

# 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: Diethanolamine, GR 99%+  
Product Code: D 1637  
CAS No : 111-42-2

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

Acute toxicity, (Category 4)  
Skin irritation, (Category 2)  
Serious eye damage, (Category 1)

Reproductive toxicity, (Category 2)

Specific target organ toxicity -  
repeated exposure, (Category 2),  
Kidney, Liver, Blood

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Hazard Statements

H302  
H315  
H318  
H361fd

H373

Precautionary Statements

P202

P280

P301 + P312

P302 + P352

P305 + P351 + P338

P308 + P313

Supplemental Hazard  
Statements

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word

H302: Harmful if swallowed.  
H315: Causes skin irritation.  
H318: Causes serious eye damage.

H361fd: Suspected of damaging fertility.  
Suspected of damaging the unborn child.  
H373: May cause damage to organs  
through prolonged or repeated exposure if  
swallowed.

Danger

Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye damage.  
Suspected of damaging fertility. Suspected of damaging the  
unborn child.  
May cause damage to organs (Kidney, Liver, Blood) through  
prolonged or repeated exposure if swallowed.

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

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

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

IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes.  
Remove contact lenses, if present and easy to do. Continue  
rinsing.

IF exposed or concerned: Get medical advice/ attention.

none

Danger

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## Hazard Statements

H318  
H361fd

Causes serious eye damage.  
Suspected of damaging fertility. Suspected of damaging the unborn child.

## Precautionary Statements

P202

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

P280

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

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313

IF exposed or concerned: Get medical advice/ attention. none

## 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.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : Bis(2-hydroxyethyl)amine  
2,2'-Iminodiethanol  
Formula : C<sub>4</sub>H<sub>11</sub>NO<sub>2</sub>  
Molecular weight : 105,14 g/mol  
CAS-No. : 111-42-2  
EC-No. : 203-868-0

Component	Classification	Concentration
Diethanolamine		
CAS-No. 111-42-2 EC-No. 203-868-0	Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; Repr. 2; STOT RE 2; H302, H315, H318, H361fd, 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. Call in physician.

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. Immediately 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

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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

Water Foam Carbon dioxide (CO<sub>2</sub>) 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 on intense heating.

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

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: Avoid inhalation of dusts. Avoid substance contact.

Ensure adequate ventilation. 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.

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

### 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.

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

Tightly closed. Dry.

Air sensitive.

Storage class

Storage class (TRGS 510): 11: Combustible Solids

### 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

Derived No Effect Level (DNEL)

Application Area	Routes of exposure	Health effect	Value
Worker DNEL, longterm	inhalation	Systemic effects	1 mg/m3
Worker DNEL, longterm	dermal	Systemic effects	
Consumer DNEL, longterm	inhalation	Systemic effects	0,25 mg/m3
Consumer DNEL, longterm	dermal	Systemic effects	
Consumer DNEL, longterm	oral	Systemic effects	

### Predicted No Effect Concentration (PNEC)

Compartment	Value
Fresh water	0,0022 mg/l
Sea water	0,00022 mg/l
Aquatic intermittent release	0,022 mg/l
Fresh water sediment	0,019 mg/kg
Sea sediment	0,0019 mg/kg
Soil	0,00108 mg/kg
Sewage treatment plant	100 mg/l

### 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: Latex gloves

Minimum layer thickness: 0,6 mm

Break through time: 480 min

Material tested: Lapren® (KCL 706 / Aldrich Z677558, 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: 0,11 mm

Break through time: 30 min

Material tested: KCL 741 Dermatrill® L

Body Protection

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.

Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Physical state	solid
b) Color	colorless, light yellow
c) Odor	ammoniacal
d) Melting point/freezing point	Melting point: 27 °C at 1.013 hPa
e) Initial boiling point and boiling range	217 °C at 200 hPa
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	Upper explosion limit: 10,6 %(V) Lower explosion limit: 1,6 %(V)
h) Flash point	138 °C - closed cup
i) Autoignition temperature	355 °C at 1.013 hPa
j) Decomposition temperature	No data available
k) pH	11,0 - 12 at 105 g/l at 25 °C
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 390,9 mPa.s at 30 °C - OECD Test Guideline 114 114102,7 mPa.s at 50 °C - OECD Test Guideline 114 105 g/l at 20 °C - completely soluble log Pow: -2,46 at 25 °C - OECD Test Guideline 107 - Bioaccumulation is not expected.
m) Water solubility	1 hPa at 108 °C - OECD Test Guideline 104
n) Partition coefficient: n-octanol/water	1,097 g/cm <sup>3</sup> at 20 °C
o) Vapor pressure	No data available
p) Density	No data available
q) Relative density	No data available
r) Relative vapor density	No data available
s) Particle characteristics	No data available
t) Explosive properties	No data available
u) Oxidizing properties	none
9.2 Other safety information	
Dissociation constant	8,99 at 25 °C
Relative vapor density	3,63 - (Air = 1.0)

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### 10.2 Chemical stability

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

Absorbs carbon dioxide (CO<sub>2</sub>) from air.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Strong heating.

### 10.5 Incompatible materials

bronze, Copper, Copper alloys, brass, Zinc, zinc alloys, Strong oxidizing agents

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## 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 - Oncorhynchus mykiss (rainbow trout) - 460 mg/l - 96 h

Remarks: (ECHA)

Toxicity to daphnia

and other aquatic

invertebrates

static test EC50 - Ceriodaphnia dubia (water flea) - 30,1 mg/l - 48 h

Remarks: (ECHA)

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

9,5 mg/l - 96 h

(US-EPA)

Toxicity to bacteria static test EC10 - activated sludge - > 1.000 mg/l - 30 min

(OECD Test Guideline 209)

Toxicity to daphnia

and other aquatic

invertebrates(Chronic

toxicity)

semi-static test EC10 - Daphnia magna (Water flea) - 1,05 mg/l - 21

d

Remarks: (ECHA)

### 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 93 % - Readily biodegradable.

(OECD Test Guideline 301F)

Biochemical Oxygen

Demand (BOD)

885 mg/g

Remarks: (External MSDS)

Chemical Oxygen

Demand (COD)

1.352 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.

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## 12.7 Other adverse effects

Additional ecological  
information

Biological effects:

Harmful effect due to pH shift.

When discharged properly, no impairments in the function of  
adapted biological wastewater treatment plants are to be expected.

Discharge into the environment must be avoided.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

No data available

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: -

IMDG: -

IATA: -

### 14.2 UN proper shipping name

ADR/RID : Not dangerous goods

IMDG : Not dangerous goods

IATA : Not dangerous goods

### 14.3 Transport hazard class(es)

ADR/RID: -

IMDG: -

IATA: -

### 14.4 Packaging group

ADR/RID: -

IMDG: -

IATA: -

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

### 14.6 Special precautions for user

No data available

Further information

Not classified as dangerous in the meaning of transport regulations.

## 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

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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