

## MATERIAL SAFETY DATA SHEET

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Version 1.3

## Section 1 - Product and Company Information

Product Name BISBENZIMIDE HOECHST NO  
33258TRIHYDROCHLORIDE  
Product Number B2883  
Brand SIGMA  
Company Sigma-Aldrich  
Street Address 3050 Spruce Street  
City, State, Zip, Country SAINT LOUIS MO 63103 US  
Technical Phone: 314 771 5765  
Emergency Phone: 414 273 3850 Ext. 5996  
Fax: 800 325 5052

## Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
BISBENZIMIDE H 33258	23491-45-4	No

Formula C<sub>25</sub>H<sub>24</sub>N<sub>6</sub>O<sub>3</sub>Cl<sub>3</sub>H  
Synonyms Bisbenzimidazole trihydrochloride \* Bisbenzimidazole trihydrochloride \* H 33258 \* HOE 33058 \* HOE 33258 \* 33258 Hoechst \* Hoechst 33258 \* Hoechst Dye 33258 \* NSC-322921 \* Phenol, 4-(5-(4-methyl-1-piperazinyl)(2,5'-bi-1H-benzimidazol)-2'-yl)-, trihydrochloride  
RTECS Number: SM1140500

## Section 3 - Hazards Identification

## EMERGENCY OVERVIEW

Harmful.

Irritating to eyes, respiratory system and skin.

Target organ(s): Liver. Kidneys.

## 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.

#### 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.

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### Section 5 - Fire Fighting Measures

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#### FLASH POINT

N/A

#### AUTOIGNITION TEMP

N/A

#### FLAMMABILITY

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.

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### Section 6 - Accidental Release Measures

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#### 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.

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### Section 7 - Handling and Storage

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#### 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.

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## Section 8 - Exposure Controls / PPE

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### ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

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## Section 9 - Physical/Chemical Properties

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Appearance	Physical State: Solid	
Property	Value	At Temperature or Pressure
Molecular Weight	533.9 AMU	
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

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## Section 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Materials to Avoid: Oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Thermal decomposition may produce carbon monoxide, carbon dioxide, and nitrogen oxides, Hydrogen chloride gas.

### HAZARDOUS POLYMERIZATION

Section 11 - Toxicological Information

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ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.  
Skin Absorption: May be harmful if absorbed through the skin.  
Eye Contact: Causes eye irritation.  
Inhalation: Material is irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.  
Ingestion: May be harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)

Liver. Kidneys.

SIGNS AND SYMPTOMS OF EXPOSURE

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

TOXICITY DATA

Intravenous  
Rat  
32200 UG/KG  
LD50  
Remarks: Behavioral:Somnolence (general depressed activity).  
Lungs, Thorax, or Respiration:Dyspnea. Skin and Appendages:  
Other: Hair.

Intravenous  
Mouse  
36900 UG/KG  
LD50  
Remarks: Behavioral:Somnolence (general depressed activity).  
Lungs, Thorax, or Respiration:Dyspnea. Skin and Appendages:  
Other: Hair.

CHRONIC EXPOSURE - MUTAGEN

Result: Laboratory experiments have shown mutagenic effects.

Species: Rat  
Dose: 1 MG/L  
Cell Type: fibroblast  
Mutation test: Cytogenetic analysis

Species: Mouse  
Dose: 1 MG/L  
Cell Type: fibroblast  
Mutation test: Cytogenetic analysis

Species: Hamster  
Dose: 80 MG/L  
Cell Type: Other cell types  
Mutation test: Cytogenetic analysis

Species: Hamster  
Dose: 10 UMOL/L  
Cell Type: ovary  
Mutation test: Sister chromatid exchange

Species: Hamster  
Dose: 15 UMOL/L

Cell Type: lung  
Mutation test: Sister chromatid exchange

Species: Mammal  
Dose: 1600 NMOL/L  
Cell Type: lymphocyte  
Mutation test: DNA damage

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## Section 12 - Ecological Information

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No data available.

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## Section 13 - Disposal Considerations

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### 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.

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## Section 14 - Transport Information

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### DOT

Proper Shipping Name: None  
Non-Hazardous for Transport: This substance is considered to be non-hazardous 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.  
R: 36/37/38  
Risk Statements: Irritating to eyes, respiratory system and skin.  
S: 36/37/39  
Safety Statements: Wear suitable protective clothing, gloves, and eye/face protection.

### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful.  
Risk Statements: Irritating to eyes, respiratory system and skin.  
Safety Statements: Wear suitable protective clothing, gloves, and eye/face protection.  
US Statements: Target organ(s): Liver. Kidneys.

### UNITED STATES REGULATORY INFORMATION

SARA LISTED: No  
TSCA INVENTORY ITEM: Yes

### 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

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