



SIGMA-ALDRICH

# Material Safety Data Sheet

Date Printed: 12/13/2008  
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Version 1.70

## Section 1 - Product and Company Information

<b>Product Name</b>	Nitrotetrazolium Blue chloride, ~98% (TLC)		
<b>Product Number</b>	N6876		
<b>Brand</b>	Sigma-Aldrich		
<b>Company</b>	Sigma-Aldrich		
<b>Address</b>	3050 Spruce Street		
<b>City, State, Zip, Country</b>	SAINT LOUIS, MO 63103 US		
<b>Technical Phone:</b>	800-325-5832	<b>Emergency Phone:</b>	314-776-6555
<b>Fax:</b>	800-325-5052		

## Section 2 - Composition/Information on Ingredient

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>	<u>EC no</u>	<u>Annex I Index Number</u>
NITROTETRAZOLIUM BLUE CHLORIDE MONOHYDRATE	298-83-9	Yes	206-087-4	

<u>Ingredient Name</u>	<u>CAS #</u>	<u>Percent</u>	<u>SARA 313</u>
THE FOLLOWING SUBSTANCES ARE PRESENT AS RESIDUAL COMPONENTS OF PRODUCTION.			
METHANOL	67-56-1	>= 3.000% <= 10.000%	Yes

**Formula** C40H30Cl2N10O6  
**Synonyms** NBT (dye), Nitro Blue tetrazolium, p-Nitro Blue tetrazolium, Nitro Bluetetrazolium chloride, p-Nitro Blue tetrazolium chloride, Nitro BT, Nitrotetrazolium Blue, pNitrotetrazolium Blue, Nitro tetrazolium BT, Nitrotetrazolium Chloride Blue, Nitro Blue tetrazolium salt, Tetrazolium Nitro Blue, Tetrazolium nitro BT

## Section 3 - Hazards Identification

### Emergency Overview

Harmful.  
Harmful by inhalation, in contact with skin and if swallowed. Harmful: possible risk of irreversible effects through inhalation, in contact with skin, and if swallowed.  
Target organ(s): Eyes, Kidneys.

**HMIS Rating**  
Health: 1\*      Flammability: 0      Reactivity: 0

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

\*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.

## Section 5 - Fire Fighting Measures

**Autoignition Temp:** N/A

### Extinguishing Media

#### Suitable

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 self-contained breathing apparatus, 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 vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Do not use if skin is cut or scratched. Wash thoroughly after handling.

**Storage****Suitable**

Keep tightly closed. Store at 2-8°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. 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.

**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

**Color**

Light yellow

**Molecular Weight**

817.7 AMU

**pH**

N/A

**BP/BP Range**

N/A

**MP/MP Range**

189 °C

**Freezing Point**

N/A

**Vapor Pressure**

N/A

**Vapor Density**

N/A

**Saturated Vapor Conc.**

N/A

**SG/Density**

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

**Partition Coefficient**

N/A

**Decomposition Temp.**

N/A

**Flash Point °F**

N/A

**Flash Point °C**

N/A

**Explosion Limits**

N/A

**Flammability**

N/A

**Autoignition Temp**

N/A

**Solubility**

**Solvent:** 50 mg/ml MeOH. Clear, very strongly yellow

N/A = not available

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**Section 10 - Stability and Reactivity**

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**Stability**

**Stable**

Stable

**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.

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**Section 11 - Toxicological Information**

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**Route of Exposure****Skin Contact**

May cause skin irritation.

**Skin Absorption**

Harmful if absorbed through skin.

**Eye Contact**

May cause eye irritation.

**Inhalation**

Harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

**Ingestion**

Harmful if swallowed.

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

Eyes, Kidneys, Liver, Heart.

**Signs and Symptoms of Exposure**

Exposure can cause: Gastrointestinal disturbances. May cause convulsions. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**RTECS Number:** XF8045000

**Toxicity Data**

Oral - Mouse: 2000 mg/kg (LD50)

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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 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 Directives Classification

**Symbol of Danger:** Xn

**Indication of Danger**

Harmful.

**Risk Statements** R: 20/21/22 68/20/21/22

Harmful by inhalation, in contact with skin and if swallowed. Harmful: possible risk of irreversible effects through inhalation, in contact with skin, and if swallowed.

**Safety Statements** S: 36/37 45

Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

### US Classification and Label Text

**Indication of Danger**

Harmful.

**Risk Statements**

Harmful by inhalation, in contact with skin and if swallowed. Harmful: possible risk of irreversible effects through inhalation, in contact with skin, and if swallowed.

**Safety Statements**

Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**US Statements**

Target organ(s): Eyes. Kidneys.

### United States Regulatory Information

**SARA Listed:** Yes

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

**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

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 packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.