay France Phone +33 (0)2 47 25 58 25
mail : info@dujardin-salleron.com - web site : www.dujardin-salleron.com

1.4 Emergency telephone number **France :** INRS : +33 (0)1 45 42 59 59

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (Regulation (CE) N° 1272/2008)

This mixture is not classified as dangerous according to European Union Legislation.

2.2 Label elements

Labeling (Regulation (CE) N° 1272/2008)

Not a hazardous mixture according to GHS.

2.3 Other hazards

None known

SECTION 3. Composition/informations on ingredients

Chemical nature: Aqueous solution / mixture

3.1 Substance : not applicable

3.2 Mixture :

Components not classified as hazardous as a consequence of the substances concentration (Regulation (CE) N° 1272/2008)

Chemical name (Concentration)

Potassium iodide (< 1.7%)

CAS N°	EC N°	REACH N°	Classification
7681-11-0	231-659-4	01-21199661-40-XXXX	Acute toxicity, oral, Cat. 4, H302, Skin irritation, Cat. 2, H315 Serious eye irritation, Cat. 2, H319 Sensitization, skin, Cat. 1, H317 Sensitization, respiratory Cat. 1, H334 Specific target organ toxicity, single exposure, Cat 3 : respiratory tract irritation, H335

Potassium iodate (< 0.06%)

CAS N°	EC N°	REACH N°	Classification
7758-058-06	231-831-9	-	Oxidizing solid, Category 2, H272 Skin irritation, Cat. 2, H315 Serious eye irritation, Cat. 2, H319 Specific target organ toxicity, single exposure, Cat 3 : respiratory tract irritation, H335

Potassium hydroxide (< 0,02%)

CAS N°	EC N°	REACH N°	Classification
1310-58-3	215-181-3	01-2119487136-33	Corrosive to metals, Cat. 1, H290 Skin corrosion, Cat. 1A, H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air.
After skin contact: wash off with plenty of water. Remove contaminated clothing.
After eye contact: rinse out with plenty of water. Call in ophthalmologist.
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

Irritant effects, Cough, Shortness of breath.
The following applies to iodides in general: Sensitization possible in predisposed persons.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Water, carbon dioxide (CO_2), foam, dry powder.
Unsuitable extinguishing media
For this mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible.
Ambient fire may liberate hazardous vapors (development of hydriodic acid).

5.3 Advice for firefighters

Special protective equipment for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
Further information
Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Do not breathe vapors, aerosols. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.
Advice for emergency responders: Protective equipment see section 8.

6.2 Environmental precautions

Do not empty into drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.
Observe possible material restrictions (see sections 7 and 10).
Take up with liquid-absorbent and neutralizing material, e.g. Trivorex ® (PREVOR) . Dispose of properly.
Clean up affected area.

6.4 Other indications

Immediately cleaning up spills.

SECTION 7. Handling and storage

7.1 Precautions for safe handling Advice on safe handling

Observe label precautions.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions :
Tightly closed. Protected from light.
Store at +15°C to +25°C.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls / personal protection

8.1 Control parameters

Components with occupational exposure limit values

Potassium hydroxide (1310-58-3)

Basis	Value	Threshold limits	Remarks
Limit value for occupational exposure (VLEP France)	Short Term Exposure limit (STEL)	2 mg/m^3	Indicative limit value

Derived No Effect Level (DNEL)

Potassium hydroxide (1310-58-3)			
Worker DNEL, long term	Local effects	inhalation	1 mg/m^3
Consumer DNEL, long term	Local effects	inhalation	1 mg/m^3
Potassium iodide (7681-11-0)			
Consumer DNEL, long term	Systemic effects	dermal route intravenous route	1862 mg/kg (mouse) 167 mg/kg (rat)

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See section 7.1.

Individual protection measures

Hygiene measures :

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with mixture.

Eye/face protection

Safety glasses

Hand protection

Wear exclusively gloves special chemistry provided with a CE marking. If gloves must be reused, clean them before removing them and keeping them in a well ventilated place.

full contact:	Glove material:	Nitrile rubber
	Glove thickness:	0,11 mm
	Break through time:	> 480 min
Splash contact:	Glove material:	Nitrile rubber
	Glove thickness:	0,11 mm
	Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

Other protective equipment

Carry protective clothing for chemicals appropriate, provided with a CE marking.

Respiratory protection

Required when vapors/aerosols are generated.
Recommended filter type: P 2.
The company has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Do not empty into drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid.
Color	colorless.
Odor	odorless.
Odor Threshold	No information available.
pH	No information available.
Melting point	No information available.
Boiling point	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	not applicable
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapor pressure	No information available.
Relative vapor density	No information available.
Relative density	ca.1.07 g/cm^3 at 20°C.
Water solubility	soluble at 20°C.
Partition coefficient: n- octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

9.2 Other data

Bulk density	No information available.
Refraction index	No information available.
Dissociation constant	No information available.
Surface tension	No information available.
Henry constant	No information available.

SECTION 10. Stability and reactivity

10.1 Reactivity

See below

10.2 Chemical stability

The product is chemically stable during 6 months under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

No information available.

10.4 Conditions to avoid

No information available

10.5 Incompatible materials

No information available

10.6 Hazardous decomposition products

In the event of fire: see section 5.

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute oral toxicity

Possible irritation of the mucous membranes of the mouth, pharynx, esophagus and gastrointestinal tract.

Effective dose - species - times of exposure No information available.

Acute inhalation toxicity

Possible irritation of the respiratory mucous membranes.

Effective dose - species - time of exposure No information available.

Skin irritation

Possible cutaneous irritation.

Effective dose - species - time of exposure No information available.

Eye irritation

Possible eye irritation.

Effective dose - species - time of exposure No information available.

Sensitization No information available.

Specific target organ toxicity - single exposure

The product is not being classified as specific toxic for target organ, single exposure.

Specific target organ toxicity - repeated exposure

The product is not being classified as specific toxic for target organ, repeated exposure.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

Teratogenicity No information available.

Aspiration hazards No information available.

11.2 Further information

Quantitative data on the toxicity of this product are not available.

Other information:

The following applies to iodides in general: sensitization possible with allergic demonstrations in predisposed persons.

Further data :

Other dangerous properties are not excluded, but not very probable in case of appropriate use.
Handle in accordance with good industrial hygiene and safety

Components

Potassium iodide

Acute oral toxicity
LD50 rat: 2779 mg/kg
Acute dermal toxicity
absorption
Eye irritation
Rabbit
Result: slight irritation (HSDB)
Genotoxicity in vitro
Ames test
Salmonella typhimurium
Result: negative (Lit.)
Specific target organ toxicity – single exposure
The substance is classified as respiratory tract irritant.
Specific target organ toxicity – repeated exposure
No information available.
Respiratory or cutaneous sensitization
A prolonged or repeated exposure can cause allergic reactions in sensitive persons.

Potassium iodate

Acute oral toxicity
Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
Skin irritation
rabbit
Result : No irritation (OECD Test Guideline 404)
Eye irritation
rabbit
Result: Severe irritations (OECD Test Guideline 405)
Causes serious eye damage.
Germ cell mutagenicity
Genotoxicity in vivo
Mutagenicity (mammal cell test): micronucleus.
Result: negative (Lit.)
Genotoxicity in vitro
Ames test
Result: negative (Lit.)
Specific target organ toxicity – single exposure
The substance is classified as respiratory tract irritant.
Specific target organ toxicity – repeated exposure
No information available.
Other information
Sensitization possible in predisposed persons.

Potassium hydroxide

Acute oral toxicity
LD50 rat: 273 mg/kg (RTECS)
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.
Skin irritation
rabbit
Result: causes burns. (IUCLID)
Eye irritation
rabbit
Result: Causes burns. (IUCLID)
Sensitization
Sensitization test: guinea pig
Result: negative (IUCLID)
Germ cell mutagenicity
Genotoxicity in vitro
Ames test
Escherichia coli Result : negative (IUCLID)

SECTION 12. Ecological Information

Mixture

12.1 Ecotoxicity

Acute (short-term) fish toxicity
LC50 - EC50 - species - exposure time — No information available.
Chronic (long-term) fish toxicity
LC50 - EC50 - species - exposure time — No information available.

Acute (short-term) daphnia toxicity	
LC50 - EC50 - species - exposure time	No information available.
Chronic (long-term) daphnia toxicity	
LC50 - EC50 - species - exposure time	No information available.
Acute (short-term) algae toxicity	
LC50 - EC50 - species - exposure time	No information available.
Chronic (long-term) algae toxicity	
LC50 - EC50 - species - exposure time	No information available.
12.2 Persistence and degradability	No information available.
12.3 Bioaccumulative potential	No information available.
12.4 Mobility in soil	No information available.
12.5 Results of PBT and vPvB assessment	No information available.

12.6 Other adverse effects

Additional/ ecological information

Discharge into the environment must be avoided.

Components

Potassium iodide

Toxicity to fish

LC50 Oncorhynchus mykiss (rainbow trout): 8.960 mg/l; 96 h (ECOTOX Database)

Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility in soil	No information available.
Results of PBT and vPvB assessment	No information available.

Additional/ ecological information

Discharge into the environment must be avoided.

Potassium iodate

Toxicity to daphnia and other aquatic invertebrates

NOEC Daphnia magna (Water flea): ≥ 100 mg/l ; 48 h (OECD Test Guideline 202)

EC50 Daphnia magna (Water flea): > 100 mg/l ; 48 h (OECD Test Guideline 202)

Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility in soil	No information available.
Results of PBT and vPvB assessment	No information available.

Additional/ ecological information

Discharge into the environment must be avoided.

Potassium hydroxide

Toxicity to fish

LC50 Gambusia affinis (Mosquito fish): 80 mg/l ; 96 h (IUCLID)

Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility in soil	No information available.
Results of PBT and vPvB assessment	No information available.

Additional/ ecological information

Do not let the product undiluted or in great quantities penetrate into the groundwater, the waters or the pipes.

SECTION 13. Disposal considerations

Waste treatment methods

Waste must be disposed of in accordance with the Directive on waste 2008/98/EC and with local and national regulations. Leave chemicals in original containers. No mixing with other waste. Treat uncleaned containers like the product itself.

SECTION 14. Transport information

Land transport (ADR / RID) **14.1 - 14.6**	The mixture is not subject to regulations for road transport, as a consequence of the substances concentration.
Air transport (IATA) **14.1 - 14.6**	The mixture is not subject to regulations for air transport, as a consequence of the substances concentration.
Sea transport (IMDG) **14.1 - 14.6**	The mixture is not subject to regulations for sea transport, as a consequence of the substances concentration.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15. Regulatory information

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

UE regulations

Aquatic Class risk (WGK)	WGK1 (slightly hazardous for water).
Occupational restrictions	Take note of Directive 94/33/EC on the protection of young people at work and Directive 92/85/EEC on the safety and health at work of pregnant women
Substances of very high concern (SVHC)	This product does not contain substances of very high concern above the respective regulatory limit (> 0.1%(w/w) Regulation (EC) N° 1907/2006 (REACH), Article 57

15.2 Chemical Safety Assessment

No information available.

SECTION 16. Other informations

Full text of H-Statements referred to under sections 2 and 3.

H272	May intensify fire; oxidizer.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

Training advice

Provide adequate information, instruction and training for operators.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. If does not represent a guarantee of any properties of the product.