

OTTO CHEMIE PVT LTD

An ISO 9001 : 2015 & GMP Certified Company
101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate,
Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841
Email : info@ottokemi.com Web : www.ottokemi.com

Creation Date: 23-04-2025

Revision Date: 11-09-2030

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Ethyllithium solution, 0.5 M in benzene: cyclohexane
Product Code: E 1221
CAS No : 811-49-4

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification
OTTO CHEMIE PVT LTD
101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate,
Chinchpada, Vasai East, Waliv, Maharashtra 401208.
Email info@ottokemi.com

1.4. Emergency telephone number
Phone no. : + 91 22 2207 0099 (9:00am - 6:00 pm).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Flammable liquids, (Category 2)

Substances and mixtures which
in contact with water emit

flammable gases, (Category 2)

Skin irritation, (Category 2)

Eye irritation, (Category 2)

Germ cell mutagenicity,
(Category 1B)

Carcinogenicity, (Category 1A)

Specific target organ toxicity -
repeated exposure, (Category 1),
Blood

Aspiration hazard, (Category 1)
airways.

Long-term (chronic) aquatic
hazard, (Category 2)

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Hazard Statements

H225

H261

H304

H315

H319

H340

H350

H372

H411

Precautionary Statements

P210

H225: Highly flammable liquid and vapor.

H261: In contact with water releases
flammable gas.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H340: May cause genetic defects.

H350: May cause cancer.

H372: Causes damage to organs through
prolonged or repeated exposure.

H304: May be fatal if swallowed and enters

H411: Toxic to aquatic life with long lasting
effects.

Danger

Highly flammable liquid and vapor.

In contact with water releases flammable gas.

May be fatal if swallowed and enters airways.

Causes skin irritation.

Causes serious eye irritation.

May cause genetic defects.

May cause cancer.

Causes damage to organs (Blood) through prolonged or
repeated exposure.

Toxic to aquatic life with long lasting effects.

Keep away from heat, hot surfaces, sparks, open flames and
other ignition sources. No smoking.

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P231 + P232
P273
P301 + P310
P303 + P361 + P353
P331
Supplemental Hazard
Statements
Restricted to professional users.
Reduced Labeling (<= 125 ml)
Pictogram
Signal Word
Hazard Statements
H340
H350
H372
H304
Precautionary Statements
P301 + P310
P331
Supplemental Hazard
Statements
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.

Handle and store contents under inert gas. Protect from moisture.
Avoid release to the environment.
IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
Do NOT induce vomiting.
none

Danger

May cause genetic defects.
May cause cancer.
Causes damage to organs through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.

IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
Do NOT induce vomiting.
none

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Formula : C₂H₅Li
Molecular weight : 36,00 g/mol

Component	Classification	Classification
Ethyllithium		
CAS-No. 811-49-4	Pyr. Sol. 1; Water-react 2; Skin Corr. 1A; H250, H261, H314	>= 1 - < 3 %

*A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, or the annual tonnage does not require a registration.
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

General advice

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

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with

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water/ shower. Consult a physician.

In case of eye contact

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

If swallowed

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

Water Foam

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Lithium oxides

Combustible.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

May not get in touch with: Water

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

Forms explosive mixtures with air at ambient temperatures.

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

Remove container from danger zone and cool with water. 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: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

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 carefully with liquid-absorbent material (e.g.

Chemisorb®). Dispose of properly. Clean up affected area.

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

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Keep workplace dry. Do not allow product to come into contact with water.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

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

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For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Never allow product to get in contact with water during storage.

Storage stability Recommended storage temperature

2 - 8 °C

Handle and store under inert gas.

Storage class

Storage class (TRGS 510): 4.3: Hazardous materials, which set free flammable gases upon contact with water

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

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

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

Skin protection

required

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

required when vapours/aerosols 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 ABEK

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.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state

liquid

b) Color

No data available

c) Odor

No data available

d) Melting

No data available

point/freezing point

e) Initial boiling point

No data available

and boiling range

f) Flammability (solid, gas)

No data available

g) Upper/lower flammability or explosive limits

No data available

h) Flash point

-27,22 °C - closed cup

i) Autoignition temperature

The substance or mixture is not classified as pyrophoric.

j) Decomposition temperature

No data available

k) pH

No data available

l) Viscosity

Viscosity, kinematic: No data available
Viscosity, dynamic: No data available

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m) Water solubility	No data available
n) Partition coefficient: n-octanol/water	No data available
o) Vapor pressure	No data available
p) Density	0,862 g/cm ³ at 25 °C
Relative density	No data available
q) Relative vapor density	No data available
r) Particle characteristics	No data available
s) Explosive properties	Not classified as explosive.
t) Oxidizing properties	none
9.2 Other safety information	
No data available	

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Warming.

Moisture.

10.5 Incompatible materials

Bases, Strong oxidizing agents, acids, Halogens, Metallic salts

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg

Inhalation LC50 Rat: > 50mg/L.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity

to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: Ecological information

12.1 Toxicity

Mixture

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

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.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission

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Delegated regulation (EU) 2017/2100 or Commission
Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

Components

benzene

Toxicity to fish semi-static test LC50 - *Oryzias latipes* (Orange-red killifish) - > 100 mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia

and other aquatic

invertebrates

semi-static test EC50 - *Daphnia magna* (Water flea) - > 1.000

mg/l - 48 h

(OECD Test Guideline 202)

semi-static test NOEC - *Daphnia magna* (Water flea) - > 1.000

mg/l - 48 h

(OECD Test Guideline 202)

Toxicity to algae static test ErC50 - *Pseudokirchneriella subcapitata* (green algae) - > 1.000 mg/l - 72 h

(OECD Test Guideline 201)

static test NOEC - *Pseudokirchneriella subcapitata* (green algae)

- >= 1.000 mg/l - 72 h

(OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - activated sludge - > 1.000 mg/l - 3 h

(OECD Test Guideline 209)

Toxicity to

fish(Chronic toxicity)

flow-through test NOEC - *Pimephales promelas* (fathead

minnow) - 0,8 mg/l - 32 d

Remarks: (ECHA)

Toxicity to daphnia

and other aquatic

invertebrates(Chronic

toxicity)

semi-static test LC50 - *Daphnia magna* (Water flea) - > 100

mg/l - 21 d

(OECD Test Guideline 211)

Cyclohexane

Toxicity to fish flow-through test LC50 - *Pimephales promelas* (fathead

minnow) - 4,53 mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia

and other aquatic

invertebrates

static test EC50 - *Daphnia magna* (Water flea) - 0,9 mg/l - 48

h

(OECD Test Guideline 202)

Toxicity to algae ErC50 - *Pseudokirchneriella subcapitata* (green algae) - >

4,425 mg/l - 72 h

(OECD Test Guideline 201)

Toxicity to bacteria IC50 - Bacteria - 29 mg/l - 15 h

Remarks: (ECHA)

Ethyllithium

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

No data available

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SECTION 14: Transport information

14.1 UN number
ADR/RID: 3399
14.2 UN proper shipping name
ADR/RID : ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
(Ethyllithium, benzene, Cyclohexane)
IMDG : ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
(Ethyllithium, benzene, Cyclohexane)
IATA : Organometallic substance, liquid, water-reactive, flammable (Ethyllithium, benzene, Cyclohexane)
14.3 Transport hazard class(es)
ADR/RID: 4.3 (3)
14.4 Packaging group
ADR/RID: II
14.5 Environmental hazards
ADR/RID: yes
14.6 Special precautions for user
Tunnel restriction code : (D/E)
Further information : No data available

IMDG: 3399 IATA: 3399
IMDG: 4.3 (3) IATA: 4.3 (3)
IMDG: II IATA: II
IMDG Marine pollutant: yes IATA: no

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.

Authorisations and/or restrictions on use
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

: benzene

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: benzene

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: benzene

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

: Cyclohexane

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

: benzene

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

E2 ENVIRONMENTAL HAZARDS

P5c FLAMMABLE LIQUIDS

Other regulations

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

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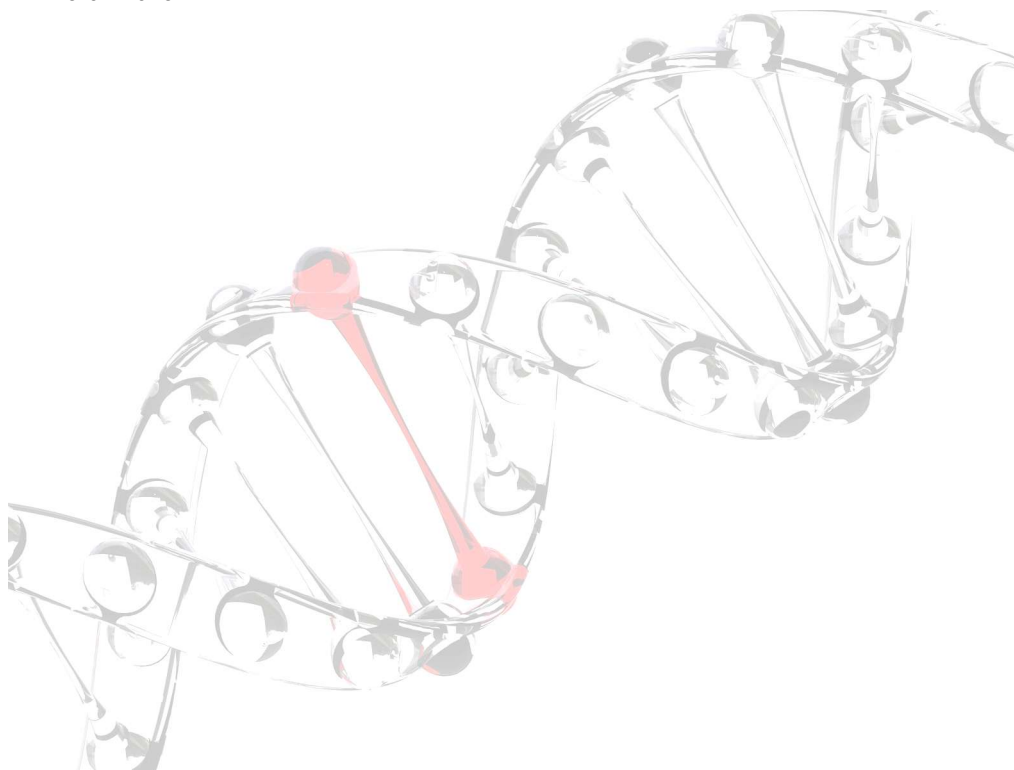
Take note of Dir 94/33/EC on the protection of young people at work.
15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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