

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: 2-Methoxy ethanol, GR 99%+
Product Code: M 1877
CAS No : 109-86-4

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 3)

Acute toxicity, (Category 4)

Acute toxicity, (Category 4)

Acute toxicity, (Category 4)

Reproductive toxicity, (Category 1B)

Specific target organ toxicity -
single exposure, (Category 1),
Immune system

Specific target organ toxicity -
repeated exposure, (Category 2),
thymus

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Hazard Statements

H226

H302 + H312 + H332

H360FD

H370

H373

repeated exposure.

Precautionary Statements

P210

P280

P301 + P312

P303 + P361 + P353

P304 + P340 + P312

P308 + P311

Supplemental Hazard
Statements

H226: Flammable liquid and vapor.

H302: Harmful if swallowed.

H332: Harmful if inhaled.

H312: Harmful in contact with skin.

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

H370: Causes damage to organs.

H373: May cause damage to organs
through prolonged or repeated exposure.

Danger

Flammable liquid and vapor.

Harmful if swallowed, in contact with skin or if inhaled.

May damage fertility. May damage the unborn child.

Causes damage to organs (Immune system).

May cause damage to organs (thymus) through prolonged or

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

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

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

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: Call a POISON CENTER/ doctor.
none

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Restricted to professional users.

Reduced Labeling (≤ 125 ml)

Pictogram

Signal Word

Hazard Statements

H370

H360FD

Precautionary Statements

P280

P308 + P311

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.

Danger

Causes damage to organs.

May damage fertility. May damage the unborn child.

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

IF exposed or concerned: Call a POISON CENTER/ doctor.
none

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Methyl Cellosolve®
Ethylene glycol monomethyl ether
Methyl glycol
Formula : C₃H₈O₂
Molecular weight : 76,09 g/mol
CAS-No. : 109-86-4
EC-No. : 203-713-7

Component	Classification	Concentration
2-Methoxyethanol Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
CAS-No. 109-86-4 EC-No. 203-713-7	Flam. Liq. 3; Acute Tox. 4; Repr. 1B; STOT SE 1; STOT RE 2; H226, H302, H332, H312, H360FD, H370, H373	≤ 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. Call a physician immediately.

In case of eye contact

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

If swallowed

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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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂) Foam 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.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air at elevated temperatures.

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

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.

Store under inert gas.

Storage class

Storage class (TRGS 510): 3: Flammable liquids

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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

Derived No Effect Level (DNEL)

Application Area	Routes of exposure	Health effect	Value
Worker DNEL, acute	inhalation	Systemic effects	10 mg/m3
Worker DNEL, longterm	dermal	Systemic effects	
Worker DNEL, longterm	inhalation	Systemic effects	3,2 mg/m3
Consumer DNEL, longterm	inhalation	Systemic effects	0,53 mg/m3
Consumer DNEL, longterm	oral	Systemic effects	

Predicted No Effect Concentration (PNEC)

Compartment	Value
Fresh water	10 mg/l
Fresh water sediment	36,8 mg/kg
Sea water	1 mg/l
Sea sediment	3,68 mg/kg
Aquatic intermittent release	94 mg/l
Soil	1,87 mg/kg
Sewage treatment plant	1000 mg/l
oral	7,3 mg/kg

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: butyl-rubber

Minimum layer thickness: 0,7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

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: Viton®

Minimum layer thickness: 0,7 mm

Break through time: 120 min

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

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

Recommended Filter type: Filter A-(P2)

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.

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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	clear, liquid
b) Color	colorless
c) Odor	ether-like
d) Melting point/freezing point	Melting point/ range: -85 °C - lit.
e) Initial boiling point and boiling range	124 - 125 °C - lit.
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	Upper explosion limit: 24,5 %(V) Lower explosion limit: 2,5 %(V)
h) Flash point	40 °C - closed cup
i) Autoignition temperature	No data available
j) Decomposition temperature	204 - 232 °C
k) pH	5,0 - 7,0 at 25 °C
l) Viscosity	Viscosity, kinematic: 1,6 mm ² /s at 20 °C Viscosity, dynamic: 1,7 mPa.s at 20 °C
m) Water solubility	at 20 °C soluble
n) Partition coefficient: n-octanol/water	log Pow: -0,77 at 28 °C - Bioaccumulation is not expected., (Lit.)
o) Vapor pressure	10 hPa at 20 °C
p) Density	0,965 g/mL at 25 °C - lit.
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	
Surface tension	ca.72 mN/m at 25 °C
Relative vapor density	2,63 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixture with air.

Vapor/air-mixtures are explosive at intense warming.

10.2 Chemical stability

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

Contains the following stabilizer(s):

butyl hydroxytoluene (BHT) (0,005 %)

10.3 Possibility of hazardous reactions

Generates dangerous gases or fumes in contact with:

Aluminum

magnesium

bases

Zinc

Risk of explosion with:

Oxidizing agents

Air

Possible formation of:

Peroxides

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10.4 Conditions to avoid

Heat. 45°C

Heating.

10.5 Incompatible materials

Aluminum, various plastics

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

Toxicity to fish static test LC50 - Lepomis macrochirus (Bluegill sunfish) - > 10.000

mg/l - 96 h

(OECD Test Guideline 203)

Toxicity to daphnia

and other aquatic

invertebrates

semi-static test EC50 - Daphnia magna (Water flea) - 27.000 mg/l -

48 h

(ISO 6341)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) -

25.500 mg/l - 72 h

(ISO 8692)

Toxicity to bacteria static test EC50 - activated sludge - > 1.000 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) - > 500 mg/l -

21 d

(OECD Test Guideline 211)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 20 d

Result: 88 % - Readily biodegradable.

Remarks: (ECHA)

12.3 Bioaccumulative potential

No bioaccumulation is to be expected (log Pow <= 4).

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

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Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods
No data available

SECTION 14: Transport information

14.1 UN number		
ADR/RID: 1188	IMDG: 1188	IATA: 1188
14.2 UN proper shipping name		
ADR/RID : ETHYLENE GLYCOL MONOMETHYL ETHER		
IMDG : ETHYLENE GLYCOL MONOMETHYL ETHER		
IATA : Ethylene glycol monomethyl ether		
14.3 Transport hazard class(es)		
ADR/RID: 3	IMDG: 3	IATA: 3
14.4 Packaging group		
ADR/RID: III	IMDG: III	IATA: III
14.5 Environmental hazards		
ADR/RID: yes	IMDG Marine pollutant: yes	IATA: no
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)

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

: 2-Methoxyethanol

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.

H3 STOT SPECIFIC TARGET

ORGAN TOXICITY – SINGLE

EXPOSURE

P5c FLAMMABLE LIQUIDS

H3 STOT SPECIFIC TARGET

ORGAN TOXICITY – SINGLE

EXPOSURE

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

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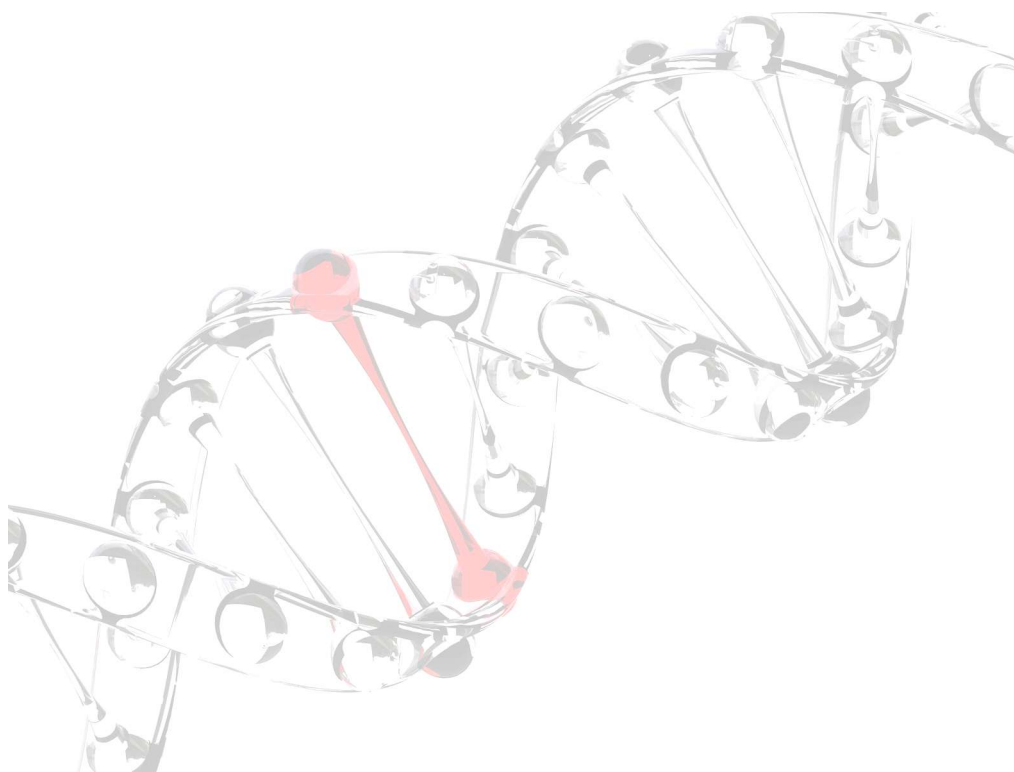
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SECTION 16: Other Information

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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