

## Safety data sheet Argon, compressed.

Creation date : 27.01.2005  
Revision date : 07.03.2012

Version : 3.0

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

#### 1.1. Product identifier

**Product name**  
Argon, compressed.

EC No (from EINECS): 231-147-0

CAS No: 7440-37-1

Index-Nr. -

**Chemical formula** Ar**REACH Registration number:**

Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH),  
exempted from registration.

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

##### Relevant identified uses

Industrial and professional. Perform risk assessment prior to use.

##### Uses advised against

Consumer use.

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

##### Company identification

Linde AG, Linde Gas Division, Seitnerstraße 70, D-82049 Pullach

**E-Mail Address** Info@de.linde-gas.com

#### 1.4. Emergency telephone number

**Emergency phone numbers (24h):** 089-7446-0

### SECTION 2: Hazards identification

#### 2.1. 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.

#### 2.2. 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 Response

None.

##### Precautionary Statement Storage

P403 Store in a well-ventilated place.

##### Precautionary Statement Disposal

None.

#### 2.3. Other hazards

None.

### SECTION 3: Composition/information on ingredients

**Substance / Mixture:** Substance.

#### 3.1. Substances

Argon, compressed.

CAS No: 7440-37-1

Index-Nr.: -

EC No (from EINECS): 231-147-0

**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.

#### 3.2. Mixtures

Not applicable.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### First Aid General Information:

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

##### First Aid Inhalation:

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

##### First Aid Skin / Eye:

Adverse effects not expected from this product.

##### First Aid Ingestion:

Ingestion is not considered a potential route of exposure.

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

In high concentrations may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation.

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

None.

### SECTION 5: Fire fighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

All known extinguishants can be used.

#### 5.2. Special hazards arising from the substance or mixture

##### Specific hazards

Exposure to fire may cause containers to rupture/explode. Non flammable.

##### Hazardous combustion products

None.

#### 5.3. Advice for fire-fighters

##### 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

Normal firefighters' equipment consists of an appropriate SCBA (open-circuit positive pressure compressed air type) in combination with fire kit. Equipment and clothing to the following standards will provide a suitable level of protection for firefighters.

##### Guideline:

EN 469:2005: Protective clothing for firefighters. Performance requirements for protective clothing for firefighting., EN 15090 Footwear for firefighters., EN 443 Helmets for fire fighting in buildings and other structures., EN 659 Protective gloves for firefighters., EN 137 Respiratory protective devices — Self-contained open-circuit compressed air breathing apparatus with full face mask — Requirements, testing, marking.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ensure adequate air ventilation. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. EN 137 Respiratory protective devices — Self-contained open-circuit compressed air breathing apparatus with full face mask — Requirements, testing, marking.

#### 6.2. Environmental precautions

Try to stop release.

#### 6.3. Methods and material for containment and cleaning up

Ventilate area.

#### 6.4. Reference to other sections

See also sections 8 and 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Suck back of water into the container must be prevented. Do not allow backfeed into the container. 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 persons should handle gases under pressure. Protect containers 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 container contents. When moving containers, even for short distances, use appropriate equipment eg. trolley, hand truck, fork truck etc. 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 regularly) checked for leaks before use. If user experiences any difficulty operating container 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. Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment. Keep container valve outlets clean and free from contaminants particularly oil and water. Never attempt to transfer gases from one container to another. Do not smoke while handling product. The substance must be handled in accordance with good industrial hygiene and safety procedures.

#### 7.2. Conditions for safe storage, including any incompatibilities

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. Cylinders should be stored in the vertical position and properly secured to prevent falling over. Stored containers should be periodically checked for general conditions and leakage. Container valve guards or caps should be in place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from ignition sources (including static discharges). Keep away from combustible materials. Secure cylinders to prevent them from falling. Observe "Technische Regeln Druckgase (TRG) 280 Ziffer 5"

#### 7.3. Specific end use(s)

None.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No occupational exposure limit.

#### 8.2. Exposure controls

##### Appropriate engineering controls

Product to be handled in a closed system. Oxygen detectors should be used when asphyxiating gases may be released. The substance must be handled in accordance with good industrial hygiene and safety procedures. Consider work permit system e.g. for maintenance activities. Systems under pressure should be regularly checked for leakages. Provide adequate general or local ventilation.

##### Personal protective equipment

##### Eye and face protection

Wear eye protection to EN 166 when using gases.

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### Skin protection

### Hand protection

Advice: Wear working gloves and safety shoes while handling containers.

### Other protection

Wear working gloves and safety shoes while handling containers. EN ISO 20345 Personal protective equipment - Safety footwear.

### Respiratory protection

Not required

### Thermal hazards

Not required

### Environmental Exposure Controls

Specific risk management measures are not required beyond good industrial hygiene and safety procedures. Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### General information

**Appearance/Colour:** Colourless gas.

**Odour:** No odour warning properties.

**Melting point:** -189 °C

**Boiling point:** -186 °C

**Flash point:** Not applicable for gases and gas mixtures.

**Flammability range:** Non flammable.

**Vapour Pressure 20 °C:** Not applicable.

**Relative density, gas (Air=1):** 1,38, Heavier than air.

**Solubility in water:** 61 mg/l

**Autoignition temperature:** Not applicable.

#### Explosive properties:

Explosive acc. EU legislation: Not explosive.

Explosive acc. transp. reg.: Not explosive.

**Oxidising properties:** Not applicable.

**Molecular weight:** 40 g/mol

**Critical temperature:** -122,3 °C

**Relative density, liquid (Water=1):** 1,4

### 9.2. Other information

Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Unreactive under normal conditions.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

None.

### 10.4. Conditions to avoid

None.

### 10.5. Incompatible materials

No reaction with any common materials in dry or wet conditions.

### 10.6. Hazardous decomposition products

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

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### General

No known toxicological effects from this product.

## SECTION 12: Ecological information

### 12.1. Toxicity

No ecological damage caused by this product.

### 12.2. Persistence and degradability

Not applicable.

### 12.3. Bioaccumulative potential

Not applicable.

### 12.4. Mobility in soil

The substance is a gas, not applicable.

### 12.5. Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

### 12.6. Other adverse effects

Not applicable.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Do not discharge into any place where its accumulation could be dangerous. Contact supplier if guidance is required. Vent to atmosphere in a well ventilated place. Consult supplier for specific recommendations. Refer to the EIGA code of practice (Doc.30 "Disposal of Gases", downloadable at <http://www.eiga.org>) for more guidance on suitable disposal methods.

Gases in pressure containers excluding those, which are mentioned under 16 05 04

EWC Nr. 16 05 05

## SECTION 14: Transport information

### ADR/RID

### 14.1. UN number

1006

### 14.2. UN proper shipping name

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### 14.3. Transport hazard class(es)

Class: 2  
Classification Code: 1A  
Labels: 2.2  
Hazard number: 20  
Tunnel restriction code: (E)

### 14.4. Packing group (Packing Instruction)

P200

### 14.5. Environmental hazards

None.

### 14.6. Special precautions for user

None.

### IMDG

#### 14.1. UN number

1006

#### 14.2. UN proper shipping name

Argon, compressed

### 14.3. Transport hazard class(es)

Class: 2.2  
Labels: 2.2  
EmS: F-C, S-V

### 14.4. Packing group (Packing Instruction)

P200

### 14.5. Environmental hazards

None.

### 14.6. Special precautions for user

None.

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

### IATA

#### 14.1. UN number

1006

#### 14.2. UN proper shipping name

Argon, compressed

### 14.3. Transport hazard class(es)

Class: 2.2  
Labels: 2.2

### 14.4. Packing group (Packing Instruction)

P200

### 14.5. Environmental hazards

None.

### 14.6. Special precautions for user

None.

#### 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 container 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.

### SECTION 15: Regulatory information

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

Seveso Directive 96/82/EC: Not covered.

#### Other regulations

Regulations for the prevention of industrial accidents  
Pressure Vessel Regulation  
Council Directive 89/391/EEC on the introduction of measures to encourage improvements in the safety and health of workers at work  
Directive 94/9/EC on equipment and protective systems intended for use in potentially explosive atmospheres (ATEX)  
Directive 89/686/EEC on personal protective equipment  
Council Directive 67/548/EEC on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances  
Directive 1999/45/EC concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations  
Directive 97/23/EC on the approximation of the laws of the Member States concerning pressure equipment.

#### Further national regulations

Not classified according to TA-Luft.

#### Water pollution class

Not polluting to waters according to VwVwS from 27.07.2005.

#### TA-Luft

Not classified according to TA-Luft.

### 15.2. Chemical safety assessment

A CSA does not need to be carried out for this product.

### SECTION 16: Other information

Ensure all national/local regulations are observed. Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out. The hazard of asphyxiation is often overlooked and must be stressed during operator training.

#### 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

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given in this document are believed to be correct at the time of going to press.

### Further information

Kühn-Birett: Merkblätter gefährliche Arbeitsstoffe, Hommel: Handbook of dangerous goods Note:

When using this document care should be taken, as the decimal sign and its position complies with rules for the structure and drafting of international standards, and is a comma on the line.

As an example 2,000 is two (to three decimal places) and not two thousand, whilst 1.000 is one thousand and not one (to three decimal places). Please note that there has been a change in the system that has been used to create this SDS, therefore its number and revision may not correspond to versions that have previously been distributed.

### References

Various sources of data have been used in the compilation of this SDS, they include but are not exclusive to:

European Chemical Agency: Information on Registered Substances <http://apps.echa.europa.eu/registered/registered-sub.aspx#search>

European Chemical Agency: Guidance on the Compilation of Safety Data Sheets.

European Industrial Gases Association (EIGA) Doc. 169/11 Classification and Labelling guide.

ISO 10156:2010 Gases and gas mixtures -- Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets.

Matheson Gas Data Book, 7th Edition.

National Institute for Standards and Technology (NIST) Standard Reference Database Number 69

The ESIS (European chemical Substances Information System) platform of the former European Chemicals Bureau (ECB) ESIS (<http://ecb.jrc.ec.europa.eu/esis/>).

The European Chemical Industry Council (CEFIC) ERICards.

United States of America's National Library of Medicine's toxicology data network TOXNET (<http://toxnet.nlm.nih.gov/index.html>)

International Programme on Chemical Safety (<http://www.inchem.org/>)

Substance specific information from suppliers.

### 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

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End of document