

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

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: 1,2-Dimethoxyethane, 99%
Product Code: D 1915
CAS No : 110-71-4

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)

Acute toxicity, (Category 4)

Skin irritation, (Category 2)

Reproductive toxicity, (Category 1B)

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Hazard Statements

H225

H315

H332

H360FD

Precautionary Statements

P202

P210

P233

P303 + P361 + P353

P304 + P340 + P312

P308 + P313

Supplemental Hazard information (EU)

EUH019

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word

Hazard Statements

H360FD

Precautionary Statements

P202

P308 + P313

Supplemental Hazard information (EU)

H225: Highly flammable liquid and vapor.

H332: Harmful if inhaled.

H315: Causes skin irritation.

H360FD: May damage fertility. May damage the unborn child.

Danger

Highly flammable liquid and vapor.

Causes skin irritation.

Harmful if inhaled.

May damage fertility. May damage the unborn child.

Do not handle until all safety precautions have been read and understood.

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

Keep container tightly closed.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

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

IF exposed or concerned: Get medical advice/ attention.

May form explosive peroxides.

Restricted to professional users.

Danger

May damage fertility. May damage the unborn child.

Do not handle until all safety precautions have been read and understood.

IF exposed or concerned: Get medical advice/ attention.

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EUH019

May form explosive peroxides.

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.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Monoglyme
Dimethylglycol
mono-Glyme
Ethylene glycol dimethyl ether

Formula : C₄H₁₀O₂
Molecular weight : 90,12 g/mol
CAS-No. : 110-71-4
EC-No. : 203-794-9

Component	Classification	Concentration
1,2-dimethoxy-ethane Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
CAS-No. 110-71-4 EC-No. 203-794-9	Flam. Liq. 2; Acute Tox. 4; Skin Irrit. 2; Repr. 1B; H225, H332, H315, H360FD	<= 100 %

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

In case of skin contact

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

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

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. Chemizorb®). 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.

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.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Test for peroxide formation periodically and before distillation.

Storage class

Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)

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

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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

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 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Viton®

Minimum layer thickness: 0,7 mm

Break through time: 480 min

Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M)

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 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm

Break through time: 10 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

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, clear
b) Color	colorless
c) Odor	ether-like
d) Melting point/freezing point	Melting point/ range: -58 °C - lit.
e) Initial boiling point and boiling range	85 °C - lit.
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	Upper explosion limit: 10,4 %(V) Lower explosion limit: 1,6 %(V)
h) Flash point	5 °C - closed cup
i) Autoignition temperature	No data available
j) Decomposition	No data available

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temperature

k) pH

l) Viscosity

ca.7neutral

Viscosity, kinematic: 0,48 mm²/s at 20 °C - OECD Test Guideline 114

Viscosity, dynamic: 0,42 mPa.s at 20 °C - OECD Test Guideline 114

m) Water solubility

1.000 g/l at 25 °C - soluble

n) Partition coefficient:

log Pow: -0,21 at 25 °C - (experimental) - Bioaccumulation is not expected.

n-octanol/water

o) Vapor pressure

87 hPa at 25 °C - OECD Test Guideline 104

p) Density

0,867 g/cm³ at 25 °C - lit.

Relative density

0,87 at 20 °C - OECD Test Guideline 109

q) Relative vapor

3,11 - (Air = 1.0)

density

r) Particle

No data available

characteristics

s) Explosive properties

Not classified as explosive.

t) Oxidizing properties

none

9.2 Other safety information

Surface tension

70,7 mN/m at 1g/l at 23 °C
- OECD Test Guideline 115

Relative vapor

3,11 - (Air = 1.0)

density

SECTION 10: Stability and reactivity

10.1 Reactivity

Formation of peroxides possible.

Vapors may form explosive mixture with air.

10.2 Chemical stability

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

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Warming.

Moisture.

10.5 Incompatible materials

Oxidizing agents, Strong acids, Strong oxidizing agents

10.6 Hazardous decomposition products

Peroxides

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

Toxicity to fish static test LC50 - Danio rerio (zebra fish) - > 5.000 mg/l - 96 h

(OECD Test Guideline 203)

Remarks: The value is given in analogy to the following substances:

Tegdme

Toxicity to daphnia

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and other aquatic
invertebrates
semi-static test EC50 - Daphnia magna (Water flea) - 4.000 mg/l -
48 h
(OECD Test Guideline 202)
Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) -
9.120 mg/l - 72 h
(OECD Test Guideline 201)
Toxicity to bacteria static test EC50 - activated sludge - > 6.400 mg/l - 3 h
(OECD Test Guideline 209)
Toxicity to daphnia
and other aquatic
invertebrates(Chronic
toxicity)
semi-static test NOEC - Daphnia magna (Water flea) - 320 mg/l - 21
d
(OECD Test Guideline 211)
Remarks: The value is given in analogy to the following substances:
Diethyleneglycol dimethylether
12.2 Persistence and degradability
Biodegradability aerobic - Exposure time 48 d
Result: 16 % - According to the results of tests of biodegradability
this product is not readily biodegradable.
(OECD Test Guideline 302B)
Chemical Oxygen 1.700 mg/g
Demand (COD) Remarks: (External MSDS)
12.3 Bioaccumulative potential
Due to the distribution coefficient n-octanol/water, accumulation in organisms is not
expected.
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
Delegated regulation (EU) 2017/2100 or Commission
Regulation (EU) 2018/605 at levels of 0.1% or higher.
12.7 Other adverse effects

SECTION 13: Disposal considerations

13.1 Waste treatment methods
No data available

SECTION 14: Transport information

14.1 UN number		
ADR/RID: 2252	IMDG: 2252	IATA: 2252
14.2 UN proper shipping name		
ADR/RID : 1,2-DIMETHOXYETHANE		
IMDG : 1,2-DIMETHOXYETHANE		
IATA : 1,2-Dimethoxyethane		
14.3 Transport hazard class(es)		
ADR/RID: 3	IMDG: 3	IATA: 3
14.4 Packaging group		
ADR/RID: II	IMDG: II	IATA: II
14.5 Environmental hazards		
ADR/RID: no	IMDG Marine pollutant: no	IATA: no

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14.6 Special precautions for user
Tunnel restriction code : (D/E)
Further information : No data available

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)

: 1,2-dimethoxy-ethane

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

: 1,2-dimethoxy-ethane

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.

P5c FLAMMABLE LIQUIDS

Other regulations

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

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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