



SIGMA-ALDRICH

## Material Safety Data Sheet

Date Printed: 12/14/2009  
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Version 1.90

## Section 1 - Product and Company Information

**Product Name** bisBenzimide H 33342 trihydrochloride  
**Product Number** B2261  
**Brand** Sigma-Aldrich

**Company Address** Sigma-Aldrich  
3050 Spruce Street  
**City, State, Zip, Country** SAINT LOUIS, MO 63103 US  
**Technical Phone:** 800-325-5832  
**Fax:** 800-325-5052  
**Emergency Phone:** 314-776-6555

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
BISBENZIMIDE HOECHST NO 33342	23491-52-3	Yes	245-691-1	
TRIHYDROCHLORIDE HYDRATE				

Ingredient Name	CAS #	Percent	SARA 313
THE FOLLOWING SUBSTANCES ARE PRESENT AS RESIDUAL COMPONENTS OF PRODUCTION			
ACETONITRILE	75-05-8	<= 2.000 %	Yes

**Formula** C<sub>27</sub>H<sub>28</sub>N<sub>6</sub>O · 3HCl · xH<sub>2</sub>O  
**Synonyms**

## Section 3 - Hazards Identification

## Emergency Overview

Toxic (USA) Harmful (EU).  
Toxic in contact with skin. Risk of serious damage to eyes.  
This material can produce a cyanidelike effect. Target organ(s): Central nervous system; Liver.

## HMIS Rating

Health: 2\* Flammability: 0 Reactivity: 1

## NFPA Rating

Health: 2 Flammability: 0 Reactivity: 1

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

## Section 4 - First Aid Measures

## Oral Exposure

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

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## Inhalation Exposure

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

## Dermal Exposure

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

## Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

## Section 5 - Fire Fighting Measures

**Autoignition Temp:** N/A

## Extinguishing Media

## Suitable

Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

## Firefighting

## Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

## Specific Hazard(s)

Emits toxic fumes under fire conditions.

## Section 6 - Accidental Release Measures

## Procedure to be Followed in Case of Leak or Spill

Evacuate area.

## Procedure(s) of Personal Precaution(s)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

## Methods for Cleaning Up

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

## Section 7 - Handling and Storage

## Handling

## User Exposure

Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

## Storage

## Suitable

Keep tightly closed. Store at -20°C

## Special Requirements

Light sensitive.

## Section 8 - Exposure Controls / PPE

## Engineering Controls

Safety shower and eye bath. Mechanical exhaust required.

## Personal Protective Equipment

## Respiratory

Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

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**Hand**

Compatible chemical-resistant gloves.

**Eye**

Chemical safety goggles.

**General Hygiene Measures**

Wash thoroughly after handling.

**Section 9 - Physical/Chemical Properties****Appearance****Physical State**  
Solid**Molecular Weight** 561.94 AMU

<b>pH</b>	N/A
<b>BP/BP Range</b>	N/A
<b>MP/MP Range</b>	N/A
<b>Freezing Point</b>	N/A
<b>Vapor Pressure</b>	N/A
<b>Vapor Density</b>	N/A
<b>Saturated Vapor Conc.</b>	N/A
<b>SG/Density</b>	N/A
<b>Bulk Density</b>	N/A
<b>Odor Threshold</b>	N/A
<b>Volatile%</b>	N/A
<b>VOC Content</b>	N/A
<b>Water Content</b>	N/A
<b>Solvent Content</b>	N/A
<b>Evaporation Rate</b>	N/A
<b>Viscosity</b>	N/A
<b>Partition Coefficient</b>	N/A
<b>Decomposition Temp.</b>	N/A
<b>Flash Point °F</b>	N/A
<b>Flash Point °C</b>	N/A

**Explosion Limits** N/A

<b>Flammability</b>	N/A
<b>Autoignition Temp</b>	N/A
<b>Solubility</b>	N/A

N/A = not available

**Section 10 - Stability and Reactivity****Stability****Stable**

Stable.

**Conditions of Instability**

May discolor on exposure to light.

**Materials to Avoid**

Strong oxidizing agents

**Hazardous Decomposition Products****Hazardous Decomposition Products**

Carbon monoxide, Carbon dioxide, Nitrogen oxides, Hydrogen chloride gas

**Hazardous Polymerization****Hazardous Polymerization**

Will not occur.

**Section 11 - Toxicological Information****Route of Exposure****Skin Contact**

Causes skin irritation.

**Skin Absorption**

May be harmful if absorbed through the skin.

**Eye Contact**

May cause eye irritation.

**Inhalation**

May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

**Ingestion**

Harmful if swallowed.

**Target Organ(s) or System(s)**

Liver. Kidneys. Central nervous system. Blood. Lungs.

**Signs and Symptoms of Exposure**

This material can produce a cyanide like effect. Always have a cyanide first aid kit present when using this material. The onset of symptoms is generally delayed pending conversion to cyanide. Adverse effects may include nausea, vomiting, diarrhea, headache, dizziness, rashes and cyanosis. Other symptoms include mental excitement or depression, drowsiness, impaired perception, incoordination, stupor, coma, and death.

**Conditions Aggravated by Exposure**

Acetonitrile is metabolized in the liver to water, formic acid, and hydrogen cyanide. The cyanide is further metabolized to thiocyanate.

**RTECS Number:** N/A**Chronic Exposure- Carcinogen**

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

**Chronic Exposure- Mutagen**

Result: Scientific studies have indicated that this material has the capacity to bind to DNA and the potential to cause breaks in the DNA strand which lead to mutations. However, this material has not been listed as a Mutagen by an authoritative governmental source.

**Section 12 - Ecological Information**

No data available.

**Section 13 - Disposal Considerations****Appropriate Method of Disposal of Substance or Preparation**

Contact a licensed professional waste disposal service to dispose of this material.

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

**Section 14 - Transport Information****DOT****Proper Shipping Name:** None**Non-Hazardous for Transport** This substance is considered to be nonhazardous for transport.**IATA****Non-Hazardous for Air Transport** Non-hazardous for air transport.

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## Section 15 - Regulatory Information

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### EU Additional Classification

**Symbol of Danger:** Xn

**Indication of Danger**

Harmful.

**Risk Statements** R: 22 37/38

Harmful if swallowed. Irritating to respiratory system and skin.

**Safety Statements** S: 36/37

Wear suitable protective clothing and gloves.

### US Classification and Label Text

**Indication of Danger**

Toxic (USA) Harmful (EU).

**Risk Statements**

Toxic in contact with skin. Risk of serious damage to eyes.

**Safety Statements**

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**US Statements**

This material can produce a cyanidelike effect. Target organ(s): Central nervous system. Liver.

### United States Regulatory Information

**SARA Listed:** Yes

**Notes:** This product is or contains a component that is subject to SARA313 reporting requirements.

### Canada Regulatory Information

**WHMIS Classification**

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

**DSL:** Yes

**NDSL:** No

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## Section 16 - Other Information

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### Disclaimer

For R&D use only. Not for drug, household or other uses.

### Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. SigmaAldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2009 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.