

# 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 : 1,2,4-Triazole, 99%  
Product Code: T 1990  
CAS-No.: 288-88-0

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.Hazard identification

2.1Classification of the substance or mixture

Acute toxicity - Oral, Category 4

Eye irritation, Category 2

Reproductive toxicity, Category 2

2.2GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Warning

Hazard statement(s)

H302 Harmful if swallowed

H319 Causes serious eye irritation

Precautionary statement(s)

Prevention

P264 Wash ... thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

Response

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/u2026if you feel unwell.

P330 Rinse mouth.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

P308+P313 IF exposed or concerned: Get medical advice/ attention.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container to ...

2.3Other hazards which do not result in classification

none

### SECTION 3.Composition/information on ingredients

3.1Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
1H-1,2,4-triazole	1H-1,2,4-triazole	288-88-0	none	100%

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## SECTION 4. First-aid measures

### 4.1 Description of necessary first-aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

Fresh air, rest.

#### In case of skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower.

#### In case of eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### If swallowed

Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention.

### 4.2 Most important symptoms/effects, acute and delayed

no data available

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

/SRP:/ Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. /Poisons A and B/

## SECTION 5. Fire-fighting measures

### 5.1 Extinguishing media

Suitable extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Special protective equipment for fire-fighters: Wear self contained breathing apparatus for fire fighting if necessary.

### 5.2 Specific hazards arising from the chemical

no data available

### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

## SECTION 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

### 6.2 Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

### 6.3 Methods and materials for containment and cleaning up

Accidental Release Measures. Personal precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Environmental precautions: Do not let product enter drains. Methods for cleaning up: Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid exposure - obtain special instructions before use. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Separated from strong oxidants and strong acids. Store in an area without drain or sewer access. Keep container tightly closed in a dry and well-ventilated place.

## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

### 8.2 Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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## 8.3 Individual protection measures, such as personal protective equipment (PPE)

### Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### Skin protection

Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Respiratory protection

Wear dust mask when handling large quantities.

### Thermal hazards

no data available

## SECTION 9. Physical and chemical properties

Physical state	white crystalline powder and flakes
Colour	Needles from benzene/ethanol
Odour	no data available
Melting point/ freezing point	320\u00b0C(dec.)(lit.)
Boiling point or initial boiling point and boiling range	260\u00b0C(lit.)
Flammability	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit / flammability limit	no data available
Flash point	170\u00b0C
Auto-ignition temperature	490\u00b0C
Decomposition temperature	290\u00b0C
pH	no data available
Kinematic viscosity	no data available
Solubility	In water:1250 g/L (20 \u00b0C)
Partition coefficient n-octanol/water (log value)	log Kow = -0.58
Vapour pressure	0.0203mmHg at 25\u00b0C
Density and/or relative density	1.274g/cm <sup>3</sup>
Relative vapour density	no data available
Particle characteristics	no data available

## SECTION 10. Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Combustible Dust explosion possible if in powder or granular form, mixed with air.

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Reacts with strong acids and strong oxidants.

### 10.6 Hazardous decomposition products

When heated to decomposition it emits toxic vapors of /nitroxides/.

## 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.

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Special Remarks on other Toxic Effects on Humans: Not available.

## SECTION 12. Ecological information

### 12.1 Toxicity

Toxicity to fish: no data available  
Toxicity to daphnia and other aquatic invertebrates: no data available  
Toxicity to algae: no data available  
Toxicity to microorganisms: no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

An estimated BCF of 3 was calculated in fish for 1H-1,2,4-triazole(SRC), using a log Kow of -0.58(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

### 12.4 Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of 1H-1,2,4-triazole can be estimated to be 5(SRC). According to a classification scheme(2), this estimated Koc value suggests that 1H-1,2,4-triazole is expected to have very high mobility in soil.

### 12.5 Other adverse effects

no data available

## SECTION 13. Disposal considerations

### 13.1 Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## SECTION 14. Transport information

### 14.1 UN Number

ADR/RID: Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

### 14.2 UN Proper Shipping Name

ADR/RID: unknown

IMDG: unknown

IATA: unknown

### 14.3 Transport hazard class(es)

ADR/RID: Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

### 14.4 Packing group, if applicable

ADR/RID: Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

### 14.5 Environmental hazards

ADR/RID: no

IMDG: no

IATA: no

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

## SECTION 15. Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
1H-1,2,4-triazole	1H-1,2,4-triazole	288-88-0	none
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.

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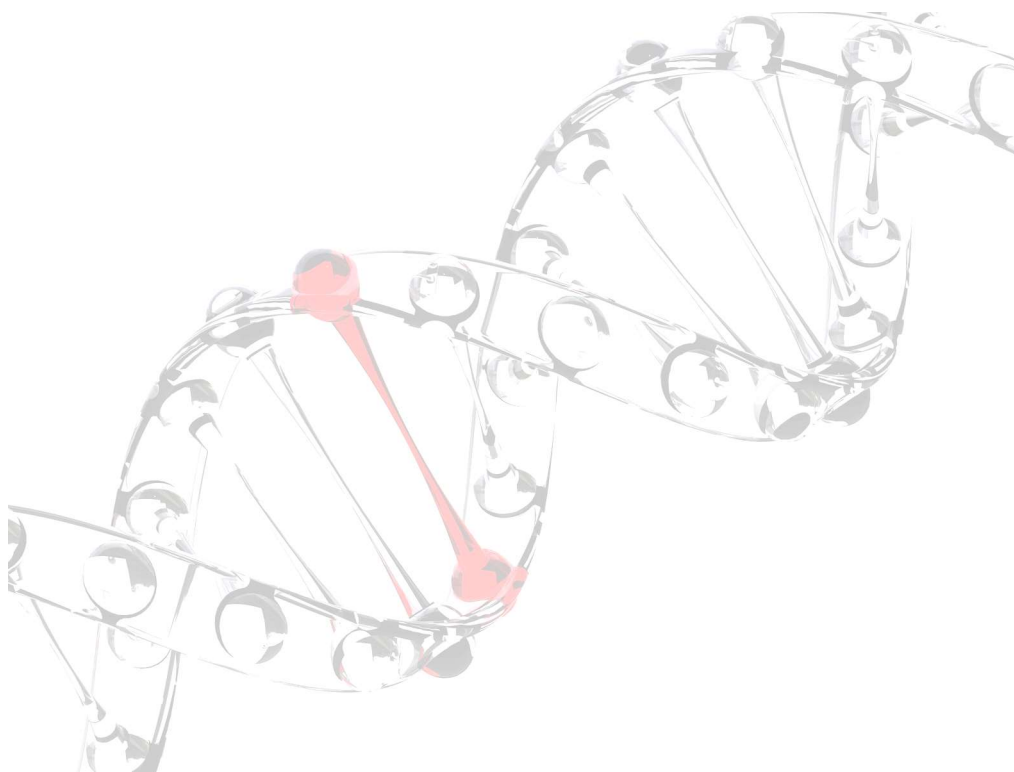
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Vietnam National Chemical Inventory	Not Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Listed.

## 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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