

MSDS

Material Safety Datasheets



Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

Argon IG-01

Version number: 2.0
Replaces version of: 2014-08-25 (1)

Revision: 2017-02-14
First version: 2014-08-25

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

1.1 Product identifier

Trade name	<u>Argon IG-01</u>
EC number	231-147-0
CAS number	7440-37-1

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

Relevant identified uses	Fire extinguishing agent
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1.3 Details of the supplier of the safety data sheet

Minimax GmbH & Co.KG Industriestrasse 10/12 23840 Bad Oldesloe Germany	Telephone: +49 (0) 4531 - 803 0 Telefax: +49 (0) 4531 - 803 248 Website: www.minimax.de
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National contact

National contact	e-Mail
MV Global R&D - Technical Product Management - Inert Gas / CO2-based products	ClaessenT@minimax.de

e-mail (competent person) sdb@csb-online.de

Please do not use this e-mail adress to ask for the latest safety data sheet. For this purpose contact Minimax GmbH & Co.KG.

1.4 Emergency telephone number

Emergency information service	Consultank GmbH +49 (0) 178 433 7434
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Poison centre		
Country	Name	Telephone
Germany	Giftinformationszentrum - Nord Göttingen	+49 551 19240

As above or next toxicological information centre.

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Classification acc. to GHS				
Section	Hazard class	Category	Hazard class and category	Hazard statement
2.5	gases under pressure	C	Press. Gas C	H280

for full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

May displace oxygen and cause rapid suffocation.

Victim may not be aware of asphyxiation.

Contains gas under pressure; may explode if heated.

Additional information

According to the results of its assessment, this substance is not a PBT or a vPvB.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word warning

Pictograms

GHS04



Hazard statements

H280 Contains gas under pressure; may explode if heated.

Precautionary statements

P410 Protect from sunlight.

2.3 Other hazards

There is no additional information.

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

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SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	argon
Identifiers	
CAS No	7440-37-1
EC No	231-147-0
Molecular formula	Ar
Molar mass	39.95 g/mol

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

In all cases of doubt, or when symptoms persist, seek medical advice.

Following inhalation

Provide fresh air.

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

Mouth to mouth resuscitation should be avoided. Use alternative methods, preferably with oxygen or compressed air driven apparatus.

Following skin contact

Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.

Following eye contact

Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.

Following ingestion

Get medical advice/attention if you feel unwell.

Notes for the doctor

none

4.2 Most important symptoms and effects, both acute and delayed

Breathing difficulties.

Unconsciousness.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products: Section 10.

Contact with the product can cause burns and/or frostbite.

Contains gas under pressure; may explode if heated.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Special protective equipment for firefighters

use suitable breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

Ventilate affected area.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

6.2 Environmental precautions

not required

6.3 Methods and material for containment and cleaning up

Advices on how to clean up a spill

Not applicable.

Other information relating to spills and releases

Ventilate affected area.

6.4 Reference to other sections

Personal protective equipment: see section 8.

Incompatible materials: see section 10.

Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation.

Specific notes/details

None.

Measures to protect the environment

Refer to manufacturer/supplier for information on recovery/recycling.

Advice on general occupational hygiene

Do not eat, drink and smoke in work areas.

7.2 Conditions for safe storage, including any incompatibilities

Flammability hazards

None.

Incompatible substances or mixtures

Incompatible materials: see section 10.

Protect against external exposure, such as

heat

Consideration of other advice

Keep away from food, drink and animal feedingstuffs.

Ventilation requirements

Provision of sufficient ventilation.

Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

No data available.

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

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Individual protection measures (personal protective equipment)

Eye/face protection

Not required.

Hand protection

Wear suitable gloves.

Protect against external exposure, such as Cold.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Self-contained breathing apparatus (EN 133).

Environmental exposure controls

Use appropriate container to avoid environmental contamination.

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	gaseous
Form	compressed
Colour	colourless
Odour	of citrus fruits (odorant)
Odour threshold	these information are not available

Other safety parameters

pH (value)	not relevant
Melting point/freezing point	-189.2 °C
Initial boiling point and boiling range	-185.9 °C
Flash point	not applicable
Evaporation rate	these information are not available
Flammability (solid, gas)	non-combustible

Explosive limits

Lower explosion limit (LEL)	not applicable
Upper explosion limit (UEL)	not applicable
Vapour pressure	these information are not available
Density	0.001784 g/cm ³ at 0 °C
Vapour density	these information are not available

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Relative density	1.38 (air = 1)
Solubility(ies)	
Water solubility	67 mg/l at 20 °C
Partition coefficient	
n-octanol/water (log KOW)	these information are not available
Auto-ignition temperature	these information are not available
Relative self-ignition temperature for solids	not relevant (Gaseous)
Decomposition temperature	these information are not available
Viscosity	
Kinematic viscosity	not relevant (gaseous)
Dynamic viscosity	not relevant (gaseous)
Explosive properties	not explosive
Oxidising properties	shall not be classified as oxidising

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

Gas under pressure.

If heated:

danger of explosion, gas under pressure, danger of bursting container

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Contains gas under pressure; may explode if heated.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

If not otherwise specified the classification is based on:

Animal studies; Evidence from any other toxicity tests; Expert judgement (weight of evidence determination).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Skin corrosion/irritation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Serious eye damage/eye irritation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory or skin sensitisation

Skin sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Respiratory sensitisation

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Germ cell mutagenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Carcinogenicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Reproductive toxicity

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

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Specific target organ toxicity - single exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Specific target organ toxicity - repeated exposure

Classification could not be established because:

Data are lacking, inconclusive, or conclusive but not sufficient for classification.

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

If inhaled:

asphyxiant gas, may displace oxygen and cause rapid suffocation

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity (acute)

No data available.

Aquatic toxicity (chronic)

No data available.

12.2 Persistence and degradability

Biodegradation

The study does not need to be conducted because the substance is inorganic.

Persistence

The study does not need to be conducted because the substance is inorganic.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Other adverse effects

Data are not available.

Endocrine disrupting potential

Not listed.

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Remarks

Water hazard class - WHC (Wassergefährdungsklasse): nwg (Non-hazardous to water)

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Refer to manufacturer/supplier for information on recovery/recycling.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Refer to manufacturer/supplier for information on recovery/recycling.

Remarks

Please consider the relevant national or regional provisions.

SECTION 14: Transport information

14.1	UN number	1006
14.2	UN proper shipping name	ARGON, COMPRESSED
14.3	Transport hazard class(es)	
	Class	2.2
	Subsidiary risk(s)	2.2 (gas under pressure)
14.4	Packing group	not assigned to a packing group
14.5	Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations
14.6	Special precautions for user	Provisions for dangerous goods (ADR) should be complied within the premises.
14.7	Transport in bulk according to Annex II of MARPOL and the IBC Code	The cargo is not intended to be carried in bulk.
14.8	<u>Information for each of the UN Model Regulations</u>	
	Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)	
	UN number	1006
	Proper shipping name	UN1006, ARGON, COMPRESSED, 2.2, (E)
	Class	2
	Classification code	1A
	Danger label(s)	2.2

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Special provisions (SP)	378, 653, 662
Excepted quantities (EQ)	E1
Limited quantities (LQ)	120 ml
Transport category (TC)	3.
Tunnel restriction code (TRC)	E
Hazard identification No	20
Emergency Action Code	2T

International Maritime Dangerous Goods Code (IMDG)

UN number	1006
Proper shipping name	UN1006, ARGON, COMPRESSED, 2.2
Class	2.2
Danger label(s)	2.2



Special provisions (SP)	378
Excepted quantities (EQ)	E1
Limited quantities (LQ)	120 ml
EmS	F-C, S-V
Stowage category	A

International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	1006
Proper shipping name	UN1006, Argon, compressed, 2.2
Class	2.2
Danger label(s)	2.2



Special provisions (SP)	A69, A202
Excepted quantities (EQ)	E1

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SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

not listed

List of substances subject to authorisation (REACH, Annex XIV)

not listed

Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II

not listed

Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)

not listed

Regulation 98/2013/EU on the marketing and use of explosives precursors

not listed

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Indication of changes: Section 1

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances

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Abbr.	Descriptions of used abbreviations
EmS	Emergency Schedule
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN).

International Maritime Dangerous Goods Code (IMDG).

Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H280	Contains gas under pressure; may explode if heated.

Responsible for the safety data sheet

C.S.B. GmbH

Düsseldorfer Str. 113

47809 Krefeld

Telephone: +49 (0) 2151 - 652086 - 0

Telefax: +49 (0) 2151 - 652086 - 9

e-Mail: info@csb-online.de

Website: www.csb-online.de

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