



MANUFACTURERS OF FINE CHEMICALS & INTERMEDIATES

FACTORY & CORRESPONDENCE ADDRESS :  
77/2, 'S' BLOCK, M.I.D.C., BHOSARI,  
PUNE : 411 026 (MAH.), INDIA.  
PHONE : 0091 20 27120630  
TELEFAX : 0091 20 27122058  
E-MAIL : accounts@shivamchemicals.com  
info@shivamchemicals.com  
factory@shivamchemicals.com  
WEB : www.shivamchemicals.com

## MATERIAL SAFETY DATA SHEET

Substance Name: **1-H BENZOTRIAZOLE**.

Complying with according to Regulation (EC) No. 1907/2006 and REGULATION (EC) No 1272/2008 (CLP)

### Section 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/ UNDERTAKING

#### 1.1 Product identifier

Substance Name: 1-H BENZOTRIAZOLE

Trade name: 1-H BENZOTRIAZOLE OR 1,2,3,BENZOTRIAZOLE

Synonyms: BENZENE RING FUSED AZOLE

Chemical formula: C<sub>6</sub>H<sub>5</sub>N<sub>3</sub>

Product type: Heterocyclic Compound with Nitrogen Atoms.

CAS number: 95-14-7

H.S.Code : 29339900

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

#### 1.3 Details of the supplier of the safety data sheet

Company/undertaking identification

Supplier/Manufacturer: SHIVAM ENTERPRISES.

S-77/2, MIDC, BHOSARI, PUNE-411026

Tel: +91-20-27120630

Fax: +91-20-27122058

E-mail: [info@shivamchemicals.com](mailto:info@shivamchemicals.com)

E-mail address of person responsible for this SDS: [info@shivamchemicals.com](mailto:info@shivamchemicals.com)

#### 1.4 Emergency telephone number

Emergency telephone number (including hours of operation): +91-9822612471

### Section 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Eye irritation (Category 2), H319

Chronic aquatic toxicity (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.





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## 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]



Hazard pictograms (CLP)

Signal word (CLP) : Warning

Hazard statement(s)

H302 + H332 : Harmful if swallowed or if inhaled

H319 : Causes serious eye irritation.

H412 : Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P273 : Avoid release to the environment.

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

## 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.

### Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. Substances

Synonyms	: 1,2,3-Benzotriazole OR 1H-Benzotriazole
Formula	: C6H5N3
Molecular weight	: 119.12 g/mol
CAS-No.	: 95-14-7
EC-No.	: 202-394-1

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
<b>1,2,3-Benzotriazole OR 1H-Benzotriazole</b>		
CAS-No. 95-14-7 EC-No. 202-394-1	Acute Tox. 4; Eye Irrit. 2; Aquatic Chronic 2; H302, H319, H411	<= 100 %

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### Section 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

##### General advice

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

##### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

##### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

##### In case of eye contact

Flush eyes with water as a precaution.

##### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. 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: FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Special hazards arising from the substance or mixture

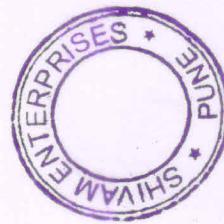
Carbon oxides, Nitrogen oxides (NOx)

#### 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### 5.4 Further information

Use water spray to cool unopened containers.



### Section 6: ACCIDENTAL RELEASE MEASURES

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

Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.

For personal protection see section 8.



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### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

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

Sweep up and shovel.\n20 Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.\n20 Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

### 6.4 Reference to other sections

For disposal see section 13.

## Section 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.Keep away from sources of ignition

- No smoking.Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

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

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated



## Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION

### 8.1 Control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

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

#### Personal protective equipment

##### 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

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.



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Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de,  
test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### Body Protection

Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

- a) Appearance Form : solid
- b) Odour : No data available
- c) Odour Threshold : No data available
- d) pH : 6.0 - 7.0 at 100 g/l at 20 °C
- e) Melting point/freezing point...  
Melting point/range : 97 - 99 °C - lit
- f) Initial boiling point and boiling range: No data available
- g) Flash point : 170 °C - closed cup
- h) Evaporation rate : No data available



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- i) Flammability (solid, gas) : No data available.
- j) Upper/lower flammability or explosive limits : No data available
- k) Vapour pressure : 0.04 mmHg at 20 °C
- l) Vapour density : No data available
- m) Relative density : No data available
- n) Water solubility : No data available
- o) Partition coefficient: noctanol/water : log Pow: 1.44
- p) Auto-ignition temperature : 400 °C
- q) Decomposition temperature : No data available
- r) Viscosity : No data available
- s) Explosive properties : No data available
- t) Oxidizing properties : No data available

### 9.2 Other safety information

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

No data available

### 10.4 Conditions to avoid

Exposure to light may affect product quality.

### 10.5 Incompatible materials

Strong oxidizing agents, Heavy metals

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)

Other decomposition products - No data available

In the event of fire: see section 5





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## Section 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 500 mg/kg(Benzotriazole)

(OECD Test Guideline 423)

LD50 Dermal - Rat - > 1,000 mg/kg(Benzotriazole)

#### Skin corrosion/irritation

Skin - Rabbit(Benzotriazole)

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit(Benzotriazole)

Result: Irritating to eyes. - 24 h

(OECD Test Guideline 405)

#### Respiratory or skin sensitisation

Maximisation Test - Guinea pig(Benzotriazole)

Result: Does not cause skin sensitisation.

(OECD Test Guideline 406)

#### Germ cell mutagenicity

Ames test(Benzotriazole)

Salmonella typhimurium

Result: negative

OECD Test Guideline 474(Benzotriazole)

Mouse - male and female

Result: negative

#### Carcinogenicity

This product is or contains a component that is not classifiable as to its classification.(Benzotriazole)

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### Reproductive toxicity

No data available(Benzotriazole)

#### Specific target organ toxicity - single exposure

No data available(Benzotriazole)

#### Specific target organ toxicity - repeated exposure

No data available

#### Aspiration hazard

No data available(Benzotriazole)

#### Additional Information

RTECS: DM1225000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Benzotriazole)



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WEB

**MANUFACTURERS OF FINE CHEMICALS & INTERMEDIATES****Section 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

Toxicity to fish

semi-static test LC50 - Danio rerio (zebra fish) - 180 mg/l - 96 h(Benzotriazole)  
(OECD Test Guideline 203)Toxicity to daphnia and  
other aquatic  
invertebratesImmobilization EC50 - Daphnia galeata (water flea) - 8.58 mg/l - 48  
h(Benzotriazole)  
OECD Test Guideline 202)

Toxicity to algae

Growth inhibition EC50 - Selenastrum capricornutum (green algae) - 75 mg/l -  
72 h(Benzotriazole)  
(OECD Test Guideline 201)**12.2 Persistence and degradability**

Biodegradability

aerobic - Exposure time 28 d(Benzotriazole)

Result

: 0 % - Not readily biodegradable.

(OECD Test Guideline 301D)

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available(Benzotriazole)

**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 Other adverse effects**

Harmful to aquatic life with long lasting effects.

**Section 13: DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**Section 14: TRANSPORT INFORMATION****14.1 UN number**

3077

ADR/RID:

IMDG:

IATA:

**14.2 UN proper shipping name 1-H BENZOTRIAZOLE**

ADR/RID: dangerous goods....3077 , 9 , III

IMDG: dangerous goods....3077 , 9 , III

IATA: dangerous goods....3077 , 9 , III





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### 14.3 Transport hazard class(es)

ADR/RID: : 9

### 14.4 Packaging group

ADR/RID: : III

### 14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: P

### 14.6 Special precautions for user

No data available

## Section 15: REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

## Section 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.

H302 + H332 Harmful if swallowed or if inhaled

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Version no. 4

Date of issue: 02/06/2023

To the best of our knowledge the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

