# Safety data sheet
# Krypton, compressed.



## 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

**Product name**
Krypton, compressed.
EC No (from EINECS): 231-098-5
CAS No: 7439-90-9
Index-Nr. -
**Chemical formula** Kr
**REACH Registration number**:
Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.
**Known uses**
Not known.
**Company identification**
Linde AG, Linde Gas Division, Seitnerstraße 70, D-82049 Pullach
**E-Mail Address** Info@de.linde-gas.com
**Emergency phone numbers (24h):** 089-7446-0

## 2 HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

**Classification acc. to Regulation (EC) No 1272/2008/EC (CLP/GHS)**
Press. Gas (Compressed gas) - Contains gas under pressure; may explode if heated.

**Classification acc. to Directive 67/548/EEC & 1999/45/EC**
Not classified as hazardous to health.
Asphyxiant in high concentrations.
**Risk advice to man and the environment**
In high concentrations may cause asphyxiation.
Compressed gas.
**Label Elements**

**- Labelling Pictograms**

**- Signal word**
Warning

**- Hazard Statements**

| | |
|---|---|
| H280 | Contains gas under pressure; may explode if heated. |
| EIGA-As | Asphyxiant in high concentrations. |

**- Precautionary Statements**

**Precautionary Statement Prevention**
None.

**Precautionary Statement Reaction**
None.

**Precautionary Statement Storage**
P403 Store in a well-ventilated place.

**Precautionary Statement Disposal**
None.

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/Preparation:** Substance.
**Components/Impurities**
Krypton, compressed.
**CAS No:** 7439-90-9
**Index-Nr.**: -
**EC No (from EINECS):** 231-098-5
**REACH Registration number**:
Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.
Contains no other components or impurities which will influence the classification of the product.

## 4 FIRST AID MEASURES

**Inhalation**
In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
**Ingestion**
Ingestion is not considered a potential route of exposure.

## 5 FIRE FIGHTING MEASURES

**Specific hazards**
Exposure to fire may cause containers to rupture/explode. Non flammable.
**Hazardous combustion products**
None.
**Suitable extinguishing media**
All known extinguishants can be used.
**Specific methods**
If possible, stop flow of product. Move container away or cool with water from a protected position.
**Special protective equipment for fire fighters**
In confined space use self-contained breathing apparatus.

## 6 ACCIDENTAL RELEASE MEASURES

**Personal precautions**
Evacuate area. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Ensure adequate air ventilation. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
**Environmental precautions**
Try to stop release.
**Clean up methods**
Ventilate area.

## 7 HANDLING AND STORAGE

**Handling**
Suck back of water into the container must be prevented. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Refer to supplier's handling instructions. Only experienced and properly instructed personsshould handle gases under pressure. Protect cylinders from physical damage; do not drag, roll, slide or drop. Never use direct flame or electrical heating devices to raise the pressure of a container. 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. Ensure the complete gas system has been (or is regularily) checked for leaks before use. 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 tothe supplier. Replace valve outlet caps or plugs and containercaps where supplied as soon as container is disconnected from equipment. Keep container valve outlets clean and free fromcontaminates particularly oil and water. Never attempt to transfer gases from one cylinder/container to another. Do not smoke while handling product. The substance must be handled in accordance withgood industrial hygiene and safety procedures.

**Storage**
Keep container below 50°C in a well ventilated place. Observe all regulations and local requirements regarding storage of containers. Containers should not be stored in conditions likely to encourage corrosion. Containers should be stored in the vertical position and properly secured to prevent falling over. Stored containers should be periodically checkedfor general conditions and leakage. Container valve guards or caps should be in place. Store containers in location free from fire riskand away from sources of heat and ignition. Keep away from ignition sources (including static discharges). Keep away from combustible materials Observe "Technische Regeln Druckgase (TRG) 280 Ziffer 5"

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Personal protection**
Ensure adequate ventilation.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

**General information**
**Appearance/Colour:** Colourless gas.
**Odour:** None.

**Important information on environment, health and safety**
**Molecular weight:** 84 g/mol
**Melting point:** -157,2 °C
**Boiling point:** -153 °C
**Critical temperature:** -63,8 °C
**Autoignition temperature:** Not applicable.
**Flammability range:** Not applicable.
**Relative density, gas:** 2,9
**Relative density, liquid:** Not applicable.
**Solubility mg/l water:** 221 mg/l
**Maximum filling pressure (bar):** 200 bar
**Other data**
Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

## 10 STABILITY AND REACTIVITY

**Stability and reactivity**
Stable under normal conditions.
**Hazardous decomposition products**
**Statements on decomposition**
None.

## 11 TOXICOLOGICAL INFORMATION

**General**
No known toxicological effects from this product.

## 12 ECOLOGICAL INFORMATION

**General**
No known ecological damage caused by this product.

## 13 DISPOSAL CONSIDERATIONS

**General**
Do not discharge into any place where its accumulation could be dangerous. May be vented to atmosphere in a well ventilated place. Contact supplier if guidance is required.
**EWC Nr. 16 05 05**

## 14 TRANSPORT INFORMATION

**ADR/RID**

| | | | |
|---|---|---|---|
| Class | 2 | Classification Code | 1A |

**UN number and proper shipping name**
UN 1056 Krypton, compressed
UN 1056 Krypton, compressed

| | | | |
|---|---|---|---|
| Labels | 2.2 | Hazard number | 20 |
| Packing Instruction | P200 | | |

**IMDG**

| | |
|---|---|
| Class | 2.2 |

**UN number and proper shipping name**
UN 1056 Krypton, compressed

| | |
|---|---|
| Labels | 2.2 |
| Packing Instruction | P200 |
| EmS | FC, SV |

**IATA**

| | |
|---|---|
| Class | 2.2 |

**UN number and proper shipping name**
UN 1056 Krypton, compressed

| | |
|---|---|
| Labels | 2.2 |
| Packing Instruction | P200 |

**Other transport 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. Before transporting product containers ensure that they are firmly secured. Ensure that the cylinder valve is closed and not leaking. Ensure that the valve outlet cap nut or plug (where provided) is correctly fitted. Ensure that the valve protection device (where provided) is correctly fitted. Ensure adequate ventilation. Ensure compliance with applicable regulations.

## 15 REGULATORY INFORMATION

**Further national regulations**
Pressure Vessel Regulation
Regulations for the prevention of industrial accidents
**Water pollution class**
Not polluting to waters according to VwVwS from 17.05.99.
**TA-Luft**
Not classified according to TA-Luft.

## 16 OTHER INFORMATION

Ensure all national/local regulations are observed. The hazard of asphyxiation is often overlooked and must be stressed during operator training. Before using this product in any new process or

experiment, a thorough material compatibility and safety study should be carried out.

**Advice**

Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted. Details given in this document are believed to be correct at the time of going to press.

**Further information**

Linde safety advice

| | |
|---|---|
| No. 3 | Oxygen deficiency |
| No. 7 | Safe handling of gas cylinders and cylinder bundles |
| No. 11 | Transport of gas receptacles in vehicles |

**End of document**