

Material Safety Data Sheet

Printing date 08/05/2008

Version 3

Reviewed on 08/05/2008

1 Identification of substance

Product details

Trade name: Helium (Compressed Gas)

Article number: 033-01-0001

Creation date: 08/14/2006

Manufacturer/Supplier:

Linde Canada Limited
5860 Chedworth Way
Mississauga, Ontario L5R 0A2
Telephone (905) 501-1700

Linde
575 Mountain Avenue
Murray Hill, NJ 07974
Telephone (908) 464-8100

24-HOUR EMERGENCY TELEPHONE NUMBER:
(905) 501-0802

24-HOUR EMERGENCY TELEPHONE NUMBER:
CHEMTREC (800) 424-9300

Information department: Customer Service Centre: 1-866-385-5349

2 Composition/Data on components

Chemical characterization:

CAS No. Description
7440-59-7 Helium

Identification number(s)

EINECS Number: 231-168-5

3 Hazards identification

Hazard description:

WHMIS-symbols:

A - Compressed gas



HMS-ratings (scale 0 - 4)

HEALTH	0	Health = 0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

NFPA ratings (scale 0 - 4)

Health	0	Health = 0
Fire	0	Fire = 0
Reactivity	0	Reactivity = 0

Information pertaining to particular dangers for man and environment: Not applicable.

Classification system:

The classification is in line with internationally approved calculation standards. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

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GHS label elements



Warning

2.5/C - Contains gas under pressure; may explode if heated.

Storage:

Protect from sunlight. Store in a well-ventilated place.

4 First aid measures

- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for at least 15 minutes under running water. Then consult a doctor.
- After swallowing: Not applicable

5 Fire fighting measures

- Suitable extinguishing agents:
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

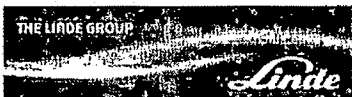
- Person-related safety precautions:
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Stop leak - ONLY if possible to do so without risk.
- Measures for environmental protection: Prevent seepage into sewage system, workpits and/or cellars.
- Measures for cleaning/collecting: Ensure adequate ventilation.
- Additional information: No dangerous substances are released.

7 Handling and storage

- Handling:
- Information for safe handling:
Handle with care. Avoid jolting, friction, and impact.
Use only in well ventilated areas.
Store cylinders upright with valve protection cap in place and firmly secured to prevent falling or being knocked over.
If difficulty with operating cylinder valve is experienced discontinue use and contact supplier.
- Information about protection against explosions and fires:
Keep ignition sources away - Do not smoke.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

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Storage:

Requirements to be met by storerooms and receptacles:

Do not expose cylinder to temperatures higher than 50°C (122 °F)

In formation about storage in one common storage facility:

Sources of ignition should be removed from storage area.

Further information about storage conditions:

Keep cylinder valve tightly closed.

Store cylinder in a well ventilated area.

Store in accordance with local fire code and/or building code or any pertaining regulations.

8 Exposure controls and personal protection

Additional information about design of technical systems:

Adequate local ventilation.

Safety showers and eyewash stations should be nearby.

Components with limit values that require monitoring at the workplace:

7440-59-7 Helium (23-100%)

EL Simple asphyxiant

Additional information: The lists that were valid during the creation were used as basis.

Personal protective equipment:

General protective and hygienic measures:

Protective clothing should be kept free of oil and grease.

PPE should be inspected and maintained regularly to retain its effectiveness.

Breathing equipment:

Use atmosphere-supplying respirators (e.g. supplied-air: demand, pressure-demand, or continuous-flow or self-contained breathing apparatus: demand or pressure-demand or combination supplied-air with auxiliary self-contained air supply atmosphere-supplying respirator) in case of insufficient ventilation.

Protection of hands:



Protective gloves.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Eye protection: Safety glasses

9 Physical and chemical properties

General Information

Form: Gaseous.

Color: Colorless

Odor: Odorless

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Change in condition

Melting point/Melting range: -272°C

Boiling point/Boiling range: -268°C

Flash point: Not applicable.**Danger of explosion:** Product does not present an explosion hazard.**Solubility in / Miscibility with**

Water at 20°C: 8.6 g/l

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- Dangerous reactions:** No dangerous reactions known.
- Dangerous products of decomposition:** No dangerous decomposition products known.

11 Toxicological information

- Acute toxicity:**
- LD/LC50 values that are relevant for classification:** LC50 > 5000ppm
- Primary irritant effect:**
- on the skin:** No irritating effect.
- on the eye:** No irritating effect.
- Sensitization:** No sensitizing effects known.
- Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
The substance is not subject to classification.

12 Ecological information

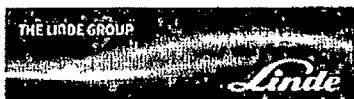
- General notes:** Generally not hazardous for water.

13 Disposal considerations

- Product:**
- Recommendation:** Unused product should be returned to vendor.
- Unleaded packagings:**
- Recommendation:**
Cylinder and unused product should be returned to vendor. Disposable cylinder must be disposed of in accordance with local regulations.

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Recommended cleansing agent: None applicable.

14 Transport information

TDG and DOT regulations:



Hazard class: 2
 Identification number: UN1046
 Proper shipping name (technical name): HELIUM, COMPRESSED
 Label: 2.2

Maritime transport IMDG:



IMDG Class: 2.2
 UN Number: 1046
 Label: 2.2
 Marine pollutant: No
 Proper shipping name: HELIUM, COMPRESSED

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 2
 UN/ID Number: 1046
 Label: 2.2
 Proper shipping name: HELIUM, COMPRESSED

UN "Model Regulation": UN1046, HELIUM, COMPRESSED, 2.2

15 Regulations

SARA

Section 355 (extremely hazardous substances):

Substance is not listed.

Section 313 (Specific toxic chemical listings):

Substance is not listed.

TSCA (Toxic Substances Control Act):

Substance is listed.

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Prop osition 65

Chemicals known to cause cancer:

Substance is not listed.

Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

Chemicals known to cause developmental toxicity:

Substance is not listed.

Carcinogeny categories

EPA (Environmental Protection Agency)

Substance is not listed.

NTP (National Toxicology Program)

Substance is not listed.

TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

Canadian substance listings:

Canadian Domestic Substances List (DSL)

Substance is listed.

Canadian Ingredient Disclosure list (limit 0.1%)

Substance is not listed.

Canadian Ingredient Disclosure list (limit 1%)

Substance is not listed.

Pro duct related hazard informations:

Observe the general safety regulations when handling chemicals.

The substance is not subject to classification according to the sources of literature known to us.

The product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Sa fety phrases:

Keep container tightly closed in a cool place.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Please refer to the section 3 for NFPA and HMIS Hazard Codes.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

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GENERAL DISCLAIMER

For terms and conditions, including limitation of liability, please refer to the purchase agreement in effect between Linde Inc. (or any of its affiliates and subsidiaries) and the purchaser.

• **Department issuing MSDS:** Customer Service Centre: 1-866-385-5349

Abbreviations and Acronyms:

ACGIH: American Conference of Governmental Industrial Hygienists
HMIS: Hazardous Materials Identification System
NFPA: National Fire Protection Association
N/A: Not Applicable
LC50: Lethal Concentration, 50 Percent
LD50: Lethal Dose, 50 Percent
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
WHMIS: Workplace Hazardous Materials Information System (Canada)

CDN