MATERIAL SAFETY DATA SHEET
according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Date of issue: 02/04/2013  Version 1.0

SECTION 1. Identification

Product identifier
Product number  818287
Product name  Lithium iodide anhydrous for synthesis

Relevant identified uses of the substance or mixture and uses advised against
Identified uses  Chemical for synthesis

Details of the supplier of the safety data sheet
Company  EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821, United States of America | SDS Phone Support: +1-978-715-1335 | General Inquiries: +1-978-715-4321 | Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
e-mail: mm_sds@merckgroup.com

Emergency telephone  800-424-9300 CHEMTREC (USA)
+1-703-527-3887 CHEMTREC (International)
24 Hours/day; 7 Days/week

SECTION 2. Hazards identification

GHS-Labeling
Not a dangerous substance according to GHS.

OSHA Hazards
While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Other hazards
None known.

SECTION 3. Composition/information on ingredients

Formula  LiI  IlI (Hill)
CAS-No.  10377-51-2
Molar mass  133.84 g/mol
Hazardous ingredients

Chemical Name ( Concentration)
CAS-No.
lithium iodide ( >= 90 % - <= 100 % )
10377-51-2

SECTION 4. First aid measures

Description of first-aid measures

Inhalation
After inhalation: fresh air.

Skin contact
After skin contact: wash off with plenty of water. Remove contaminated clothing.

Eye contact
After eye contact: rinse out with plenty of water.

Ingestion
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

The following applies to iodides in general: Sensitization possible in predisposed persons.
The following applies to lithium compounds in general: when handled or used inappropriately, the absorption of large quantities is followed by CNS disorders, agitation, spasms, ataxia (impaired locomotor coordination) due to disturbed electrolyte balance.

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

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.

Special hazards arising from the substance or mixture

Not combustible.
Ambient fire may liberate hazardous vapors.
Fire may cause evolution of:
hydrogen iodide

Advice for firefighters

Special protective equipment for fire-fighters
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

Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact.
Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions
Do not empty into drains.

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 dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7. Handling and storage

Precautions for safe handling
Observe label precautions.

Conditions for safe storage, including any incompatibilities
Tightly closed. Dry. Protected from light.
Store at +15°C to +25°C (+59°F to +77°F).

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Basis</th>
<th>Value</th>
<th>Threshold limits</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>lithium iodide</td>
<td>ACGIH</td>
<td>10377-51-2</td>
<td>Time Weighted Average (TWA): 0.01 ppm</td>
<td>Form of exposure: Inhalable fraction and vapor.</td>
</tr>
</tbody>
</table>

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

Individual protection measures
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures
Change contaminated clothing. Wash hands after working with substance.

Eye/face protection
Safety glasses
Hand protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory protection
required when dusts are generated.
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties
Physical state  powder, finecrystalline
Color  white
Odor  No strong odor known.
Odor Threshold  No information available.
pH  No information available.
Melting point  450 °C
Boiling point  No information available.
Flash point  No information available.
Evaporation rate  No information available.
Flammability (solid, gas)  No information available.
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. 4 g/cm³
at  68 °F ( 20 °C)
Water solubility  1,640 g/l
at  66 °F ( 19 °C)
Partition coefficient: n-octanol/water  No information available.
Autoignition temperature  No information available.
Decomposition temperature  No information available.
SECTION 10. Stability and reactivity

Reactivity
See below

Chemical stability
Sensitivity to light

Possibility of hazardous reactions
no information available

Conditions to avoid
no information available

Incompatible materials
no information available

Hazardous decomposition products
in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure
Eye contact, Skin contact, Ingestion

Specific target organ systemic toxicity - single exposure
The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard
Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC
No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.
ACGIH
No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information
Quantitative data on the toxicity of this product are not available.
Further toxicological data:
Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.
Other information
The following applies to iodides in general: Sensitization possible in predisposed persons.
The following applies to lithium compounds in general: when handled or used inappropriately, the absorption of large quantities is followed by CNS disorders, agitation, spasms, ataxia (impaired locomotor coordination) due to disturbed electrolyte balance.
Further data:
Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information
Ecotoxicity
No information available.
Persistence and degradability
No information available.
Bioaccumulative potential
No information available.
Mobility in soil
No information available.
Other adverse effects
Discharge into the environment must be avoided.

SECTION 13. Disposal considerations
The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information
Land transport (DOT)
Not classified as dangerous in the meaning of transport regulations.

Air transport (IATA)
Not classified as dangerous in the meaning of transport regulations.

**Sea transport (IMDG)**
Not classified as dangerous in the meaning of transport regulations.

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**SECTION 15. Regulatory information**

**United States of America**

**OSHA Hazards**
No OSHA Hazards

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

**SARA 311/312 Hazards**
No SARA Hazards

**SARA 313**
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 302**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**Clean Water Act**
This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

**Massachusetts Right To Know**
Remarks
No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**
*Ingredients*
lithium iodide

**New Jersey Right To Know**
*Ingredients*
lithium iodide
Notification status
TSCA: On TSCA Inventory

DSL: All components of this product are on the Canadian DSL.

SECTION 16. Other information

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.

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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