



LASAL 4

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 11/06/2014

Version: 1.0

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

1.1. Product identifier

Product form : Substance
Substance name : LASAL 4
Chemical name : Helium
CAS No : 7440-59-7
Product code : SG-1001-02741

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

Use of the substance/mixture : Laser cutting and welding

1.3. Details of the supplier of the safety data sheet

Air Liquide America Specialty Gases
6141 Easton Rd
Plumsteadville, PA 18949 - USA
T 1.800.217.2688
www.airliquide.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Compressed gas H280

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



GHS04

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H280 - Contains gas under pressure; may explode if heated
OSHA-H01 - May displace oxygen and cause rapid suffocation

Precautionary statements (GHS-US) : P202 - Do not handle until all safety precautions have been read and understood
P271 - Use only outdoors or in a well-ventilated area
P280 - Wear protective gloves, protective clothing, eye protection, face protection
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P308+P313 - If exposed or concerned: Get medical advice/attention
P403 - Store in a well-ventilated place
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F)
CGA-PG05 - Use a back flow preventive device in the piping
CGA-PG06 - Close valve after each use and when empty
CGA-PG10 - Use only with equipment rated for cylinder pressure
CGA-PG14 - Approach suspected leak area with caution
CGA-PG21 - Open valve slowly

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

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SECTION 3: Composition/information on ingredients

3.1. Substance

Name : LASAL 4
CAS No : 7440-59-7

Name	Product identifier	%	Classification (GHS-US)
Helium	(CAS No)7440-59-7	100	Compressed gas, H280

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact : Adverse effects not expected from this product.
First-aid measures after eye contact : Adverse effects not expected from this product.
First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

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

Symptoms/injuries : Symptoms similar to those listed under inhalation.
Symptoms/injuries after inhalation : May displace oxygen and cause rapid suffocation. If you feel unwell, seek medical advice.
Symptoms/injuries after skin contact : Adverse effects not expected from this product.
Symptoms/injuries after eye contact : Adverse effects not expected from this product.
Symptoms/injuries after ingestion : Ingestion is not considered a potential route of exposure.
Symptoms/injuries upon intravenous administration : Not known.
Chronic symptoms : None known.

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

If you feel unwell, seek medical advice. If breathing is difficult, give oxygen.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media : Do not use water jet to extinguish.

5.2. Special hazards arising from the substance or mixture

Fire hazard : The product is not flammable.
Explosion hazard : Product is not explosive. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
Reactivity : None known.

5.3. Advice for firefighters

Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.
Protection during firefighting : Standard protective clothing and equipment (e.g., Self Contained Breathing Apparatus) for fire fighters. 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

General measures : Ensure adequate ventilation.

6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment consistent with the site emergency plan.
Emergency procedures : Escape the danger area by the closest safe route. Close doors and windows of adjacent premises. Keep containers closed. Mark the danger area. Seal off low-lying areas. Keep upwind.

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6.1.2. For emergency responders

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|----------------------|---|
| Protective equipment | : Standard protective clothing and equipment (e.g., Self Contained Breathing Apparatus) for fire fighters. Equip cleanup crew with proper protection. |
| Emergency procedures | : Evacuate and limit access. Ventilate area. |

6.2. Environmental precautions

Try to stop release if safe to do so.

6.3. Methods and material for containment and cleaning up

- | | |
|-------------------------|--|
| For containment | : Try to stop release if safe to do so. |
| Methods for cleaning up | : Dispose of this material and its container in accordance with local regulations. |

6.4. Reference to other sections

See also Sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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|-----------------------------------|---|
| Additional hazards when processed | : Pressurized container: Do not pierce or burn, even after use. Use equipment rated for cylinder pressure. |
| Precautions for safe handling | : Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. |

7.2. Conditions for safe storage, including any incompatibilities

- | | |
|------------------------|---|
| Technical measures | : Comply with applicable regulations. |
| Storage conditions | : Do not expose to temperatures exceeding 52°C (125°F). Keep container closed when not in use. Protect cylinder from physical damage. |
| Incompatible products | : None known. |
| Incompatible materials | : None known. |

7.3. Specific end use(s)

See Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Helium (7440-59-7)

8.2. Exposure controls

- | | |
|----------------------------------|---|
| Appropriate engineering controls | : Provide adequate general and local exhaust ventilation. Systems under pressure should be regularly checked for leakages. Ensure exposure is below occupational exposure limits. Oxygen detectors should be used when asphyxiating gases may be released. Consider work permit system e.g. for maintenance activities. |
| Hand protection | : Wear working gloves when handling gas containers. 29CFR 1910.138: Hand Protection. |
| Eye protection | : Wear safety glasses with side shields. 29 CFR 1910.133: Eye and Face Protection. |
| Skin and body protection | : Wear suitable protective clothing, e.g. - lab coats, coveralls or flame resistant clothing. |
| Respiratory protection | : None necessary during normal and routine operations. |
| Thermal hazard protection | : None necessary during normal and routine operations. |
| Environmental exposure controls | : Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment. |
| Other information | : Wear safety shoes while handling containers. 29 CFR 1910.136: Foot Protection. |

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas
Appearance	: Clear, colorless gas.
Molecular mass	: 4.0026 g/mol
Color	: Colorless
Odor	: odorless
Odor threshold	: No data available
pH	: Not applicable.
Relative evaporation rate (butyl acetate=1)	: No data available
Relative evaporation rate (ether=1)	: Not applicable.
Melting point	: -272 °C
Freezing point	: No data available
Boiling point	: -267.9 °C
Flash point	: No data available
Critical temperature	: -266.96 °C
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 6894688.3424271 mbar
Critical pressure	: 230 kPa
Relative vapor density at 20 °C	: 0.138
Relative density	: No data available
Relative gas density	: 0.14 Lighter or similar to air.
Solubility	: Water: 1.5 mg/l
Log Pow	: Not applicable
Log Kow	: No data available
Viscosity, kinematic	: Not applicable.
Viscosity, dynamic	: Not applicable.
Explosive properties	: Not applicable - not flammable.
Oxidizing properties	: None.
Explosive limits	: Not flammable

9.2. Other information

Additional information	: None.
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SECTION 10: Stability and reactivity

10.1. Reactivity

None known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Under normal conditions of storage and use hazardous decomposition products should not be produced.

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Helium (7440-59-7)	
LC50 inhalation rat (ppm)	410000 ppm/4h
ATE US (gases)	410000.00000000 ppmV/4h

Skin corrosion/irritation : Not classified
pH: Not applicable.

Serious eye damage/irritation : Not classified
pH: Not applicable.

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

Symptoms/injuries after inhalation : May displace oxygen and cause rapid suffocation. If you feel unwell, seek medical advice.

Symptoms/injuries after skin contact : Adverse effects not expected from this product.

Symptoms/injuries after eye contact : Adverse effects not expected from this product.

Symptoms/injuries after ingestion : Ingestion is not considered a potential route of exposure.

Symptoms/injuries upon intravenous administration : Not known.

Chronic symptoms : None known.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

Helium (7440-59-7)	
Persistence and degradability	No ecological damage caused by this product.

12.3. Bioaccumulative potential

LASAL 4(7440-59-7)	
Log Pow	Not applicable

Helium (7440-59-7)	
Log Pow	Not applicable for inorganic gases.
Bioaccumulative potential	No ecological damage caused by this product.

12.4. Mobility in soil

Helium (7440-59-7)	
Ecology - soil	No ecological damage caused by this product.

12.5. Other adverse effects

Effect on ozone layer : No additional information available

Effect on the global warming : No known ecological damage caused by this product.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Contact supplier if guidance is required. Do not discharge into any place where its accumulation could be dangerous. Ensure that the emission levels from local regulations or operating permits are not exceeded.
Waste disposal recommendations	: Refer to the CGA Pamphlet P-63 "Disposal of Gases" available at www.cganet.com for more guidance on suitable disposal methods.
Additional information	: None.

SECTION 14: Transport information

In accordance with DOT	
Transport document description	: UN1046 Helium, compressed, 2.2
UN-No.(DOT)	: 1046
DOT NA no.	: UN1046
Proper Shipping Name (DOT)	: Helium, compressed
Department of Transportation (DOT) Hazard Classes	: 2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115
Hazard labels (DOT)	: 2.2 - Non-flammable gas



DOT Packaging Exceptions (49 CFR 173.xxx)	: 306;307
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 302
DOT Packaging Bulk (49 CFR 173.xxx)	: 302;314
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 75 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 150 kg
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Additional information

Other information	: No supplementary information available.
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ADR

Transport document description	: UN 1046 HELIUM, COMPRESSED, 2.2, (E)
Class (ADR)	: 2 - Gases
Hazard identification number (Kemler No.)	: 20
Classification code (ADR)	: 1A
Hazard labels (ADR)	: 2.2 - Non-flammable compressed gas



Orange plates	:
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Tunnel restriction code (ADR)	: E
LQ	: 120ml
Excepted quantities (ADR)	: E1

Transport by sea

UN-No. (IMDG)	: 1046
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Proper Shipping Name (IMDG) : Helium, Compressed
Class (IMDG) : 2.2 - Non-flammable, non-toxic gases

Air transport

UN-No.(IATA) : 1046
Proper Shipping Name (IATA) : Helium, Compressed
Class (IATA) : 2

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

Helium (7440-59-7)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class A - Compressed Gas

EU-Regulations

No additional information available

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

Not classified

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

15.2.2. National regulations

No additional information available

15.3. US State regulations

Helium (7440-59-7)	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) List	

SECTION 16: Other information

Indication of changes : Revised safety data sheet in accordance with OSHA final rule on GHS implementation promulgated March 26, 2012.

Other information : This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this product.

Full text of H-phrases: see section 16:

Compressed gas	Gases under pressure Compressed gas
H280	Contains gas under pressure; may explode if heated

SDS US (GHS HazCom 2012)

This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of Air Liquide America Corporation's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this product is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.