

**SIGMA-ALDRICH****SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Version 3.0 Revision Date 31.12.2008

Print Date 22.06.2010

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

Product name : 2-Bromo-2-nitropropane-1,3-diol

Product Number : 17728

Brand : Fluka

Company : Sigma-Aldrich (Shanghai) Trading Co.,Ltd  
22A-B Century Ba-Shi Building,  
398 Huai Hai Zhong Road  
200020 SHANGHAI  
CHINA

Telephone : +862161415566

Fax : +862161415567

Emergency Phone # : +8615921213336

E-mail address : china@sial.com

**2. HAZARDS IDENTIFICATION****Risk advice to man and the environment**

Harmful in contact with skin and if swallowed. Irritating to respiratory system and skin. Risk of serious damage to eyes. Very toxic to aquatic organisms.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Formula : C<sub>3</sub>H<sub>6</sub>BrNO<sub>4</sub>

Molecular Weight : 199,99 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration
<b>2-Bromo-2-nitropropane-1,3-diol</b>				
52-51-7	200-143-0	603-085-00-8	Xn, N, R21/22 - R37/38 - R41 - R50	-

**4. FIRST AID MEASURES****General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE-FIGHTING MEASURES

### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

### Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

### Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Light sensitive. Store under inert gas. Moisture sensitive.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Personal protective equipment

#### Respiratory protection

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

#### Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

#### Eye protection

Safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form                      crystalline

Colour                    beige

**Safety data**

pH	no data available
Melting point	130 - 133 °C
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Water solubility	no data available

**10. STABILITY AND REACTIVITY****Storage stability**

Stable under recommended storage conditions.

**Materials to avoid**

Strong oxidizing agents, Strong bases, Strong reducing agents

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen bromide gas

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

LD50 Oral - rat - 180 mg/kg

LD50 Dermal - rat - 1.600 mg/kg

**Irritation and corrosion**

Skin - rabbit - Skin irritation

**Sensitisation**

May cause allergic skin reaction.

The preceding data, or interpretation of data, was determined using Quantitative Structure Activity Relationship (QSAR) modeling.

**Chronic exposure**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Signs and Symptoms of Exposure**

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

**Potential Health Effects**

<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	Harmful if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes serious eye irritation.
<b>Ingestion</b>	Harmful if swallowed.

**Additional Information**

RTECS: TY3385000

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 20 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates. EC50 - Daphnia magna (Water flea) - 1,6 mg/l - 48 h

### Further information on ecology

Very toxic to aquatic organisms.

## 13. DISPOSAL CONSIDERATIONS

### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### ADR/RID

UN-Number: 3241 Class: 4.1 Packing group: III  
Proper shipping name: 2-BROMO-2-NITROPROPANE-1,3-DIOL

### IMDG

UN-Number: 3241 Class: 4.1 Packing group: III EMS-No: F-J, S-G  
Proper shipping name: 2-BROMO-2-NITROPROPANE-1,3-DIOL  
Marine pollutant: No

### IATA

UN-Number: 3241 Class: 4.1 Packing group: III  
Proper shipping name: 2-Bromo-2-nitropropane-1,3-diol

## 15. REGULATORY INFORMATION

### Labelling according to EC Directives

EC Label

Hazard symbols

Xn Harmful  
N Dangerous for the environment

R-phrases(s)

R21/22 Harmful in contact with skin and if swallowed.  
R37/38 Irritating to respiratory system and skin.  
R41 Risk of serious damage to eyes.  
R50 Very toxic to aquatic organisms.

S-phrases(s)

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S37/39 Wear suitable gloves and eye/face protection.  
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

## 16. OTHER INFORMATION

### **Further information**

Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only. 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. Sigma-Aldrich Co., 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.