

*Allucid, inc.*

1-1, Bengong 5th Rd., Gangshan, Kaohsiung, Taiwan 82059

Tel: +886-7-624-3737

<http://www.allucid.com>

## Safety Data Sheet BENZOTRIAZOLE (BTA)

### 1. Information of Manufacturer/Supplier

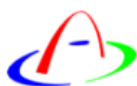
Product Name: BENZOTRIAZOLE (BTA)
Suggested use : Adhesion promoter
Restriction: Do not use in food
Name of Manufacturer/Supplier: Allucid, Inc.
Address of Manufacturer/Supplier: 1-1, Bengong 5th Rd., Gangshan Kaohsiung, Taiwan82059
Person/Telephone Number for Inquiry: H.-T. Eric Chen +886-7-624-3737
Emergency Telephone Number: +886-7-624-3737 Facsimile Number: +886-7-624-3736

### 2. Hazards Identification

Emergency Overview
<b>CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.</b>
<b>SAF-T-DATA<sup>(tm)</sup></b> Ratings (Provided here for your convenience)
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)
<b>Potential Health Effects</b> Information on the human health effects from exposure to this substance is limited.
<b>Inhalation:</b> May cause irritation to the respiratory tract. Symptoms may include coughing, sore throat, labored breathing, and chest pain. <b>Ingestion:</b> May cause irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. <b>Skin Contact:</b> May cause irritation with redness and pain. <b>Eye Contact:</b> May cause irritation, redness and pain. <b>Chronic Exposure:</b> No information found. <b>Aggravation of Pre-existing Conditions:</b> No information found.

### 3. Product Identification

Product Name: BENZOTRIAZOLE (BTA)
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Synonym: No1-H-Benzotriazole;1,2-Aminozophenylene;Benzene Azimide;1,2,3-Benzotriazole			
Name	Molecular Formula	Molecular Weight	CAS NO.
	C <sub>6</sub> H <sub>5</sub> N <sub>3</sub>	119.12	95-14-7

Ingredient	CAS NO.	Percent	Hazardous
Benzotriazole	95-14-7	>99.5%	yes

#### 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:**

Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**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 upper and lower eyelids occasionally. Get medical attention immediately.

**Notes to Physician:**

Treat symptomatically and supportively.

#### 5. Fire Fighting Measures

**Fire:**

Flash point: 171 °C

Autoignition temperature: 400 °C

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.

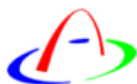
**Fire Extinguishing Media:**

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.

#### 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.

## 7. Handling and Storage

### Handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

### Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

## 8. Exposure Controls/Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**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:

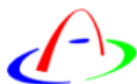
Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

### 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.

## 9. Physical and Chemical Properties

<b>Appearance:</b> Granules.	<b>pH:</b> No information found.
<b>Odor:</b> Slight characteristic odor.	<b>Boiling Point:</b> 204 °C @ 15 mm Hg.
<b>Solubility:</b> Moderate (1-10%)	<b>Melting Point:</b> 98.5 °C
<b>Specific Gravity:</b> 1.36	<b>Vapor Density (Air=1):</b> 4.1
<b>% Volatiles by volume @ 21 °C:</b> 0	<b>Vapor Pressure (mm Hg):</b> 0.04 @ 20 °C



	<b>Evaporation Rate (BuAc=1):</b> No information found.

10. Stability and Reactivity

<b>Stability</b>	Stable under ordinary conditions of use and storage. May explode during vacuum distillation. Can violently decompose above 285 °C. Avoid temperatures above 185 °C
<b>Hazardous Decomposition Products</b>	Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen
<b>Hazardous Polymerization</b>	Has not been reported.
<b>Incompatibilities</b>	Strong oxidizing agents
<b>Conditions to Avoid</b>	Heat, flames, ignition sources, strong oxidants and incompatibles.

11. Ecological Information

<b>Environmental Fate:</b> No information found. <b>Environmental Toxicity:</b> No information found.
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12. Disposal Consideration

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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13. Toxicological Information

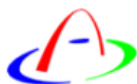
Oral rat LD50: 560 mg/kg; Inhalation rat LC50: 1910 mg/m <sup>3</sup> /3-hour. Investigated as a tumorigen and mutagen.			
-----\Cancer Lists\-----			
Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
1,2,3-Benzotriazole (95-14-7)	No	No	None

14. Transport Information

Not regulated
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15. Regulatory Information

Chemical Inventory Status
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Ingredient	TSCA	EC	Japan	Austria	Korea	Canada		Phil.
						DSL	NDSL	
Benzotriazole (95-14-7)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

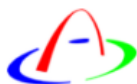
-----\ Federal, State & International Regulations\-----							
Ingredient	-SARA 302-		-SARA 313-		CERCLA	-RCRA- -261.33	-TSCA -8(d)
	RQ	TPQ	List	Chem Catg			
Benzotriazole (95-14-7)	No	No	No	No	No	No	No

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)		
<b>Australian Hazchem Code:</b> None allocated.		
<b>Poison Schedule:</b> None allocated.		
<b>WHMIS:</b> 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.		

## 16. Other Information

NFPA Ratings: Health: 1 Flammability: 1 Reactivity: 0
<b>Label Hazard Warning:</b> CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.
<b>Label Precautions:</b> Avoid contact with eyes, skin and clothing. Avoid breathing dust. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.
<b>Label First Aid:</b> 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.
<b>Product Use:</b> Metal Corrosion Inhibitor
<b>Revision Information:</b> No Changes

## 17. Information of Manufacturer/Supplier



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