

# 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](mailto:info@ottokemi.com) Web : [www.ottokemi.com](http://www.ottokemi.com)

## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1. Product identifiers

Product name: 1,3-Diaminopropane, 99%  
Product Code: D 1395  
CAS No : 109-76-2

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](mailto: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)

Corrosive to Metals, (Category 1)

Acute toxicity, (Category 4)

Acute toxicity, (Category 2)

Skin corrosion, (Sub-category

1B)

Serious eye damage, (Category

1)

Respiratory sensitization, (Subcategory 1B)

Skin sensitization, (Sub-category

1B)

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Hazard Statements

H226

H290

H302

H310

H314

H317

H334

Precautionary Statements

P210

P280

P301 + P312

P303 + P361 + P353

P304 + P340 + P310

P305 + P351 + P338

H226: Flammable liquid and vapor.

H290: May be corrosive to metals.

H302: Harmful if swallowed.

H310: Fatal in contact with skin.

H314: Causes severe skin burns and eye

damage.

H318: Causes serious eye damage.

H334: May cause allergy or asthma

symptoms or breathing difficulties if

inhaled.

H317: May cause an allergic skin reaction.

Danger

Flammable liquid and vapor.

May be corrosive to metals.

Harmful if swallowed.

Fatal in contact with skin.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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. Immediately call a POISON CENTER/ doctor.

IF IN EYES: Rinse cautiously with water for several minutes.

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Supplemental Hazard Statements	Remove contact lenses, if present and easy to do. Continue rinsing. none
Reduced Labeling (<= 125 ml)	
Pictogram	
Signal Word	Danger
Hazard Statements	
H310	Fatal in contact with skin.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H314	Causes severe skin burns and eye damage.
Precautionary Statements	
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms	: Trimethylenediamine 1,3-Propanediamine
Formula	: C3H10N2
Molecular weight	: 74,12 g/mol
CAS-No.	: 109-76-2
EC-No.	: 203-702-7

Component	Classification	Concentration
1,3-diaminopropane		
CAS-No. 109-76-2 EC-No. 203-702-7	Flam. Liq. 3; Met. Corr. 1; Acute Tox. 4; Acute Tox. 2; Skin Corr. 1B; Eye Dam. 1; Resp. Sens. 1B; Skin Sens. 1B; H226, H290, H302, H310, H314, H318, H334, H317	<= 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

First aiders need to protect themselves. 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 water/ shower. Call a physician immediately.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

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- 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 (CO<sub>2</sub>) 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

Nitrogen oxides (NO<sub>x</sub>)

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. 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

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

No metal containers.

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.

hygroscopic

Storage class

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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

## 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). Tightly fitting safety goggles

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](http://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](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm

Break through time: 60 min

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

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

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

colorless, to, yellow

c) Odor

amine-like

d) Melting

Melting point/ range: -12 °C - lit.

point/freezing point

e) Initial boiling point

140 °C - lit.

and boiling range

f) Flammability (solid,

No data available

gas)

g) Upper/lower

Upper explosion limit: 15,2 %(V)

flammability or

Lower explosion limit: 2,8 %(V)

explosive limits

h) Flash point

50 °C - DIN 51755 Part 1

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i) Autoignition temperature	No data available
j) Decomposition temperature	No data available
k) pH	> 12 at 100 g/l at 20 °C
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 1.832 mPa.s at 20 °C, 1,192 mPa.s at 40 °C
m) Water solubility	at 20 °C soluble
n) Partition coefficient: n-octanol/water	log Pow: -1,05 at 25 °C - OECD Test Guideline 107 - Bioaccumulation is not expected.
o) Vapor pressure	5,8 hPa at 25 °C - OECD Test Guideline 104
p) Density	0,888 g/cm <sup>3</sup> 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	No data available
t) Oxidizing properties	none
9.2 Other safety information	
No data available	

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Vapor/air-mixtures are explosive at intense warming.

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines!

Violent reactions possible with:

Strong oxidizing agents  
acids

Exothermic reaction with:

Acid anhydrides  
acid halides

### 10.4 Conditions to avoid

Avoid moisture.

Heating.

### 10.5 Incompatible materials

No data available

### 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.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish static test LC50 - *Leuciscus idus* (Golden orfe) - > 100 mg/l - 96 h

(DIN 38412 part 15)

Toxicity to daphnia

and other aquatic

invertebrates

static test EC50 - *Daphnia* - 27 mg/l - 48 h

(Directive 67/548/EEC, Annex V, C.2.)

Toxicity to algae static test ErC50 - *Desmodesmus subspicatus* (green algae) - 175,1

mg/l - 72 h

(DIN 38412)

static test NOEC - *Desmodesmus subspicatus* (green algae) - >= 500

mg/l - 72 h

(DIN 38412)

Toxicity to bacteria static test EC50 - activated sludge - > 1.000 mg/l - 0,5 h

(OECD Test Guideline 209)

Toxicity to daphnia

and other aquatic

invertebrates(Chronic

toxicity)

semi-static test NOEC - *Daphnia magna* (Water flea) - >= 10 mg/l -

21 d

(OECD Test Guideline 211)

### 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 14 d

Result: 96 % - Readily biodegradable.

(OECD Test Guideline 301A)

Biochemical Oxygen

Demand (BOD)

326 mg/g

Remarks: (External MSDS)

### 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 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: 2922

IMDG: 2922

IATA: 2922

### 14.2 UN proper shipping name

ADR/RID : CORROSIVE LIQUID, TOXIC, N.O.S. (1,3-diaminopropane)

IMDG : CORROSIVE LIQUID, TOXIC, N.O.S. (1,3-diaminopropane)

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IATA : Corrosive liquid, toxic, n.o.s. (1,3-diaminopropane)  
14.3 Transport hazard class(es)  
ADR/RID: 8 (6.1) IMDG: 8 (6.1) IATA: 8 (6.1)  
14.4 Packaging group  
ADR/RID: II IMDG: II IATA: II  
14.5 Environmental hazards  
ADR/RID: no IMDG Marine pollutant: no IATA: no  
14.6 Special precautions for user  
Tunnel restriction code : (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.

### 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.

H2 ACUTE TOXIC

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

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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