

MATERIAL SAFETY DATA SHEET

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Version 1.3

Section 1 - Product and Company Information

Product Name	NITROGEN, 99.998+%
Product Number	295574
Brand	ALDRICH
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
NITROGEN	7727-37-9	No
Formula	N2	
Synonyms	Nitrogen (ACGIH:OSHA) * Nitrogen gas	
RTECS Number:	QW9700000	

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution: nonflammable high-pressure gas.

HMIS RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

NFPA RATING

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

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 contact, immediately wash skin with soap and copious amounts of water.

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

EXPLOSION HAZARDS

Container explosion may occur under fire conditions.

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Use water spray or fog nozzle to keep cylinder cool. Move cylinder away from fire if there is no risk.

FIREFIGHTING

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

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area and keep personnel upwind. Shut off leak if there is no risk.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING

User Exposure: Do not breathe gas. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Suitable: Keep tightly closed. Cylinder temperature should not exceed 125°F (52°C).

SPECIAL REQUIREMENTS

Contents under pressure.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS

Mechanical exhaust required. Safety shower and eye bath.

WORK PRACTICES

Store and use with adequate ventilation.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Government approved respirator in nonventilated areas and/or for exposure above the TLV or PEL.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

EXPOSURE LIMITS, RTECS

Country	Source	Type	Value
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USA USA	ACGIH ACGIH	TWA	
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Remarks: Simple asphyxiant, No TWA

USA USA	MSHA Standard	MSHA	
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Remarks: Asphyxiants/Gases. Asphyxiants/Gases.

New Zealand	OEL	OEL	
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Remarks: check ACGIH TLV check ACGIH TLV

Section 9 - Physical/Chemical Properties

Appearance	Physical State: Compressed gas
	Color: Colorless
	Odor: Odorless

Property	Value	At Temperature or Pressure
Molecular Weight	28.01 AMU	
pH	N/A	
BP/BP Range	-195.8 °C	760 mmHg
MP/MP Range	-210 °C	
Freezing Point	-210 °C	
Vapor Pressure	N/A	
Vapor Density	1.15 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	0.967 g/cm3	
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

Section 10 - Stability and Reactivity

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Nature of decomposition products not known.

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Inhalation: Can cause rapid suffocation.

SIGNS AND SYMPTOMS OF EXPOSURE

May be harmful. Exposure can cause: Nausea, headache, and vomiting.

CONDITIONS AGGRAVATED BY EXPOSURE

At high concentrations nitrogen functions as a simple asphyxiant by displacing air.

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. Observe all federal, state, and local environmental regulations.

APPROPRIATE METHOD OF DISPOSAL OF CONTAMINATED PACKAGING

Caution: no-return cylinder. Do not reuse. Empty cylinder will contain hazardous residue. Follow proper disposal techniques.

Section 14 - Transport Information

DOT

Proper Shipping Name: Nitrogen, compressed
UN#: 1066
Class: 2.2
Packing Group: None
Hazard Label: Non-Flammable gas
PIH: Not PIH

IATA

Proper Shipping Name: Nitrogen, compressed
IATA UN Number: 1066
Hazard Class: 2.2

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

S: 38

Safety Statements: In case of insufficient ventilation, wear suitable respiratory equipment.

US CLASSIFICATION AND LABEL TEXT

Safety Statements: In case of insufficient ventilation, wear suitable respiratory equipment.

US Statements: Caution: nonflammable high-pressure gas.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

TSCA INVENTORY ITEM: Yes 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

Section 16 - Other Information

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. Sigma-Aldrich 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 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.