

Safety data sheet

Page: 1/12

BASF Safety data sheet according to the United Nations' Globally Harmonized System (UN GHS)

Date / Revised: 02.02.2024

Version: 5.0

Product: **Argon Liquid**

(ID no. 30042226/SDS_GEN_00/EN)

Date of print 20.10.2025

1. Identification

Product identifier

Argon Liquid

Chemical name: Argon

CAS Number: 7440-37-1

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

Relevant identified uses: Chemical

Recommended use: Chemical

Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Petrochemicals

Telephone: +49 621 60-42151

E-mail address: sds-petrochemicals@basf.com

Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Press. Gas Refrigerated liquefied gas

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:



Signal Word:

Warning

Hazard Statement:

H281

Contains refrigerated gas; may cause cryogenic burns or injury.

Precautionary Statements (Prevention):

P282

Wear cold insulating gloves and either face shield or eye protection.

Precautionary Statements (Response):

P315

Get immediate medical advice/attention.

P336

Thaw frosted parts with lukewarm water. Do not rub affected area.

Precautionary Statements (Storage):

P410 + P403

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

Other hazards

According to UN GHS criteria

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition/Information on Ingredients

Substances

Chemical nature

This product contains (a) substance(s) excluded from the obligation to register under REACH regulation:

Argon

CAS Number: 7440-37-1

EC-Number: 231-147-0

Hazardous ingredients (GHS)

According to UN GHS criteria

No particular hazards known.

For the classifications not written out in full in this section the full text can be found in section 16.

Mixtures

Not applicable

4. First-Aid Measures**Description of first aid measures**

Immediately remove contaminated clothing. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). First aid personnel should pay attention to their own safety.

If inhaled:

If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

On skin contact:

Thaw out frostbites under cold liquid or water, do not rub affected parts of the body, apply sterile dressings, consult a skin specialist.

On contact with eyes:

Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

frostbite, (Further) symptoms and / or effects are not known so far

Hazards: (Further) symptoms and / or effects are not known so far

Indication of any immediate medical attention and special treatment needed

Treatment: Symptomatic treatment (decontamination, vital functions). Artificial respiration with oxygen.

5. Fire-Fighting Measures**Extinguishing media**

Additional information:

Product will not burn.

Special hazards arising from the substance or mixture

Shut off or stop released substance/product under safe conditions. Cool endangered containers with water-spray.

Advice for fire-fighters

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

Evacuate area of all unnecessary personnel.

6. Accidental Release Measures

Shut off or stop source of leak. Shut off or stop released substance/product under safe conditions.

Personal precautions, protective equipment and emergency procedures

Avoid contact with the skin, eyes and clothing. Ensure adequate ventilation.

Keep people away and stay on the upwind side.

Handle in accordance with good industrial hygiene and safety practice.

Environmental precautions

Discharge into the environment must be avoided.

Methods and material for containment and cleaning up

Ensure adequate ventilation.

Suppress gases/vapours/mists with water spray jet.

7. Handling and Storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:

The substance/product is non-combustible. Avoid influence of heat.

Conditions for safe storage, including any incompatibilities

No applicable information available.

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

7440-37-1: Argon

Exposure controls

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Self-contained breathing apparatus.

Hand protection:

When there is a risk of frostbite from escaping gas, use thermally insulated gloves (EN 511).

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Avoid contact with the skin, eyes and clothing. Ensure adequate ventilation. Avoid inhalation of vapour. Remove contaminated clothing immediately and dispose of safely.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form:	refrigerated liquified gas
Colour:	colourless
Odour:	odourless
Odour threshold:	not determined
pH value:	not applicable
Melting point:	-189 °C
Boiling point:	-186 °C (1.013 hPa)
Flash point:	not applicable, the product is a gas
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.

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Flammability:	non-inflammable gas	(other)
Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Ignition temperature:	not applicable	
Vapour pressure:	48.980 hPa (-122,4 °C) critical pressure, Literature data.	
Density:	1,669 kg/m ³ (15 °C, 1.013 hPa) Literature data., gaseous 1,784 kg/m ³ (0 °C, 1.013 hPa) Literature data., gaseous	
Relative density:	1,39	
Relative vapour density (air):	1,379 Heavier than air.	
Solubility in water:	67 mg/l (20 °C)	
Partitioning coefficient n-octanol/water (log Kow):	The value has not been determined because the substance is inorganic.	
Self ignition:	not self-igniting	Test type: Spontaneous self-ignition at room-temperature.
Thermal decomposition:	Stable at ambient temperature.	
Viscosity, dynamic:	not applicable, the product is a gas	
Viscosity, kinematic:	not applicable, the product is a gas	
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	

Other information

Self heating ability: not applicable

SADT: No data available.

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Radioactivity:

not radioactive for transport
purposes

:

Study does not need to be
conducted.Grain size distribution: The substance / product is marketed or used in a non solid or
granular form.

Molar mass: 39,95 g/mol

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: Corrosive effects to metal are not anticipated.

Formation of flammable gases: Remarks: Forms no flammable gases in the
presence of water.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Peroxides: The product does not contain peroxides.

Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

Avoid extreme heat. Avoid direct sunlight.

Incompatible materials

Substances to avoid:

None known during use and storage if used according to instructions.

Hazardous decomposition products

:

No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic by inhalation. The substance is inert. At very high air concentrations, the gas may
cause dyspnoe or asphyxia by displacing oxygen.

Experimental/calculated data:

(oral): Study not necessary due to exposure considerations.

(by inhalation): No data available concerning acute toxicity.

(dermal): Study not necessary due to exposure considerations.

Irritation

Assessment of irritating effects:

No data available concerning irritating effects. The substance is gaseous at room temperature and pressure. Testing for this particular endpoint is technically not feasible and/or this endpoint does not represent a relevant exposure scenario. Contact with liquid may cause frostbite.

Experimental/calculated data:

Skin corrosion/irritation: No data available concerning skin-irritating effects.

Serious eye damage/irritation: No data available concerning irritating effects.

Respiratory/Skin sensitization

Assessment of sensitization:

The chemical structure does not suggest a sensitizing effect. The substance is gaseous at room temperature and pressure. Testing for this particular endpoint is technically not feasible and/or this endpoint does not represent a relevant exposure scenario.

Experimental/calculated data:

No data available.

Germ cell mutagenicity

Assessment of mutagenicity:

Based on available data, the classification criteria are not met. The chemical structure does not suggest a specific alert for such an effect.

Carcinogenicity

Assessment of carcinogenicity:

Based on available data, the classification criteria are not met. The chemical structure does not suggest a specific alert for such an effect.

Reproductive toxicity

Assessment of reproduction toxicity:

Based on available data, the classification criteria are not met. The chemical structure does not suggest a specific alert for such an effect.

Developmental toxicity

Assessment of teratogenicity:

Based on available data, the classification criteria are not met. The chemical structure does not suggest a specific alert for such an effect.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
not applicable

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
Based on available data, the classification criteria are not met. The substance is inert.

Aspiration hazard

not applicable

Other relevant toxicity information

The substance is a gas that has virtually no physiologic effect.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
At the present state of knowledge, no negative ecological effects are expected.
Due to the product characteristics the test is impossible.

Toxicity to fish:
not applicable

Aquatic invertebrates:
not applicable

Aquatic plants:
not applicable

Microorganisms/Effect on activated sludge:
not applicable

Chronic toxicity to fish:
not applicable

Chronic toxicity to aquatic invertebrates:
not applicable

Assessment of terrestrial toxicity:
No data available concerning terrestrial toxicity.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):
Not applicable for inorganic substances.

Elimination information:
Study does not need to be conducted.

Assessment of stability in water:

According to structural properties, hydrolysis is not expected/probable.

Information on Stability in Water (Hydrolysis):

Study does not need to be conducted.

Bioaccumulative potential

Assessment bioaccumulation potential:

No data available.

Bioaccumulation potential:

Study does not need to be conducted.

Mobility in soil

Assessment transport between environmental compartments:

Volatility: The substance will rapidly evaporate into the atmosphere from the water surface.

Adsorption in soil: Adsorption to solid soil phase is not expected.

Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): PBT assessment does not apply. Not applicable for inorganic substances.

Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Additional information

Other ecotoxicological advice:

The material has no harmful effect on the environment.

13. Disposal Considerations

Waste treatment methods

Dispose of in accordance with national, state and local regulations.

Contaminated packaging:

Disposal must be made according to official regulations.

14. Transport Information

Land transport

ADR

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UN number or ID number: UN1951
UN proper shipping name: ARGON, REFRIGERATED LIQUID

Transport hazard class(es): 2.2
Packing group: Not applicable
Environmental hazards: no
Special precautions for user: Tunnel code: C/E

RID

UN number or ID number: UN1951
UN proper shipping name: ARGON, REFRIGERATED LIQUID

Transport hazard class(es): 2.2, 13
Packing group: Not applicable
Environmental hazards: no
Special precautions for user: Shunting label: 13

Inland waterway transport**ADN**

UN number or ID number: UN1951
UN proper shipping name: ARGON, REFRIGERATED LIQUID

Transport hazard class(es): 2.2
Packing group: Not applicable
Environmental hazards: no
Special precautions for user: None known

Transport in inland waterway vessel

Not evaluated

Sea transport**IMDG**

UN number or ID number: UN 1951
UN proper shipping name: ARGON, REFRIGERATED LIQUID

Transport hazard class(es): 2.2
Packing group: Not applicable
Environmental hazards: no
Marine pollutant: NO
Special precautions for user: EmS: F-C; S-V

Air transport

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IATA/ICAO

UN number or ID number: UN 1951

UN proper shipping name: ARGON, REFRIGERATED LIQUID

Transport hazard class(es): 2.2

Packing group: Not applicable

Environmental hazards: No Mark as dangerous for the environment is needed

Special precautions for user: None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:
Press. Gas Gases under pressure

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Vertical lines in the left hand margin indicate an amendment from the previous version.