

## Safety Data Sheet

### 1,2,3 Benzotriazole 99.5% Min Granular

#### 1. Identification of the substance/Preparation and of the company/Undertaking

**Trade name:** 1,2,3 Benzotriazole 99.5% Min Granular  
**Supplier :** Lam Seng Hang Co. Pte Ltd  
35 Tuas View Place Singapore 637881  
Tel: (65) 67943909 Fax: 67943622

#### 2. Hazard Identification



Signal Word : Warning

Emergency Overview

OSHA Hazards

Harmful by ingestion. Harmful by skin absorption, Irritant.

#### GHS Classification

Acute toxicity, Inhalation (Category 5)

Acute toxicity, Dermal (Category 4)

Acute toxicity, Oral (Category 4)

Eye irritation (Category 2A)

Acute aquatic toxicity (Category 3)

Chronic aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements

#### 3. Composition/Information on ingredients

Chemical Name	CAS No	Hazard Ingredient %
Benzotriazole	95-14-7	N/A

#### **4. First Aid Measures**

##### **General Information**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident. Immediately remove any clothing soiled by the product.

##### **After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.

##### **After skin contact**

Wash with water and soap and rinse with plenty of water. If skin irritation continues, consult a doctor.

##### **After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

##### **After swallowing**

Rinse out mouth and then drink plenty of water. Seek medical treatment.

#### **5. Fire Fighting Measure**

##### **Suitable extinguishing agents**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Use fire fighting measures that suit the environment.

##### **Special hazards caused by the material, its products of combustion or resulting gases:**

Formation of toxic gases is possible during heating or in case of fire.

Persons, who have inhaled burning vapours must be observed by medicals for at least 48 hours. Symptoms of poisoning may even occur several hours after the accident.

##### **Protective equipment:**

Wear self-contained respiratory protective device.

Do not inhale combustion vapours.

##### **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

#### **6. Accidental Release Measure**

##### **Person-related safety precautions:**

Ensure adequate ventilation

Avoid formation of dust.

Wear protective equipment. Keep unprotected persons away.

Do not smoke - keep ignition sources away

##### **Measures for environmental protection:**

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to penetrate the ground/soil.

In case of seepage into the ground inform responsible authorities.

Keep contaminated washing water and dispose of appropriately.

**Measures for cleaning/collecting:**

Ensure adequate ventilation.

Avoid dust formation absolutely. If necessary pick up with a tested and approved industrial vacuum cleaner.

Send for recovery or disposal in suitable receptacles.

Dispose contaminated material as waste according to item 13.

**7. Handling & Storage****Handling****Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of dust.

Any deposit of dust which cannot be avoided must be regularly removed.

**Information about protection against explosions and fires:**

Dust can combine with air to form an explosive mixture.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

**Storage****Requirements to be met by storerooms and receptacles:**

Store container tightly sealed at a cool and dry place with sufficient ventilation.

**Information about storage in one common storage facility:**

Store away from foodstuffs.

**Further information about storage conditions:**

Keep receptacle tightly sealed.

**Storage class** 11 Flammable solids

**Class according** to regulation on flammable liquids: Void

**8. Exposure controls/Personal protection****Additional information about design of technical systems:**

Install appropriate mechanical ventilation.

Keep away from open flames and other ignition sources.

Protect against electrostatic charges.

Components with limit values that require monitoring at the workplace:

Not required.

**Additional Occupational Exposure Limit Values for possible hazards during processing:**

Observe general threshold limit for dust.

**Additional information:**

The lists that were valid during the creation were used as basis.

**Personal protective equipment****General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes and skin.  
Do not inhale dust / smoke / mist.  
Vacuum clean contaminated clothing. Do not blow or brush off contamination.

**Breathing equipment:**

Short term filter device: Filter P2.

**Protection of hands:** Protective gloves.

**Eye protection:** Tightly sealed goggles.

**Body protection:** Protective work clothing.

## 9. Physical & Chemical Properties

<b>Form:</b>	Crystalline/flake/granular/fine granular/powder
<b>Colour:</b>	white to off-white
<b>Odour:</b>	Nearly odourless
	Value/Range Unit Method

**Change in condition**

**Melting point/Melting range:** 97-99 ° C

**Boiling point/Boiling range:** 204/20mbar ° C

**Flash point:** 195 ° C

**Flammability (solid, gaseous)** Product is not flammable.

**Ignition temperature:** 400 ° C

**Danger of explosion:**

Product is not explosive. However, formation of explosive air/dust mixtures is possible.

**Density:** at 20 ° C 1.36 g/cm<sup>3</sup>

**Solubility in / Miscibility with water:** at 20 ° C 20 g/l

**pH-value:** (0.5g in 100g water) at 25 ° C 5-6

## 10. Stability and Reactivity:

**Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

**Materials to be avoided:** Strong oxidants.

**Dangerous reactions** No dangerous reactions known

**Dangerous products of decomposition:**

Hydrogen cyanide (prussic acid)

Nitrogen oxides (NOx)

Carbon monoxide and carbon dioxide

## **11. Toxicological Information:**

### **Acute toxicity:**

LD/LC50 values that are relevant for classification: 95-14-7 benzotriazole

Oral: LD50: 560 mg/kg (rat)

Dermal: LD50: >2000 mg/kg (rabbit)

### **Primary irritant effect:**

#### **on the skin:**

No irritation, but slight irritation or redness is possible after long or repeatedly mechanical contact.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

## **12. Ecological Information:**

### **Ecotoxic effects:**

Acquatic toxicity:

95-14-7 benzotriazole

EC50: 1060 mg/L (ba)

IC50/72h: 231 mg/L (scenedesmus subspicatus)

LC50/48h: 91 mg/L (daphnia magna)

LC50/96h: 39 mg/L (fish)

LC50/96h: 25 mg/L (lm)

### **General notes:**

Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water.

Classification according to German VwVwS dt. 17.05.99 appendix 3

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

## **13. Disposal considerations:**

### **Product**

#### **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Must be specially treated adhering to official regulations.

### **Uncleaned packagings:**

#### **Recommendation:**

Disposal must be made according to official regulations.

## **14. Transportation Information:**

### **Land transport ADR/RID (cross-border)**

**ADR/RID class:** No hazardous good according to the regulation.

### **Maritime transport IMDG:**

**IMDG Class:** No hazardous good according to the regulation.

**Air transport ICAO-TI and IATA-DGR:**

ICAO/IATA Class: No hazardous good according to the regulation.

**15. Regulatory Information:**

**Markings according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

**Code letter and hazard designation of product:** Xn Harmful

**Risk phrases:**

20/22 Harmful by inhalation and if swallowed.

36 Irritating to eyes.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety phrases:**

22 Do not breathe dust.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**National regulations**

**Classification according to VbF:** Void

**Water hazard class:**

Water hazard class 2 (Assessment by list): hazardous for water.

**16. Other Information:**

Markings according to EU guidelines: The product has been classified and marked in accordance with EU.

Code letter and hazard designation of product: Xn Harmful

Risk Phrases: 22 harmful if swallowed.

National regulations

Water Hazard Class: Water hazard class (Assessment by list): hazardous for water.

**Further Information**

The information provided in this safety data sheet is correct to the best of our knowledge at the date of its publication. The information given is designed only as guidance for safe handling use processing storage, transportation disposal and release and is not to be considered a warranty or quality specification, since the conditions of the operation mention are beyond our control. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text. Lam Seng Hang Co. Pte Ltd disclaims any liability for loss or damage resulting from the use of these data, information or suggestions.