

MSDS Number: **B1692** \* \* \* \* \* Effective Date: **09/16/02** \* \* \* \* \* Supersedes: **11/02/01**



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24 Hour Emergency Telephone: 908-859-2151  
CHEMTREC: 1-800-424-9300  
National Response in Canada  
CANUTEC: 613-996-6666  
Outside U.S. And Canada  
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

# Benzotriazole

## 1. Product Identification

**Synonyms:** 1-H-Benzotriazole; Cobratec 99; 1,2-Aminozophenylene; Benzene Azimide;  
1,2,3-Benzotriazole  
**CAS No.:** 95-14-7  
**Molecular Weight:** 119.12  
**Chemical Formula:** C<sub>6</sub>H<sub>5</sub>N<sub>3</sub>  
**Product Codes:** B934

## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
1,2,3-Benzotriazole	95-14-7	90 - 100%	Yes

## 3. Hazards Identification

### Emergency Overview

**CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE**

## IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

**SAF-T-DATA**<sup>(tm)</sup> Ratings (Provided here for your convenience)

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Health Rating: 1 - Slight

Flammability Rating: 1 - Slight

Reactivity Rating: 1 - Slight

Contact Rating: 2 - Moderate

Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES

Storage Color Code: Green (General Storage)

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### Potential Health Effects

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Information on the human health effects from exposure to this substance is limited.

#### **Inhalation:**

May cause irritation to the respiratory tract. Symptoms may include coughing, sore throat, labored breathing, and chest pain.

#### **Ingestion:**

May cause irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.

#### **Skin Contact:**

May cause irritation with redness and pain.

#### **Eye Contact:**

May cause irritation, redness and pain.

#### **Chronic Exposure:**

No information found.

#### **Aggravation of Pre-existing Conditions:**

No information found.

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## 4. First Aid Measures

#### **Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

#### **Ingestion:**

Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

#### **Skin Contact:**

Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

#### **Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

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## 5. Fire Fighting Measures

**Fire:**

Flash point: 171C (340F) CC

Autoignition temperature: 400C (752F)

Flammable limits in air % by volume:

lel: 2.4

**Explosion:**

Above the flash point, explosive vapor-air mixtures may be formed. May explode during vacuum distillation. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Fire Extinguishing Media:**

Water spray, dry chemical, alcohol foam, or carbon dioxide.

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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## 6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

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## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Do not vacuum distill. Separate from incompatibles. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

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## 8. Exposure Controls/Personal Protection

**Airborne Exposure Limits:**

None established.

**Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work

area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**Personal Respirators (NIOSH Approved):**

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

**Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Eye Protection:**

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

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## 9. Physical and Chemical Properties

**Appearance:**

Off-white powder.

**Odor:**

Slight characteristic odor.

**Solubility:**

Moderate (1-10%)

**Specific Gravity:**

1.36

**pH:**

No information found.

**% Volatiles by volume @ 21C (70F):**

0

**Boiling Point:**

204C (399F) @ 15 mm Hg.

**Melting Point:**

98.5C (208F)

**Vapor Density (Air=1):**

4.1

**Vapor Pressure (mm Hg):**

0.04 @ 20C (68F)

**Evaporation Rate (BuAc=1):**

No information found.

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## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage. May explode during vacuum distillation. Can violently decompose above 285C. Avoid temperatures above 185C.

**Hazardous Decomposition Products:**

May produce oxides of carbon and oxides of nitrogen when heated to decomposition.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Strong oxidizers.

**Conditions to Avoid:**

Heat, ignition sources and incompatibilites.

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## 11. Toxicological Information

Oral rat LD50: 560 mg/kg; Inhalation rat LC50: 1910 mg/m<sup>3</sup>/3-hour. Investigated as a tumorigen and mutagen.

-----\Cancer Lists\-----			
Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
1,2,3-Benzotriazole (95-14-7)	No	No	None

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## 12. Ecological Information

**Environmental Fate:**

No information found.

**Environmental Toxicity:**

No information found.

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## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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## 14. Transport Information

Not regulated.

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## 15. Regulatory Information

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-----\Chemical Inventory Status - Part 1\-----
Ingredient                                     TSCA  EC   Japan  Australia
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1,2,3-Benzotriazole (95-14-7)                Yes  Yes  Yes    Yes
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-----\Chemical Inventory Status - Part 2\-----
Ingredient                                     Korea  DSL   NDSL  Phil.
-----
1,2,3-Benzotriazole (95-14-7)                Yes   Yes  No    Yes
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-----\Federal, State & International Regulations - Part 1\-----
Ingredient                                     -SARA 302-  -SARA 313-
RQ      TPQ      List  Chemical Catg.
-----
1,2,3-Benzotriazole (95-14-7)                No    No    No    No
```

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-----\Federal, State & International Regulations - Part 2\-----
Ingredient                                     CERCLA  -RCRA-  -TSCA-
261.33  8(d)
-----
1,2,3-Benzotriazole (95-14-7)                No      No      No
```

Chemical Weapons Convention: No      TSCA 12(b): No      CDTA: No  
SARA 311/312: Acute: Yes      Chronic: No      Fire: No      Pressure: No  
Reactivity: No      (Pure / Solid)

**Australian Hazchem Code:** None allocated.

**Poison Schedule:** None allocated.

### WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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## 16. Other Information

**NFPA Ratings:** Health: **1** Flammability: **1** Reactivity: **0**

### Label Hazard Warning:

CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

### Label Precautions:

Avoid contact with eyes, skin and clothing.

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

### Label First Aid:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15

minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, give large amounts of water to drink. Never give anything by mouth to an unconscious person. In all cases, get medical attention.

**Product Use:**

Laboratory Reagent.

**Revision Information:**

MSDS Section(s) changed since last revision of document include: 3, 5, 10.

**Disclaimer:**

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