



# N,N'-BIS(3-AMINOPROPYL)-1,4-BUTANEDIAMINE:4HCL (1,1,2,2,3,3,4,4-D8, 97%) (CP 95%)

## Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 21/07/2015

Revision date:

:

Version: 1.0

**DLM-9262**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form	: Substance
Substance name	: N,N'-BIS(3-AMINOPROPYL)-1,4-BUTANEDIAMINE:4HCL (1,1,2,2,3,3,4,4-D8, 97%) (CP 95%)
EC no	: 206-189-8
CAS No	: 1173022-85-9
Product code	: DLM-9262
Formula	: C10D8H18N4·4HCl

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.  
50 Frontage Road  
Andover, MA 01810  
USA

USA: 1-800-322-1174 Int: 1-978-749-8000  
[cilsales@isotope.com](mailto:cilsales@isotope.com) [www.isotope.com](http://www.isotope.com)

### Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours)  
International: 1-703-741-5970 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Irrit. 2 H315

Eye Irrit. 2 H319

Full text of H-phrases: see section 16

#### Classification according to Directive 67/548/EEC or 1999/45/EC

Xi; R36/38

Full text of R-phrases: see section 16

#### Classification (GHS-US)

Skin Irrit. 2 H315

Eye Irrit. 2A H319

#### Adverse physicochemical, human health and environmental effects

No additional information available

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(1,1,2,2,3,3,4,4-D8, 97%) (CP 95%) DLM-9262

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### 2.2. Label elements

#### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H315 - Causes skin irritation  
H319 - Causes serious eye irritation

Precautionary statements (CLP) :

P264 - Wash Both hands thoroughly after handling  
P280 - Wear protective clothing, protective gloves  
P302+P352 - IF ON SKIN: Wash with plenty of water/...  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P362+P364 - Take off contaminated clothing and wash it before reuse

#### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H315 - Causes skin irritation  
H319 - Causes serious eye irritation

Precautionary statements (GHS-US) :

P264 - Wash Both hands thoroughly after handling  
P280 - Wear protective clothing, protective gloves  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P321 - Specific treatment (see Hazard pictograms (CLP) on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	Product identifier	%	Classification according to Directive 67/548/EEC
N,N'-BIS(3-AMINOPROPYL)-1,4-BUTANEDIAMINE:4HCL (1,1,2,2,3,3,4,4-D8, 97%) (CP 95%) (Main constituent)	(CAS No) 1173022-85-9 (EC no) 206-189-8	100	Xi; R36/38
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
N,N'-BIS(3-AMINOPROPYL)-1,4-BUTANEDIAMINE:4HCL (1,1,2,2,3,3,4,4-D8, 97%) (CP 95%) (Main constituent)	(CAS No) 1173022-85-9 (EC no) 206-189-8	100	Skin Irrit. 2, H315 Eye Irrit. 2, H319

Full text of R-, H- and EUH-phrases: see section 16

Name	Product identifier	%	Classification (GHS-US)
N,N'-BIS(3-AMINOPROPYL)-1,4-BUTANEDIAMINE:4HCL (1,1,2,2,3,3,4,4-D8, 97%) (CP 95%) (Main constituent)	(CAS No) 1173022-85-9	100	Skin Irrit. 2, H315 Eye Irrit. 2A, H319

Full text of H-phrases: see section 16

# N,N'-BIS(3-AMINOPROPYL)-1,4-BUTANEDIAMINE:4HCL (1,1,2,2,3,3,4,4-D8, 97%) (CP 95%) DLM-9262

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### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Wash with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	: Flush eyes with water as a precaution.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2. Most important symptoms and effects, both acute and delayed

No additional information available

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

### 5.2. Special hazards arising from the substance or mixture

Reactivity : Not available.

### 5.3. Advice for firefighters

Firefighting instructions	: The product itself does not burn.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Avoid dust formation. Avoid breathing vapors, mist or gas.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

For containment : Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Provide good ventilation in process area to prevent formation of vapor.
Hygiene measures	: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in freezer (-20°C). Protect from light, air and moisture.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

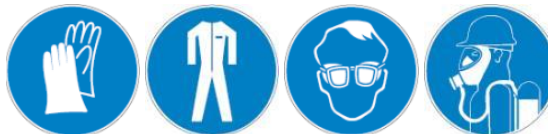
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### 8.2. Exposure controls

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Hand protection : Wear suitable protective clothing and gloves.

Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.

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

Respiratory protection : When appropriate, use NIOSH/CEN approved respirator.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

*The properties listed below are for the solvent, the main component of this mixture.*

Physical state	: Solid
Appearance	: Powder.
Molecular mass	: 356.23 g/mol
Color	: white.
Odor	: Pungent.
Odor threshold	: No data available
pH	: 5 - 7 at 348.2 g/l at 25 °C (77 °F)
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: 310 - 311 °C (590 - 592 °F) - dec.
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: 348.2 g/l at 20 °C (68 °F)
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Not available.

### 10.2. Chemical stability

Stable if stored under recommended conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Not available.

### 10.5. Incompatible materials

Strong oxidizing agent.

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### 10.6. Hazardous decomposition products

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride gas.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Causes skin irritation. pH: 5 - 7 at 348.2 g/l at 25 °C (77 °F)
Serious eye damage/irritation	: Causes serious eye irritation. pH: 5 - 7 at 348.2 g/l at 25 °C (77 °F)
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional legislation (waste) : Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

## SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

### 14.1. UN number

Not applicable

### 14.2. UN proper shipping name

Not applicable

### 14.3. Additional information

Other information : No supplementary information available.  
Special transport precautions : Not dangerous goods.

### Overland transport

No additional information available

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### Transport by sea

No additional information available

### Air transport

No additional information available

### 14.4. Environmental hazards

Other information : No supplementary information available.

### 14.5. Special precautions for user

Special transport precautions : Not dangerous goods.

### 14.6. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### N,N'-BIS(3-AMINOPROPYL)-1,4-BUTANEDIAMINE:4HCL (1,1,2,2,3,3,4,4-D8, 97%) (CP 95%) (1173022-85-9)

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
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### 15.2. International regulations

#### CANADA

#### N,N'-BIS(3-AMINOPROPYL)-1,4-BUTANEDIAMINE:4HCL (1,1,2,2,3,3,4,4-D8, 97%) (CP 95%) (1173022-85-9)

Listed on the Canadian DSL (Domestic Substances List) inventory.

#### 15.2.1. National regulations

No additional information available

### 15.3. US State regulations

#### N,N'-BIS(3-AMINOPROPYL)-1,4-BUTANEDIAMINE:4HCL (1,1,2,2,3,3,4,4-D8, 97%) (CP 95%)(1173022-85-9)

State or local regulations	U.S. - Pennsylvania - RTK (Right to Know) List U.S. - New Jersey - Right to Know Hazardous Substance List This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
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## SECTION 16: Other information

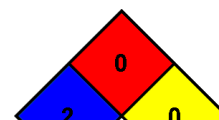
Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

Full text of R-, H- and EUH-phrases::

Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Skin Irrit. 2	skin corrosion/irritation Category 2
H315	Causes skin irritation
H319	Causes serious eye irritation
R36/38	Irritating to eyes and skin
Xi	Irritant

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.



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NFPA reactivity : 0 - Normally stable, even under fire exposure conditions,  
and are not reactive with water.

### HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur  
Flammability : 0 Minimal Hazard  
Physical : 0 Minimal Hazard

### CIL Mixture SDS

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*