

Safety Data Sheet

Nitrogen/Helium, compressed

United States Cylinder Gas
11618 S Mayfield Ave, Alsip, Illinois, 60803
Emergency Phone: CHEMTREC 1-800-424-9300
www.uscylgas.com

Section 1: Product and Company Identification

United States Cylinder Gas
11618 S Mayfield Ave, Alsip, Illinois, 60803
(708) 389-1402
Emergency Phone: CHEMTREC 1-800-424-9300
www.uscylgas.com

Product Code: **Nitrogen/Helium**

Part Number: N2/HE Mixes

Synonyms: N2/HE Mix

Recommended Use: Industrial use. Use as directed.

Usage Restrictions:

Section 2: Hazards Identification



Hazard Classification:

Gases Under Pressure, H280
Simple Asphyxiant, OSHA-H01

Hazard Statements:

H280: Contains gas under pressure; may explode if heated
OSHA-H01: MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.

Precautionary Statements

P202: Do not handle until all safety precautions have been read and understood.
P271+P403: Use and store only outdoors or in a well-ventilated place.
CGA-PG02: Protect from sunlight when ambient temperature exceeds 52C (125F).
CGA-PG05: Use a back flow preventive device in the piping.
CGA-PG06: Close valve after each use and when empty.
CGA-PG10+CGA-PG20: Use only with equipment of compatible materials of construction and rated for cylinder pressure.
CGA-PG12: Do not open valve until connected to equipment prepared for use.
CGA-PG27: Read and follow the Safety Data Sheet (SDS) before use.

Section 3: Composition/Information on Ingredients

	CAS #	Concentration
Helium	7440-59-7	0.1-99.9%
Nitrogen	7727-37-9	0.1-99.9%

	Trade Names
Helium	He, Helium, Atomic helium, Helium-4, p-Helium, O-Helium
Nitrogen	N, Nitrogen, Nitrogen gas, Molecular nitrogen, Dinitrogen

Section 4: First Aid Measures

IF ON SKIN: wash with plenty of water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media:

Use suitable extinguishing material for surrounding fire.

Protection of Firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

	Products of Combustion
Helium	Miscellaneous decomposition products
Nitrogen	Oxides of nitrogen

Section 6: Accidental Release Measures

Personal Precautions:

Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.

Environmental Precautions:

Keep away from drains, surface and ground water. Avoid heat, flames, sparks and other sources of ignition.

Methods for Containment and Cleanup:

Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition. If necessary, cover drains. Absorb large spills, dispose in appropriate containers.

Section 7: Handling and Storage

Handling:

See precautions in Section 2. Only trained personnel should handle this product. Always use approved personal protective equipment.

Storage:

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Store and handle in accordance with all current regulations and standards. Store in a well-ventilated area. Keep separated from incompatible substances.

	Incompatibilities	Conditions to avoid
Helium	No data available.	Protect from physical damage and heat. Containers may rupture or explode if exposed to heat. Keep liquid helium from contact with air.
Nitrogen	Metals, oxidizing materials	Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines	Threshold Limit Value -TLV (ppm)
Helium	Not Available
Nitrogen	Not Available

Engineering Controls

No specific controls are needed.

Eye Protection

Wear splash resistant safety goggles.

Skin Protection

Wear chemical protective clothing, including gloves.

Respiratory Protection

Use self-contained breathing apparatus.

General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9: Physical and Chemical Properties

	Physical State / Physical Form	Appearance / Color	Odor	Flash Point	Flammability	Partition Coefficient
Helium	Gas	Colorless	Odorless	Not flammable	False	0
Nitrogen	Gas	Colorless	Odorless	Not flammable	False	0

	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits	Boiling Point	Freezing Point	Vapor Pressure
Helium	Nonflammable	Not Available	Not Available	-452 F (-269 C)	-458 F (-272 C) @ 26 atm	Not Available
Nitrogen	Nonflammable	Not Available	Not Available	-321 F (-196 C)	-346 F (-210 C)	Not Available

	Vapor Density	Specific Gravity	Water Solubility	pH	Evaporation Rate	Viscosity
Helium	0.138	Not applicable	0.94% @ 0 C	0	Not applicable	0.02012 cP @ 26.8 C
Nitrogen	0.967	Not applicable	1.6% @ 20 C	0	Not applicable	0.01787 cP @ 27 C

	Molecular Weight	Molecular Formula	Density	Volatility	Solvent Solubility
Helium	4.002602	He	Not Available	Not applicable	Insoluble : Not available
Nitrogen	28.014	N2	Not Available	1	Soluble : Liquid ammonia

Section 10: Stability and Reactivity

	Stability	Conditions to Avoid	Incompatible Materials
Helium	Stable at normal temperatures and pressure.	Protect from physical damage and heat. Containers may rupture or explode if exposed to heat. Keep liquid helium from contact with air.	No data available.
Nitrogen	Stable at normal temperatures and pressure.	Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.	Metals, oxidizing materials

	Hazardous Decomposition Products	Possibility of Hazardous Reactions
Helium	Miscellaneous decomposition products	Will not polymerize.
Nitrogen	Oxides of nitrogen	Will not polymerize.

Section 11: Toxicology Information

The toxicology information is calculated for the mixture.

Acute Toxicity Estimates (ATE) of the mixture.

Oral ATE (mg/kg)	Not Available
Inhalation ATE (ppm)	Not Available
Dermal ATE (mg/kg)	Not Available

Additional health hazards:

OSHA-H01: MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.

Skin Corrosion/Irritation	Not Available
Eye Damage/Irritation	Not Available
Respiratory or Skin Sensitization	Not Available
Germ Cell Mutagenicity	Not Available
Carcinogenicity	Not Available
Reproductive Toxicity	Not Available
STOT – single exposure	Not Available
STOT – repeated exposure	Not Available
Aspiration Hazard	Not Available

Section 12: Ecological Information

Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Helium	Fish toxicity: 0 Invertebrate toxicity: Algal toxicity: Phyto toxicity: Other toxicity:	Not available	Not available	Not available
Nitrogen	Fish toxicity: 0 Invertebrate toxicity: Algal toxicity: Phyto toxicity: Other toxicity:	Not available	Not available	Not available

Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations. Do not dispose in sewers or waterways. Recycle if possible to do so. Return to manufacturer for disposal if needed.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

DOT Information For This Mixture

Shipping Name	Compressed gas, n.o.s. (Helium, Nitrogen)
UN Number	UN1956
Hazard Class	2.2
Hazard Information	NonFlammable Gas

Individual Component Information

	Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Helium	Helium, Compressed	UN1046	2.2	Not available	Not available	Not available	Not available
Nitrogen	Nitrogen, Compressed	UN1066	2.2	Not available	Not available	Not available	Not available

Canadian Transportation of Dangerous Goods

	Shipping Name	UN Number	Class	Packing Group / Risk Group
Helium	Helium, Compressed	UN1046	2.2	Not Available
Nitrogen	Nitrogen, Compressed	UN1066	2.2	Not Available

Section 15: Regulatory Information

U.S. Regulations

	CERCLA Sections	SARA 355.30	SARA 355.40
Helium	Not Regulated.	Not Regulated.	Not Regulated.
Nitrogen	Not Regulated.	Not Regulated.	Not Regulated.

SARA 370.21

	Acute	Chronic	Fire	Reactive	Sudden Release
Helium	Yes	No	No	No	Yes
Nitrogen	Yes	No	No	No	Yes

SARA 372.65

Helium	Not Regulated.
Nitrogen	Not Regulated.

OSHA Process Safety

Helium	Not regulated.
Nitrogen	Not regulated.

State Regulations

	CA Proposition 65
Helium	Not regulated.
Nitrogen	Not regulated.

Canadian Regulations

	WHMIS Classification
Helium	A
Nitrogen	A

National Inventory Status

	US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDL)
Helium	Helium	Not listed.	Listed on DSL.
Nitrogen	Nitrogen	Not listed.	Listed on DSL.

Section 16: Other Information

	NFPA Rating
Helium	Health = 1 Fire = 0 Reactivity = 0
Nitrogen	Health = 0 Fire = 0 Reactivity = 0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard