

## SAFETY DATA SHEET

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier:

**HELIUM**

CAS number: 7440-59-7

EU number: 231-168-5

REACH Registry number: exempted from the registration requirements for substances according to Annex IV / V of REACH regulation.

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

Industrial gas for industrial use.

1.3. Details of the supplier of the safety data sheet:

**CFH Löt- und Gasgeräte GmbH**

Bahnhofstr. 50

D-74254 Offenau

Tel.: +49 7136 9594-0

Fax: +49 7136 9594-44

1.3.1. Responsible person: Torsten Bogesch  
E-mail: bogesch.torsten@cfh-gmbh.de

1.4. Emergency telephone number: National Poisons Information Service: 844 892 0111

### SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to CLP regulation:

Press. Gas



**H statements:**

**H280** – Contains gas under pressure; may explode if heated.

**P statements:**

**P410 + P403** – Protect from sunlight. Store in a well-ventilated place.

Classification according to Directive 67/548/EEC:

**Not considered as hazardous substance.**

**R phrases:** none.

**S phrases:** none.

2.2. Label elements:

IUPAC Name: Helium

EU number: 231-168-5



**H statements:**

**H280** – Contains gas under pressure; may explode if heated.

**P statements:**

**P410 + P403** – Protect from sunlight. Store in a well-ventilated place.

2.3. Other hazards

Can cause asphyxiation in high concentrations. It has no characteristic odor, the victim does not perceive the suffocation.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

3.1. Substances:

Description: industrial gas

IUPAC Name: Helium

Formula: He

Purity: 100%

**SECTION 4: FIRST AID MEASURES**

4.1. Description of first aid measures:

IN CASE OF INGESTION:

Measures:

- Uncharacteristic way of exposure (gas).
- In case of discomfort consult a doctor.
- Do not give the victim anything to eat or drink, and do not induce vomiting if the victim is unconscious.

IN CASE OF INHALATION:

Measures:

- Higher concentrations may cause asphyxiation.
- Remove the victim to fresh air.
- If not breathing, give artificial respiration.
- Obtain immediate medical attention and show him the label!

IN CASE OF SKIN CONTACT:

Measures:

- Uncharacteristic way of exposure.

IN CASE OF EYE CONTACT:

Measures:

- Uncharacteristic way of exposure.

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

In case of inhalation: Loss of mobility and consciousness.

Victim may not perceive the suffocation.

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

Protection of first-aiders: wear self-contained breathing apparatus.

**SECTION 5: FIREFIGHTING MEASURES**

5.1. Extinguishing media:

5.1.1. Suitable extinguishing media:

All known extinguishing media can be used.

5.1.2. Unsuitable extinguishing media:

None known.

5.2. Special hazards arising from the substance or mixture:

Fire will produce smoke and other combustion products. The inhalation of decomposition products can be harmful to health.

5.3. Advice for firefighters:

Wear full protective clothing and self-contained breathing apparatus.

Extinguishing water must not reach into drains, soil or bodies of water. Cool closed containers exposed to fire with water.

Container: heating leads to explosion. If possible, do not allow the product in the environment. If without risk, remove the endangered containers.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

6.1. Personal precautions, protective equipment and emergency procedures:



- 6.1.1. Advices for non-emergency personnel:  
Prevent access by unauthorized persons. Only trained personnel wearing appropriate protective equipment that knows the necessary precautions well may stay at the accident scene.
- 6.1.2. For emergency responders:  
Evacuate personnel to safe areas.  
Only trained personnel wearing appropriate protective equipment that knows the necessary precautions well may stay at the accident scene.  
Evacuate all persons from the danger area.  
Ensure adequate ventilation.
- 6.2. Environmental precautions:  
The released material, and the resulting waste must be disposed in accordance with applicable environmental precautions. Do not enter into drains, watercourses and soil.  
Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.
- 6.3. Methods and material for containment and cleaning up:  
Ensure adequate ventilation. Wear personal protection equipment.
- 6.4. Reference to other sections:  
For further and detailed information see section 8 and 13.

**SECTION 7: HANDLING AND STORAGE**

- 7.1. Precautions for safe handling:  
Observe conventional hygiene precautions.  
While handling gas bottles / bundles / containers wear protective equipment.  
Technical measures:  
Ensure adequate ventilation.  
Open valve slowly to avoid pressure shock.  
Prevent ingress of water into the gas tank.  
Do not allow backflow into the container.  
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature.  
If in doubt, consult the gas supplier.  
Follow the operating instructions of the gas supplier.  
Precautions against fire and explosion:  
No specific prescription.
- 7.2. Conditions for safe storage, including any incompatibilities:  
Technical measures and storage condition:  
Keep in original, tightly closed and labelled container.  
The storage area must be suitable for ventilation and cleaning!  
Store in cool and dry place.  
Storage temperature: below 50 ° C  
See notes on the label.  
Incompatible materials: no data available.  
Packaging material: steel.
- 7.3. Specific end use(s):  
No specific instructions available.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

- 8.1. Control parameters:

Exposure limit values: none.

DNEL		Routes of exposure	Exposure frequency:	Remarks:
Worker	Consumer			
n.d.	n.d.	dermal	short term (acute) long term (repeated)	n.d.
n.d.	n.d.	inhalative	short term (acute) long term (repeated)	n.d.
n.d.	n.d.	oral	short term (acute) long term (repeated)	n.d.

PNEC			Exposure frequency:	Remarks:
Water	Soil	Air		
n.d.	n.d.	n.d.	short term (single use) long term (continuous)	n.d.
n.d.	n.d.	n.d.	short term (single use) long term (continuous)	n.d.

n.d.	n.d.	n.d.	short term (single use) long term (repeated)	n.d.
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8.2. Exposure controls:

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

8.2.1 Appropriate engineering controls:

In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin.

When using do not eat, drink or smoke.

Use only with proper use and good ventilation.

8.2.2. Individual protection measures, such as personal protective equipment:

1. Eye/face protection: not required.

2. Skin protection:

a. Hand protection: when handling gas cylinders / bundles / containers wear protective gloves.

b. Other: not required.

3. Respiratory protection: in case of emergency: use adequate respirator.

4. Thermal hazard: None known.

8.2.3. Environmental exposure controls:

No specific prescription.

**The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions an expert's advice should be sought out before deciding upon further protective measures.**

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties:

Parameter	Test method:	Remarks:
1. <b>Appearance:</b>		
		colorless pressurised gas
2. <b>Odour:</b>		odourless
3. Odour threshold:		no data available
4. pH value:		no data available
5. Melting point/ freezing point:		no data available
6. Initial boiling point/boiling range:		- 269 °C
7. Flash point:		no data available
8. Evaporation rate:		no data available
9. Flammability:		no data available
10. Upper/lower flammability or explosive limits:		no data available
11. Vapour pressure:		no data available
12. Relative density:	20 °C	0,14 Air = 1
13. Solubility(ies):		no data available
14. Partition coefficient: n-octanol/water:		no data available
15. Self-ignition temperature:		no data available
16. Degradation temperature:		no data available
17. Viscosity:		no data available
18. Explosive properties:		no data available
19. Oxidizing properties:		no data available

9.2. Other information:

No data available.

**SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity:

None known.

10.2. Chemical stability:

At normal temperature: stabile at general conditions of work.

10.3. Possibility of hazardous reactions:

None known.

10.4. Conditions to avoid:

None known.

10.5. Incompatible materials:

None known.

10.6. Hazardous decomposition products:

Prevent pressure vessel (gas cylinder) from heating and spillage.

**SECTION 11: TOXICOLOGICAL INFORMATION**

11.1. Information on toxicological effects:

Acute toxicity: none known.  
Skin corrosion/irritation: none known.  
Serious eye damage/eye irritation: none known.  
Respiratory or skin sensitisation: no sensitizing effect known.  
Germ cell mutagenicity: not proven.  
Carcinogenicity: none known.  
Reproduction toxicity: none known.  
STOT-single exposure: none known.  
STOT-repeated exposure: none known.  
Aspiration hazard: none known.

11.1.1. For substances subject to registration, brief summaries of the information derived from the test conducted:  
None known.

11.1.2. Relevant toxicological properties of the hazardous substances:  
None known.

11.1.3. Information on likely routes of exposure:  
Ingestion, inhalation, skin and eye contact.

11.1.4. Symptoms related to the physical, chemical and toxicological characteristics:  
In case of inhalation: loss of mobility and consciousness.  
Victim may not realise the fact of suffocation.

11.1.5. Delayed and immediate effects as well as chronic effects from short and long-term exposure:  
None known.

11.1.6. Interactive effects:  
None known.

11.1.7. Absence of specific data:  
No data available.

11.1.8. Other information:  
It can cause asphyxiation in high concentrations. Has no characteristic odor, the victim does not realise the fact of suffocation.

## SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:  
The material, its residues or its packaging must not enter surface water, soil and sewage

12.2. Persistence and degradability:  
No data available.

12.3. Bioaccumulative potential:  
No data available.

12.4. Mobility in soil:  
No data available.

12.5. Results of PBT and vPvB assessment:  
No data available.

12.6. Other adverse effects:  
No data available.

## SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods:  
Disposal according to the local regulations.

13.1.1. Information regarding the disposal of the product:  
No special recommendation from the manufacturer.  
During the disposal of the product, its residue and its packaging the national and local prescriptions should be observed.  
The EWC codes indicated below are only recommendations, but they may have to be changed due to special circumstances, in such cases new classification may be needed.

13.1.2. Information regarding the disposal of the packaging:  
Containers can be reused, consult gas supplier.

13.1.3. Physical/chemical properties that may affect waste treatment options shall be specified:  
None known.

13.1.4. Sewage disposal:  
None known.

13.1.5. Special precautions for any recommended waste treatment:  
No data available.

## SECTION 14: TRANSPORT INFORMATION

14.1. UN number:  
1046

14.2. UN proper shipping name:  
HELIUM, COMPRESSED

14.3. Transport hazard class(es):



ADR/RID Klasse: 2.2

IMDG Class: 2.2

Label: 2.2

H.I. number: 20/1046

14.4. Packaging group:

None.

14.5. Environmental hazard:

No data available.

14.6. Special precautions for user

None.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No applicable.

## SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

COMMISSION REGULATION (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

15.2. Chemical safety assessment: no information available.

## SECTION 16: OTHER INFORMATION

Information regarding the revision of the safety data sheet: none.

The classification has not changed significantly compared to the previous version.

Full text of the abbreviations in the safety data sheet:

DNEL: Derived No Effect Level. PNEC: Predicted No Effect Concentration. CMR effects: Carcinogenicity, Mutagenicity and reproduction toxicity. PBT: Persistent, bioaccumulative and toxic. vPvB: very persistent and very bioaccumulative. n.d.: not defined. n.a.: not applicable.

Data sources: no data available.

Relevant H-Phrases (number and full text) of Section 2 and 3: none.

Relevant H-Phrases (number and full text) of Section 2 and 3:

**H280** – Contains gas under pressure; may explode if heated.

Training instructions: n.d.

Recommended restrictions on use (non-statutory recommendations by supplier): none.

This safety data sheet had been prepared on the basis of information provided by the manufacturer/supplier and conform to the relevant regulations. The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information. The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required. Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and purposes and assume all risk associated with the use of this product. It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.