

# 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: Diethylenetriamine, 97%  
Product Code: D 1695  
CAS No : 111-40-0

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)

Acute toxicity, (Category 2)

Acute toxicity, (Category 4)

Skin corrosion, (Sub-category 1B)

Serious eye damage, (Category 1)

Skin sensitization, (Sub-category 1B)

Specific target organ toxicity -  
single exposure, (Category 3),  
Respiratory system

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Hazard Statements

H302 + H312

H314

H317

H330

H335

Precautionary Statements

P260

P280

protection.

P301 + P312

P303 + P361 + P353

P304 + P340 + P310

P305 + P351 + P338

Supplemental Hazard  
Statements

Reduced Labeling (<= 125 ml)

H302: Harmful if swallowed.

H330: Fatal if inhaled.

H312: Harmful in contact with skin.

H314: Causes severe skin burns and eye  
damage.

H318: Causes serious eye damage.

H317: May cause an allergic skin reaction.

H335: May cause respiratory irritation.

Danger

Harmful if swallowed or in contact with skin.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Fatal if inhaled.

May cause respiratory irritation.

Do not breathe mist or vapors.

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.  
Remove contact lenses, if present and easy to do. Continue  
rinsing.

none

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|                          |  |
|--------------------------|--|
| Pictogram                | Danger   |
| Signal Word              |  |
| Hazard Statements        |  |
| H330                     | Fatal if inhaled.  |
| H317                     | May cause an allergic skin reaction.   |
| H314                     | Causes severe skin burns and eye damage.   |
| Precautionary Statements |  |
| P260                     | Do not breathe mist or vapors.   |
| 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

### 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

Formula : C<sub>4</sub>H<sub>13</sub>N<sub>3</sub>  
Molecular weight : 103,17 g/mol  
CAS-No. : 111-40-0  
EC-No. : 203-865-4

| Component  | Classification   | Concentration |
|--|--|---------------|
| 2,2'-iminodiethylamine<br>CAS-No. 111-40-0<br>EC-No. 203-865-4 | Acute Tox. 4; Acute Tox. 2; Acute Tox. 4;<br>Skin Corr. 1B; Eye Dam. 1; Skin Sens.<br>1B; STOT SE 3; H302, H330, H312,<br>H314, H318, H317, H335 | <= 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. 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. Immediately call in ophthalmologist.

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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.

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

Nature of decomposition products not known.

Combustible.

Fire may cause evolution of:

nitrogen oxides

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: Do not breathe vapors, aerosols. 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 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 vapors/aerosols.

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. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 6.1A: Combustible, acute toxic Cat. 1 and 2 / very toxic

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hazardous materials

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: Chloroprene

Minimum layer thickness: 0,65 mm

Break through time: 480 min

Material tested:KCL 720 Camapren®

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: Latex gloves

Minimum layer thickness: 0,6 mm

Break through time: 60 min

Material tested:Lapren® (KCL 706 / Aldrich Z677558, Size M)

Body Protection

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.

## SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state

liquid

b) Color

colorless

c) Odor

Ammonia odor

d) Melting

Melting point/range: -35 °C

point/freezing point

e) Initial boiling point

207 °C at 1.010 hPa

and boiling range

f) Flammability (solid,

No data available

gas)

g) Upper/lower

Upper explosion limit: 6,7 %(V)

flammability or

Lower explosion limit: 2 %(V)

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|   |   |
|---|---|
| explosive limits                          |   |
| h) Flash point                            | 94 °C - closed cup  |
| i) Autoignition temperature               | 358 °C<br>at 1.013 hPa  |
| j) Decomposition temperature              | No data available   |
| k) pH                                     | No data available   |
| l) Viscosity                              | Viscosity, kinematic: 7,16 mm <sup>2</sup> /s at 20 °C<br>Viscosity, dynamic: No data available<br>at 20 °C miscible in all proportions |
| m) Water solubility                       | No data available   |
| n) Partition coefficient: n-octanol/water | No data available   |
| o) Vapor pressure                         | 0,2 hPa at 20 °C  |
| p) Density                                | 0,955 g/cm <sup>3</sup>   |
| 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              |   |
| Relative vapor density                    | 3,56 - (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.

### 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:

Oxidizing agents

Nitric acid

Strong acids

organic nitro compounds

### 10.4 Conditions to avoid

Strong heating.

### 10.5 Incompatible materials

Aluminum, Copper, Copper alloys, Zinc, zinc alloys

### 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 LC50 - Poecilia reticulata (guppy) - 1.014 mg/l - 96 h

semi-static test LC50 - Poecilia reticulata (guppy) - 430 mg/l - 96 h

Remarks: (ECHA)

Toxicity to daphnia

and other aquatic

invertebrates

static test EC50 - Daphnia magna (Water flea) - 16 mg/l - 48 h

(DIN 38412)

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

1.164 mg/l - 72 h

(OECD Test Guideline 201)

Toxicity to bacteria static test EC50 - Bacteria - 32,7 mg/l - 3 h

Remarks: (ECHA)

Toxicity to

fish(Chronic toxicity)

semi-static test NOEC - Gasterosteus aculeatus - > 10 mg/l - 28 d

(OECD Test Guideline 210)

Toxicity to daphnia

and other aquatic

invertebrates(Chronic

toxicity)

semi-static test NOEC - Daphnia magna (Water flea) - 5,6 mg/l - 21

d

Remarks: (ECHA)

### 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 21 d

Result: 87 % - Readily biodegradable.

(OECD Test Guideline 301D)

### 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

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: 2079

IMDG: 2079

IATA: 2079

### 14.2 UN proper shipping name

ADR/RID : DIETHYLENETRIAMINE

IMDG : DIETHYLENETRIAMINE

IATA : Diethylenetriamine

### 14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

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