

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 | MAI |
| CHEMICAL NAME | Methylammonium iodide |
| CAS no. | 14965-49-2 |
| EC no. | n/a |
| INDEX no. | n/a |
| REACH REGISTRATION no. | not applicable |

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

| | |
|-----------------|---|
| IDENTIFIED USES | Laboratory chemicals, Manufacture of substances |
|-----------------|---|

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

| | |
|------------------------|---|
| COMPANY IDENTIFICATION | Noctiluca S.A. |
| ADDRESS OF SUPPLIER | Noctiluca S.A. Jurija 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) | Acute toxicity, (Category 4) H302: Harmful if swallowed. Skin irritation, (Category 2) H315: Causes skin irritation. Eye irritation, (Category 2) H319: Causes serious eye irritation Respiratory system (Category 3) H335: May cause respiratory irritation. |
|-------------------------------------|--|

2.2. LABEL ELEMENTS

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

| | |
|-------------------|---|
| PRODUCT NAME | MAI |
| HAZARD PICTOGRAMS |  |

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SIGNAL WORDS HAZARD STATEMENTS

Warning

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

PRECAUTIONARY STATEMENTS

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

P302 + P352 IF ON SKIN: Wash with plenty of water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

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:

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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 SYNONYMS

Methylammonium iodide
Methylamine hydroiodide
Methanaminium iodide
Monomethylammonium iodide

CHEMICAL FORMULA MOLECULAR WEIGHT

CH₆IN
158.97g/mol

3.2. MIXTURES

not applicable

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

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INHALATION

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

SKIN CONTACT

Wash off with soap and plenty of water. Consult a physician.

EYE CONTACT

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

INGESTION

Never give anything by mouth to an unconscious person. Rinse mouth with water. 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

dry chemical, foam, water spray, carbon dioxide

UNSUITABLE EXTINGUISHING MEDIA

no data

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Carbon oxides

Nitrogen oxides (NO_x)

Hydrogen iodide

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

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

Abide by the safe handling guidance and use the suggested personal protective equipment (section 8). Ensure sufficient ventilation, wear respiratory protection, and avoid producing dust. Stay clear of inhaling gas, mist, or vapors. Make sure that there is adequate ventilation and evacuate individuals to a secure location. Do not undertake any action without proper protective gear. Section 8 provides guidelines for personal protection.

6.2. ENVIRONMENTAL PRECAUTIONS

Avoid release to the environment.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

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Clean up the spilled material by sweeping, but try to avoid generating dust. Where feasible, use vacuum equipment to collect the spilt substance. Dispose of the contents based on the local, state, or national laws.

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

Avoid breathing, swallowing, and making contact with the skin and eyes. Only use the substance in places with good ventilation. Put on protective clothing as advised in section 8.

HYGIENE MEASURES

Keep away from food and drink. Wash hands after handling, before breaks, and at the end of a workday.

FIRE PROTECTION

Normal measures for preventive fire protection.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

GENERAL

Store in a well-ventilated place. Keep container tightly closed and dry.

STORAGE TEMPERATURE

Ambient

STORAGE LIFE

Product is air, light and moisture sensitive. Product is Hygroscopic. Store in the dark. Handle and store under inert gas

INCOMPATIBLE MATERIALS

Not known

STORAGE CLASS

Storage class (TRGS 510): 11: Combustible Solids

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

8.1.1. OCCUPATIONAL EXPOSURE LIMITS

No Occupational Exposure Limit assigned.

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 for the purpose of cleansing the eyes and skin.

8.2.2. PERSONAL PROTECTION EQUIPMENT

EYE/FACE PROTECTION

Wear eye protection with side protection tested and approved under appropriate government standards such as EN166 (EU).

HAND PROTECTION

Handle with gloves. Gloves must be inspected before use and proper glove removal techniques should be

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BODY PROTECTION

RESPIRATORY PROTECTION

THERMAL HAZARDS

8.2.3. ENVIRONMENTAL EXPOSURE CONTROLS

Avoid release to the environment.

used. The selected protective gloves must satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

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

Here risk assessment shows air-purifying respirators are appropriate use a full face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls

Not known

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|--------------------------|
| PHYSICAL STATE | solid |
| COLOUR | White, light yellow |
| ODOUR | n/a |
| ODOUR THRESHOLD | n/a |
| MELTING POINT | 270 - 280 °C |
| INITIAL BOILING POINT AND BOILING RANGE | n/a |
| FLAMMABILITY | n/a |
| LOWER AND UPPER EXPLOSION LIMIT | n/a |
| FLASH POINT | n/a |
| AUTO-IGNITION TEMPERATURE (°C) | n/a |
| DECOMPOSITION TEMPERATURE | n/a |
| pH | n/a |
| KINEMATIC VISCOSITY | n/a |
| SOLUBILITY(IES) | water: n/a other: n/a |
| PARTITION COEFFICIENT: N-OCTANOL/WATER (LOG VALUE) | n/a |
| VAPOUR PRESSURE | n/a |
| DENSITY | n/a |
| 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

None anticipated.

10.2. CHEMICAL STABILITY

The product is chemically stable under recommended storage conditions.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

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n/a

10.4. CONDITIONS TO AVOID

n/a

10.5. INCOMPATIBLE MATERIALS

acids, Acid chlorides, Acid anhydrides, 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

Harmful if swallowed. Classified according to CLP notifications.

ACUTE TOXICITY – SKIN CONTACT

n/a

ACUTE TOXICITY - INHALATION

n/a

SKIN CORROSION/IRRITATION

Causes skin irritation. Classified according to CLP notifications.

SERIOUS EYE DAMAGE/IRRITATION

Causes serious eye irritation. Classified according to CLP notifications

SKIN SENSITIZATION DATA

n/a

RESPIRATORY SENSITIZATION DATA

n/a

GERM CELL MUTAGENICITY

n/a

CARCINOGENICITY

n/a

REPRODUCTIVE TOXICITY

n/a

LACTATION

n/a

STOT – SINGLE EXPOSURE

May cause respiratory irritation. Classified according to CLP notifications.

STOT – REPEATED EXPOSURE

n/a

ASPIRATION HAZARD

n/a

11.2. INFORMATION ON OTHER HAZARDS

n/a

11.2.1. ENDOCRINE DISRUPTING PROPERTIES

n/a

11.2.2. INFORMATION ON OTHER HAZARDS

n/a

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

TOXICITY – AQUATIC INVERTEBRATES

n/a

TOXICITY - FISH

n/a

TOXICITY - ALGAE

n/a

TOXICITY – SEDIMENT COMPARTMENT

not classified

TOXICITY – TERRESTRIAL COMPARTMENT

not classified

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12.2. PERSISTENCE AND DEGRADATION

n/a

12.3. BIOACCUMULATIVE POTENTIAL

n/a

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

n/a

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 | - | IMDG | - | IATA | - |
|---------|---|------|---|------|---|

14.2. UN PROPER SHIPPING NAME

| | |
|---------|---------------|
| ADR/RID | Not dangerous |
| IMDG | Not dangerous |
| IATA | Not dangerous |

14.3. TRANSPORT HAZARD CLASS(ES)

| | | | | | |
|---------|---|------|---|------|---|
| ADR/RID | - | IMDG | - | IATA | - |
|---------|---|------|---|------|---|

14.4 PACKAGING GROUP

| | | | | | |
|---------|---|------|---|------|---|
| ADR/RID | - | IMDG | - | IATA | - |
|---------|---|------|---|------|---|

14.5 ENVIRONMENTAL HAZARDS

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| | | | | | |
|---------|----|------|----|------|----|
| ADR/RID | no | IMDG | no | IATA | no |
|---------|----|------|----|------|----|

14.6 SPECIAL PRECAUTIONS FOR USER

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

EUROPEAN REGULATIONS – AUTHORISATIONS AND/OR RESTRICTONS ON USE

| CANDIDATE LIST OF SUBSTANCES OF VERY HIGH CONCERN FOR AUTHORISATION | | not listed |
|---|--|------------|
|---|--|------------|

REACH: ANNEX XIV LIST OF SUBSTANCES SUBJECT TO AUTHORISATION not listed

REACH: ANNEX XVII RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE not listed

OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES

| COMMUNITY ROLLING ACTION PLAN (CORAP) | not listed |
|---|------------|
| 1. Identify the problem or issue. | |
| 2. Gather information about the problem or issue. | |
| 3. Analyze the information and identify the causes of the problem or issue. | |
| 4. Develop a plan of action to address the problem or issue. | |
| 5. Implement the plan of action. | |
| 6. Evaluate the results of the plan of action. | |
| 7. Revise the plan of action as needed. | |
| 8. Monitor the progress of the plan of action. | |
| 9. Report on the progress of the plan of action. | |
| 10. Celebrate the success of the plan of action. | |

REGULATION (EC) N° 850/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ON not listed

PERSISTENT ORGANIC POLLUTANTS

REGULATION (EC) N° 1005/2009 ON SUBSTANCES THAT DEplete THE OZONE LAYER

REGULATION (EU) N° 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL not listed

RESELECTION (ES) IN 2012 OF THE EUROPEAN PARLIAMENT CONCERNING THE EXPORT AND IMPORT OF HAZARDOUS CHEMICALS

NATIONAL REGULATIONS

| OTHER | | | | not known |
|-------|--|--|--|-----------|
| | | | | |

15.2. CHEMICAL SAFETY ASSESSMENT

For this product a chemical safety assessment was not carried out.

SECTION 16: OTHER INFORMATION

THE FOLLOWING SECTIONS CONTAIN REVISIONS OR NEW STATEMENTS:

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation

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

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| | |
|-------|--|
| IBC | Intermediate Bulk Container |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods |
| LTEL | Long term exposure limit |
| PBT | Persistent, Bioaccumulative and Toxic |
| 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 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.