

MATERIAL SAFETY DATA SHEET

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1. PRODUCT IDENTIFIERS**

PRODUCT NAME	Iodine
CHEMICAL NAME	Iodine
CAS no.	7553-56-2
EC no.	n/a
INDEX no.	n/a
REACH REGISTRATION no.	01-2119485285-30-XXXX

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

IDENTIFIED USES	Laboratory chemicals, Manufacture of substances
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1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

COMPANY IDENTIFICATION	Noctiluca S.A.
ADDRESS OF SUPPLIER	Noctiluca S.A. Jurijs Gagarina 7/41B 87-100 TORUN POLAND
TELEPHONE	+48 56 646 19 63
E-MAIL	office@noctiluca.eu
OFFICE HOURS	8:00 – 16:00 (Warsaw time)

1.4. EMERGENCY TELEPHONE NUMBER

EUROPE	112 or 999
ASIA	110 (China, Japan, Taiwan), 119
NORTH AMERICA	911
SOUTH AMERICA	911
AFRICA	As appropriate for your country
AUSTRALIA	000 (Australia), 111 (New Zealand)

SECTION 2: HAZARDS IDENTIFICATION**2.1. CLASSIFICATION OF THE SUBSTANCE/MIXTURE**

Regulation (EC) No. 1272/2008 (CLP)	H302: Harmful if swallowed. H332: Harmful if inhaled. H312: Harmful in contact with skin H315: Causes skin irritation. H319: Causes serious eye irritation. H335: May cause respiratory irritation. H372: Causes damage to organs through prolonged or repeated exposure if swallowed. H400: Very toxic to aquatic life.
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2.2. LABEL ELEMENTS

According to Regulation (EC) No. 1272/2008 (CLP)

PRODUCT NAME

Iodide

HAZARD PICTOGRAMS



SIGNAL WORDS

Danger

HAZARD STATEMENTS

H302 + H312 + H332 Harmful if swallowed, in contact with skin or if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H372 Causes damage to organs (Thyroid) through prolonged or repeated exposure if swallowed.

H400 Very toxic to aquatic life.

PRECAUTIONARY STATEMENTS

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/ doctor if you feel unwell.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

P314 Get medical advice/ attention if you feel unwell.

2.3. OTHER HAZARDS

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

2.4. ADDITIONAL INFORMATION

not applicable

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. SUBSTANCES

CHEMICAL NAME

Iodine

SYNONYMS

-

CHEMICAL FORMULA

I₂

MOLECULAR WEIGHT

253.81 g/mol

3.2. MIXTURES

not applicable

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SECTION 4: FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

GENERAL ADVICE

Consult a physician. Show this material safety data sheet to the doctor in attendance.

INHALATION

Fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen

SKIN CONTACT

Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

EYE CONTACT

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

INGESTION

immediately make victim drink water (two glasses at most). Consult a physician.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

The most important known symptoms and impacts are outlined in the labelling (see section 2.2) and/or in section 11.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

not applicable

SECTION 5: FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

UNSUITABLE EXTINGUISHING MEDIA

For this substance/mixture no limitations of extinguishing agents are given

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Hydrogen iodide

Not combustible.

Ambient fire may liberate hazardous vapours.

5.3. ADVICE 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.

5.4. 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

Follow safe handling advice and personal protective equipment recommendations (as per section 8). Provide adequate ventilation.

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6.2. ENVIRONMENTAL PRECAUTIONS

Avoid release to the environment. Do not let product enter drains.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4. REFERENCE TO OTHER SECTIONS

For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

ADVICE ON SAFE HANDLING
 HYGIENE MEASURES

Work under hood. Do not inhale substance/mixture. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

FIRE PROTECTION

Normal measures for preventive fire protection.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

GENERAL

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Light sensitive.

STORAGE TEMPERATURE
 STORAGE LIFE

Ambient

Storage class (TRGS 510): 6.1 1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

INCOMPATIBLE MATERIALS

Not known

7.3. SPECIFIC END USE(S)

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

Worker DNEL, acute inhalation Systemic effects 1 mg/m³ Worker DNEL, longterm inhalation Systemic effects 0,07 mg/m³ Worker DNEL, acute dermal Systemic effects

8.1.1. OCCUPATIONAL EXPOSURE LIMITS

Compartment Value Fresh water 0,01813 mg/l Sea water 0,06001 mg/l Sewage treatment plant 11 mg/l Fresh water sediment 3,99 mg/kg Sea sediment 20,22 mg/kg Soil 5,95 mg/kg

8.2. EXPOSURE CONTROLS

8.2.1. APPROPRIATE ENGINEERING CONTROLS

Make certain that there is sufficient ventilation and/or exhaust. Ensure that there is a washing facility with water available to cleanse the eyes and skin.

8.2.2. PERSONAL PROTECTION EQUIPMENT

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EYE/FACE PROTECTION

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

HAND PROTECTION

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

BODY PROTECTION

Select appropriate body protection depending on the type, concentration, and quantity of hazardous substances and workplace conditions.

RESPIRATORY PROTECTION

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.Recommended Filter type: Filter type P3 The entrepreneur 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.

Not known

THERMAL HAZARDS

8.2.3. ENVIRONMENTAL EXPOSURE CONTROLS

Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE

solid

COLOUR

black, violet

ODOUR

pungent

ODOUR THRESHOLD

n/a

MELTING POINT/FREEZING POINT

Melting point/range: 113 °C - lit.

INITIAL BOILING POINT AND BOILING RANGE

184 °C - lit

FLAMMABILITY

he product is not flammable.

LOWER AND UPPER EXPLOSION LIMIT

n/a

FLASH POINT

n/a

AUTO-IGNITION TEMPERATURE (°C)

n/a

DECOMPOSITION TEMPERATURE

n/a

pH

5,4

KINEMATIC VISCOSITY

n/a

WATER SOLUBILITY

0,3 g/l at 25 °C - slightly soluble

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PARTITION COEFFICIENT: N-OCTANOL/WATER (LOG VALUE)	n/a
VAPOUR PRESSURE	0,41 hPa at 25 °C
DENSITY	4,930 g/cm ³ at 20 °C
RELATIVE DENSITY	n/a
RELATIVE VAPOUR DENSITY	n/a
PARTICLE CHARACTERISTICS	n/a

9.2. OTHER INFORMATION

n/a

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

n/a

10.2. CHEMICAL STABILITY

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

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

Risk of explosion with:

Reducing agents

Alkali metals

Acetylene

Ammonia

Potassium

copper compounds

sodium

oxyhalogenic compounds

Boron

halogen oxides

azides

ammonium compounds

antimony

in powder form

mercury oxide

with

Methanol

and

ethanol

Risk of ignition or formation of inflammable gases or vapours with:

Powdered metals

Zinc

semimetals

halogen-halogen compounds

nonmetals

nonmetallic oxides

alkali salts

Iron

Fluorine

formaldehyde

hydrides

sodium phosphite

phosphorus

sulfur

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Titanium
powdered aluminium
acetylidene
combustible substances
powdered magnesium
petrol
butadiene
Diethyl ether
with
Aluminum
Exothermic reaction with:
carbides
azides
turpentine oils and/or turpentine substitutes
alkali oxides
lithium silicide
alkaline earth compounds
nitrides
Acetaldehyde
Lithium
fluorides
Oxides of phosphorus
Chlorine
Iron in powder form

10.4. CONDITIONS TO AVOID

n/a

10.5. INCOMPATIBLE MATERIALS

Strong oxidizing agents

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

In case of fire: see SECTION 5.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY - INGESTION

Oral: No data available
LD50 Oral - Rat - 315 mg/kg
Inhalation - No data available
Dermal: No data available

ACUTE TOXICITY – SKIN CONTACT

n/a

ACUTE TOXICITY - INHALATION

n/a

SKIN CORROSION/IRRITATION

n/a

SERIOUS EYE DAMAGE/IRRITATION

n/a

SKIN SENSITIZATION DATA

n/a

RESPIRATORY SENSITIZATION DATA

n/a

GERM CELL MUTAGENICITY

n/a

CARCINOGENICITY

n/a

REPRODUCTIVE TOXICITY

May cause congenital malformation in the fetus.
Known human reproductive toxicant

LACTATION

n/a

STOT – SINGLE EXPOSURE

Inhalation - May cause respiratory irritation. -
Respiratory system

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STOT – REPEATED EXPOSURE

Oral - Causes damage to organs through prolonged or repeated exposure.

- Thyroid

n/a

ASPIRATION HAZARD

11.2. INFORMATION ON OTHER HAZARDS

n/a

11.2.1. ENDOCRINE DISRUPTING PROPERTIES

n/a

11.2.2. INFORMATION ON OTHER HAZARDS

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. anemia, 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., Lead salts have been reported to cross the placenta and to induce embryo- and feto- mortality. They also have teratogenic effect in some animal species. No teratogenic effects have been reported with exposure to organometallic lead compounds. Adverse effects of lead on human reproduction, embryonic and fetal development, and postnatal (e.g., mental) development have been reported. Excessive exposure can affect blood, nervous, and digestive systems. The synthesis of hemoglobin is inhibited and results in anemia. If left untreated, neuromuscular dysfunction, possible paralysis, and encephalopathy can result. Additional symptoms of overexposure include: joint and muscle pain, weakness of the extensor muscles (frequently the hand and wrist), headache, dizziness, abdominal pain, diarrhea, constipation, nausea, vomiting, blue line on the gums, insomnia, and metallic taste. High body levels produce increased cerebrospinal pressure, brain damage, and stupor leading to coma and often death

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

TOXICITY – AQUATIC INVERTEBRATES

static test EC50 - Daphnia magna (Water flea) - 0,55 mg/l - 48 h

Remarks: (ECHA)

EC50 - Daphnia magna (Water flea) - 0,2 mg/l - 48 h

Remarks: (ECHA)

TOXICITY - FISH

static test LC50 - Oncorhynchus mykiss (rainbow trout) - 1,67 mg/l - 96 h

Remarks: (ECHA)

TOXICITY - ALGAE

Growth inhibition ErC50 - Desmodesmus subspicatus (green algae) -

0,13 mg/l - 72 h

(OECD Test Guideline 201)

TOXICITY – SEDIMENT COMPARTMENT

not classified

TOXICITY – TERRESTRIAL COMPARTMENT

not classified

12.2. PERSISTENCE AND DEGRADATION

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. BIOACCUMULATIVE POTENTIAL

n/a

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12.4. MOBILITY IN SOIL

n/a

12.5. RESULTS OF PBT AND VPVB ASSESSMENT

This substance/mixture contains no components considered either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6. ENDOCRINE DISRUPTING PROPERTIES

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher

12.7. OTHER ADVERSE EFFECTS

n/a

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

Dispose of the product in accordance with the regulations of the local, state or national authorities. Recycling should be carried out only for fully emptied packaging. The recommended method for disposal is through incineration managed by a licensed disposal contractor. Alternatively, send the product to a licensed recycler, reclaimer or incinerator.

13.2. ADDITIONAL INFORMATION

Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORT INFORMATION

14.1. UN NUMBER

ADR/RID	3495	IMDG	3495	IATA	3495
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14.2. UN PROPER SHIPPING NAME

ADR/RID	IODINE
IMDG	IODINE
IATA	Iodine

14.3. TRANSPORT HAZARD CLASS(ES)

ADR/RID	8 (6.1)	IMDG	8 (6.1)	IATA	8 (6.1)
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14.4 PACKAGING GROUP

ADR/RID	III	IMDG	III	IATA	III
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14.5 ENVIRONMENTAL HAZARDS

ADR/RID	yes	IMDG	yes	IATA	no
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14.6 SPECIAL PRECAUTIONS FOR USER

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Tunnel restriction code : (E)
Further information : No data available

FURTHER INFORMATION

This substance does not meet the criteria for classification as hazardous according to transportation regulations.

SECTION 15: REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2. CHEMICAL SAFETY ASSESSMENT

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: OTHER INFORMATION

THE FOLLOWING SECTIONS CONTAIN REVISIONS OR NEW STATEMENTS:

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H372 Causes damage to organs through prolonged or repeated exposure if swallowed.

H400 Very toxic to aquatic life.

LEGEND

ACRONYMS

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DNEL	Derived No Effect Level
EC	European Community
EINECS	European Inventory of Existing Commercial Chemical Substances
IATA	International Air Transport Association
IBC	Intermediate Bulk Container
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
LTEL	Long term exposure limit
PBT	Persistent, Bioaccumulative and Toxic

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PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STEL	Short term exposure limit
STOT	Specific Target Organ Toxicity
UN	United Nations
vPvB	very Persistent and very Bioaccumulative

DISCLAIMERS

This MSDS has been prepared to the best of Noctiluca S.A. ability using currently available information. However, Noctiluca S.A. cannot guarantee the accuracy of the data and hazard assessments provided. Before using the product, it is important to thoroughly research and understand the relevant laws, regulations, and potential hazards. It is recommended to use the product as soon as possible after purchase with safety in mind. Any updates or changes will be added as necessary. The listed precautions are for normal handling, but if special handling is required, additional safety measures should be taken. Chemical products should be considered potentially hazardous and toxic, with the degree of risk dependent on various factors. Only those with specialised knowledge and experience or under the guidance of such individuals should handle the product from opening to storage and disposal. Each user is responsible for establishing safe usage conditions and obtaining any necessary intellectual property permission related to the use of product, compliance with all applicable regulatory requirements and generally accepted industry standards, and conducting all necessary testing and verification, including for fitness for the intended purpose. Noctiluca S.A. makes no representation or warranty of any kind, express or implied, including merchantability or fitness for a particular use regarding the product, its application or any information provided in connection therewith. The foregoing information and suggestions are also provided without warranty of non-infringement as to intellectual property rights of third parties and shall not be construed as any inducement to infringe the rights of third parties. Noctiluca S.A. shall not be liable for incidental, consequential, indirect, exemplary or special damages of any kind, including, without limitation, liability for any damage resulting from handling or from contact with the above product, in particularly all risk and liability for loss, damage or injury to persons or to property or others arising out of the transport, storage or use of product, including infringement of any third-party intellectual property rights resulting from use of product. In addition, Noctiluca S.A. shall not be liable for incidental, consequential, indirect, exemplary or special damages of any kind, including, without limitation, liability for loss of use, loss of work in progress, loss of revenue or profits, cost of substitute equipment, facilities or services, downtime costs, damage to reputation, product recall or business interruption or any liability of purchaser to a third party.