

## SDS Helium (Compressed gas)

Manufacturer/Importer/Distributor:  
INFRA S.A. DE C.V.  
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### 1.- Product and Company Identification

Product name:  
**Helium**

Chemical family<sup>1</sup>:  
**Noble Gas**

Relevant :  
**Nonflammable gas**  
**Inert gas**  
**Simple asphyxiant**

Chemical formula:  
**He**

Product Use Description:  
General Industrial

### 2.- Hazards Identification

GHS classification:

Gases under pressure – Compressed gas.  
Simple asphyxiant

GHS label elements:

Hazard pictograms/symbols



Signal Word: **“Warning”**

Hazard Statements:

H280: Contains gas under pressure; may explode if heated.

May displace oxygen and cause rapid suffocation.

Precautary Statements:

**Storage:**

P410+P403: Protect from sunlight. Storage in a well-ventilated place.

Hazards not otherwise classified

Use a back flow preventative device in the piping.

Use only with equipment rated for cylinder pressure.

Read and follow the Safety Data Sheet (SDS) before use.

High pressure gas.

Can cause rapid suffocation.

Self contained breathing apparatus (SCBA) may be required.

### 3.-Composition/Information on ingredients

Concentration (volume):	No. UN:	Sinonyms:	No. CAS <sup>2</sup> :
100%	1963	Helium gas, Gaseous helium, Balloon gas	7440-59-7

Concentration is nominal. For the exact product composition, please refer to Infra technical.

### 4.-First Aid Measures

**General advice:** Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.

**Eye contact:** Not applicable.

**Skin contact:** Not applicable.

**Ingestion:** Ingestion is not considered a potential route of exposure.

**Inhalation:** Remove to fresh air. If breathing has stopped or is labored, give assisted respirations. Supplemental oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. In case of shortness of breath, give oxygen.

**Most important symptoms/effects – acute and delayed:** Exposure to oxygen deficient atmosphere may cause the following symptoms: Dizziness. Salivation. Nausea. Vomiting. Loss of mobility/consciousness.

### 5.-Fire-Fighting Measures

**Suitable extinguishing media:** All known extinguishing media can be used.

**Specific hazards:** Upon exposure to intense heat or flame, cylinder will vent rapidly and or rupture violently. Product is nonflammable and does not support combustion. Move away from container and cool with water from a protected position. Keep containers and surroundings cool with water spray. Most cylinders are designed to vent contents when exposed to elevated temperatures.

**Special protective equipment for fire-fighters:** Wear self contained breathing apparatus for fire fighting if necessary.

## 6.-Accidental release measures

**Personal precautions, Protective Equipment and Emergency Procedures:** Evacuate personnel to safe areas. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Monitor oxygen level. Ventilate the area.

**Environmental precautions:** Do not discharge into any place where its accumulation could be dangerous. Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up:** Ventilate the area.

**Additional advice:** If possible, stop flow of product. Increase ventilation to the release area and monitor oxygen level. If leak is from cylinder or cylinder valve, call the Air Products emergency telephone number. If the leak is in the user's system, close the cylinder valve and safely vent the pressure before attempting repairs.

## 7.-Handling and Storage

**Handling:**

Protect cylinders from physical damage; do not drag, roll, slide or drop. Do not allow storage area temperature to exceed 50°C (122°F). Only experienced and properly instructed persons should handle compressed gases/cryogenic liquids. Before using the product, determine its identity by reading the label. Know and understand the properties and hazards of the product before use. When doubt exists as to the correct handling procedure for a particular gas, contact the supplier. Do not remove or deface labels provided by the supplier for the identification of the cylinder contents. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use. Use an adjustable strap wrench to remove over-tight or rusted caps. Before connecting the container, check the complete gas system for suitability, particularly for pressure rating and materials. Before connecting the container for use, ensure that back feed from the system into the container is prevented. Ensure the complete gas system is compatible for pressure rating and materials of construction. Ensure the complete gas system has been checked for leaks before use. Employ suitable pressure regulating devices on all containers when the gas is being emitted to systems with lower pressure rating than that of the container. Never insert an object (e.g. wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing a leak to occur. Open valve slowly. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier. Close container valve after each use and when empty, even if still connected to equipment. Never attempt to repair or modify container valves or safety relief devices. Damaged valves should be reported immediately to the supplier. Close valve after each use and when empty. Replace outlet caps or plugs and container caps as soon as container is disconnected from equipment. Do not subject containers to abnormal mechanical shock. Never attempt to lift a cylinder by its valve protection cap or guard. Do not use containers as rollers or supports or for any other purpose than to contain the gas as supplied. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit. Do not smoke while handling product or cylinders. Never re-compress a gas or a gas mixture without first consulting the supplier. Never attempt to transfer gases from one cylinder/container to another. Always use backflow protective device in piping. When returning cylinder install valve outlet cap or plug leak tight. Never use direct flame or electrical heating devices to raise the pressure of a container. Containers should not be subjected to temperatures above 50°C (122°F).

**Storage:**

Open/close valve slowly. Close when not in use. Wear Safety Eye Protection. Check Safety Data Sheet before use. Use a back flow preventative device in the piping. Use only with equipment rated for cylinder pressure. Read and follow the Safety Data Sheet (SDS) before use. Full containers should be stored so that oldest stock is used first. Containers should be stored in a purpose built compound which should be well ventilated, preferably in the open air. Stored containers should be periodically checked for general condition and leakage. Observe all regulations and local requirements regarding storage of containers. Protect containers stored in the open against rusting and extremes of weather. Containers should not be stored in conditions likely to encourage corrosion. Containers should be stored in the vertical position and properly secured to prevent

toppling. The container valves should be tightly closed and where appropriate valve outlets should be capped or plugged. Container valve guards or caps should be in place. Keep containers tightly closed in a cool, well-ventilated place. Store containers in location free from fire risk and away from sources of heat and ignition. Full and empty cylinders should be segregated. Do not allow storage temperature to exceed 50°C (122°F). Return empty containers in a timely manner.

Technical measures/Precautions:

Containers should be segregated in the storage area according to the various categories (e.g. flammable, toxic, etc.) and in accordance with local regulations. Keep away from combustible material.

## 8.-Exposure controls/Personal protection

### Engineering measures:

Provide natural or mechanical ventilation to prevent oxygen deficient atmospheres below 19.5% oxygen.

### Personal protective equipment

#### Respiratory protection:

Self contained breathing apparatus (SCBA) or positive pressure airline with mask are to be used in oxygen-deficient atmosphere.

Air purifying respirators will not provide protection. Users of breathing apparatus must be trained.

#### Hand protection:

Wear working gloves when handling gas containers.

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

#### Eye protection:

Safety glasses recommended when handling cylinders.

#### Skin and body protection:

Safety shoes are recommended when handling cylinders.

#### Special instructions for:

Ensure adequate ventilation, especially in confined areas.

**Protection and hygiene Remarks:** Simple asphyxiant.

## 9.-Physical and Chemical Properties

Boiling point/range: -452.092°F (-268.94°C) @ 1.01325 bar	Melting point/range: -457.51 °F (-271.95 °C) @ 25.55 bar	Flash point: Not applicable	Autoignition: Not applicable
Density: 0.012 lb/ft <sup>3</sup> (0.0002 g/cm <sup>3</sup> ) @ 70°F (21°C)	pH: Not applicable	Molecular Weight: 4.0026 g/mol	Physical state: Gas
Color: Colorless	Odor: No odor warning properties.	Velocidad de Evaporación: Not applicable	Water solubility: 0.0015 g/l
Vapor pressure: Not applicable	Relative vapor density: 0.138 (air = 1)	Upper explosion flammability limit : Not data available	Lower explosion flammability limit : Not data available

## 10.-Stability and Reactivity

Chemical Stability:	Stable under normal conditions.
Conditions to avoid:	No data available.
Materials to avoid:	No data available.
Hazardous decomposition products:	No data available.
Possibility of hazardous Reactions/Reactivity:	No data available.

## 11.-Toxicological Information

### Information on toxicological effects

#### Likely routes of exposure

**Effects on Eye:** No adverse effect.

**Effects on Skin:** No adverse effect.

**Inhalation Effects:** In high concentrations may cause asphyxiation. Asphyxiation may bring about unconsciousness without warning and so rapidly that victim may be unable to protect themselves.

**Ingestion Effects:** Ingestion is not considered a potential route of exposure.

**Symptoms:** Exposure to oxygen deficient atmosphere may cause the following symptoms: Dizziness. Salivation. Nausea. Vomiting. Loss of mobility/consciousness.

#### Acute toxicity

**Acute Oral Toxicity:** No data is available on the product itself.

**Inhalation:** No data is available on the product itself.

**Acute Dermal Toxicity:** No data is available on the product itself.

**Skin corrosion/irritation:** No data available.

**Serious eye damage/eye irritation:** No data available.

**Sensitization:** No data available.

#### Chronic toxicity or effects from long term exposures

**Carcinogenicity:** No data available.

**Reproductive toxicity:** No data is available on the product itself.

**Germ cell mutagenicity:** No data is available on the product itself.

**Specific target organ systemic toxicity (single exposure):** No data available.

**Specific target organ systemic toxicity (repeated exposure):** No data available.

**Aspiration hazard:** No data available.

#### Delayed and Immediate Effects and Chronic Effects from Short and Long Term Exposure

Not applicable.

## 12.-Ecological Information

#### Ecotoxicity effects

**Aquatic toxicity:** No data is available on the product itself.

**Toxicity to other organisms:** No data available.

**Persistence and degradability****Biodegradability:** No data is available on the product itself.**Mobility:** No data available.**Bioaccumulation:** No data is available on the product itself.**Further information**

This product has no known eco-toxicological effects.

**13.-Disposal considerations****Waste from residues/unused products:** Contact supplier if guidance is required. Return unused product in original cylinder to supplier.**Contaminated packaging:** Return cylinder to supplier.**14.-Transport Information****DOT/IATA/IMDG/TDG**

UN/ID No.:	UN 1046
Proper shipping name:	Helium, compressed
Class or Division:	2.2
Label(s):	2.2



Marine Pollutant: No.

**Further Information**

Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. The transportation information is not intended to convey all specific regulatory data relating to this material. For complete transportation information, contact an Air Products customer service representative.

**15.-Regulatory Information**

Toxic Substance Control Act (TSCA) 12(b) Component(s): None.

Country	Regulatory	Notification
USA	TSCA	Included on Inventory.
EU	EINECS	Included on Inventory.
Canada	DSL	Included on Inventory.
Australia	AICS	Included on Inventory.
Japan	ENCS	Included on Inventory.
South Korea	ECL	Included on Inventory.
China	SEPA	Included on Inventory.
Philippines	PICCS	Included on Inventory.

**EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification**

Sudden Release of Pressure Hazard.

**US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)**

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

**16.-Other information**

## NFPA Rating

Salud:	0
Flamabilidad:	0
Reactividad:	0
Riesgos Especiales:	SA

## HMIS Rating

Salud (S):	0
Flamabilidad (I):	0
Riesgos Físicos (RF):	3
Equipo de Protección Personal (EPP):	

Prepared by INFRA S.A. DE C.V. Industrial Safety Management.