



ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

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

### 1.1 Product identifier

Product Name	GAS MIXTURE (HYDROGEN-ARGON)
Synonym(s)	HYDROGEN-ARGON
CAS No.	Mixture.
EC No.	Mixture.
REACH Registration No.	Mixture.

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

Identified Use(s)	Industrial gas.
Uses Advised Against	Not known.

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

Company Identification	Hudson Technologies Company
Address	PO Box 1541 One Blue Hill Plaza Pearl River, New York USA
Postal code	10965
Telephone	+1 (800) 953 2244
Fax	+1 (845) 512 6070
E-mail	<a href="mailto:information@hudsontech.com">information@hudsontech.com</a>

### 1.4 Emergency telephone number

Company	+1 (800) 501 4376
---------	-------------------

**2. SECTION 2: HAZARDS IDENTIFICATION**

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008 (CLP) Flam. Gas 1: Extremely flammable gas.  
Gases under pressure; Press. Gas; Compressed gas.

2.2 Label elements

Product Name According to Regulation (EC) No. 1272/2008 (CLP)  
GAS MIXTURE (HYDROGEN-ARGON)

Hazard Pictogram(s)



GHS02



GHS04

Signal Word(s)

Danger.

Hazard Statement(s)

H220: Extremely flammable gas.  
H280: Contains gas under pressure; may explode if heated.

Precautionary Statement(s)

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
P381: Eliminate all ignition sources if safe to do so.  
P410+P403: Protect from sunlight. Store in a well-ventilated place.

2.3 Other hazards

Can form explosive mixture with air.  
May cause asphyxiation when concentrations are sufficient to reduce oxygen below safe breathing levels.

2.4 Additional Information

This SDS is available in languages other than English.

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

HAZARDOUS INGREDIENT(S)	CAS No.	EC No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Argon	7440-37-1	231-147-0	95	Press. Gas, Compressed gas; H280	GHS04
Hydrogen	1333-74-0	215-605-7	5	Flam. Gas 1; H220 Press. Gas; Compressed gas; H280	GHS02 GHS04

**4. SECTION 4: FIRST AID MEASURES**

4.1 Description of first aid measures

**Inhalation** If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if necessary. If breathing has stopped, apply artificial respiration.

**Skin Contact** Wash skin with water.

**Eye Contact** Flush eyes with water for at least 15 minutes.

**Ingestion** Unlikely route of exposure.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation: High concentrations: Loss of coordination, Unconsciousness.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

**5. SECTION 5: FIREFIGHTING MEASURES**

Extremely flammable gas. Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

5.1 Extinguishing media

**Suitable Extinguishing media** Extinguish preferably with foam, dry chemical or waterspray or fog.

**Unsuitable extinguishing media** None known.

5.2 Special hazards arising from the substance or mixture

Contains gas under pressure; may explode if heated. Can form explosive mixture with air. Hydrogen burns with an invisible flame. Spontaneous/explosive re-ignition may occur.

### 5.3 Advice for fire-fighters

Evacuate area and fight fire remotely due to the risk of explosion. Eliminate all ignition sources if safe to do so. Fire fighters should wear complete protective clothing including self-contained breathing apparatus. If it is safe to do so, containers should be removed from fire area because they are likely to rupture under fire conditions. Keep containers cool by spraying with water if exposed to fire.

## 6. SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Evacuate area. Eliminate sources of ignition. Ensure adequate ventilation. Avoid breathing gas. Wear suitable respiratory protection.

### 6.2 Environmental precautions

Do not allow to enter drains, sewers or watercourses.

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

Stop leak if safe to do so. Allow small spillages to evaporate provided there is adequate ventilation. Ventilate area.

### 6.4 Reference to other sections

See Also Section 8, 13.

## 7. SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Provide adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Use non-sparking hand tools and explosion proof electrical equipment. Avoid breathing gas. Wear suitable respiratory protection. Do not drag, roll, slide or drop cylinders. Use a suitable hand truck design for cylinder movement. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. Never insert an object into valve cap openings. Doing so may damage valve causing a leak to occur. Secure cylinders in an upright position at all times, close all valves when not in use. Keep closed even when empty. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

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

Storage temperature < 52°C (125 °F)

Storage life Stable under normal conditions.

Incompatible materials Air, Oxidising agents.

7.3 Specific end use(s)

Industrial gas.

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

8.1 Control parameters

Occupational Exposure Limits None assigned.

8.2 Exposure controls

Appropriate engineering controls Ensure adequate ventilation.

Personal protection equipment



Eye Protection

Wear suitable eye/face protection.



Skin protection

Wear suitable gloves.



Respiratory protection

Wear suitable respiratory protective equipment if exposure to high levels of material is likely.

Thermal hazards Not applicable.

Environmental Exposure Controls Do not allow to enter drains, sewers or watercourses.

**9. SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

9.1 Information on basic physical and chemical properties

Appearance Gas.

Colour: Colourless.

Odour Odourless.

Odour threshold Not established.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range -186.33 °C (-303 °F)

Critical Temperature	Not available.
Flash Point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Extremely flammable gas.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	2.1193 (Water = 1)
Relative vapour density	1.32 (Air =1)
Solubility(ies)	Solubility (Water): Not available, considered to have low solubility. Solubility (Other): Not available.
Partition coefficient: n-octanol/water	Not applicable.
Auto-ignition temperature	Not available.
Decomposition Temperature (°C)	Not available.
Viscosity	Not applicable.
Explosive properties	Can form explosive mixture with air.
Oxidising properties	Not oxidising.
9.2 Other information	Not known.

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

10.1 Reactivity	Stable under normal conditions.
10.2 Chemical Stability	Stable under normal conditions.
10.3 Possibility of hazardous reactions	Can form explosive mixture with air.
10.4 Conditions to avoid	Keep away from heat and sources of ignition.
10.5 Incompatible materials	Air, Oxidising agents.
10.6 Hazardous decomposition product(s)	No hazardous decomposition products known.

**11. SECTION 11: TOXICOLOGICAL INFORMATION**

11.1 Information on toxicological effects

Acute toxicity - Ingestion	Low acute toxicity.
Acute toxicity - Skin Contact	Low acute toxicity.
Acute toxicity - Inhalation	Low acute toxicity.
Skin corrosion/irritation	Non-irritant.
Serious eye damage/irritation	Non-irritant.
Skin sensitisation data	Not classified.
Respiratory sensitisation data	Not classified.
Germ cell mutagenicity	There is no evidence of mutagenic potential.
Carcinogenicity	No evidence of carcinogenicity.
Reproductive toxicity	Not classified.
Lactation	Not classified.
STOT - single exposure	None anticipated.
STOT - repeated exposure	None anticipated.
Aspiration hazard	Not classified.

11.2 Other information

Not known.

**12. SECTION 12: ECOLOGICAL INFORMATION**

12.1 Toxicity

Toxicity - Aquatic invertebrates	Low toxicity to invertebrates.
Toxicity - Fish	Low toxicity to fish.
Toxicity - Algae	Low toxicity to algae.
Toxicity - Sediment	Not classified.
Compartment	
Toxicity - Terrestrial	Not classified.
Compartment	

12.2 Persistence and Degradation

No adverse ecological effects are expected.

12.3 Bioaccumulative potential

No adverse ecological effects are expected.

12.4 Mobility in soil

Not applicable.

12.5 Results of PBT and vPvB assessment

Not classified as PBT or vPvB.

12.6 Other adverse effects

None anticipated.

**13. SECTION 13: DISPOSAL CONSIDERATIONS**

13.1 Waste treatment methods

Containers must not be punctured or destroyed by burning, even when empty. Refer to manufacturer/supplier for information on recovery/recycling.

13.2 Additional Information

Disposal should be in accordance with local, state or national legislation.

**14. SECTION 14: TRANSPORT INFORMATION**

14.1 UN number

UN No. 1954

14.2 UN proper shipping name

UN proper shipping name COMPRESSED GAS, FLAMMABLE, N.O.S.

14.3 Transport hazard class(es)

ADR/RID Class 2.1  
 IMDG Class 2.1  
 IMDG EMS Not available

ICAO/IATA

Excepted Quantities E0  
 Passenger and Cargo Aircraft Forbidden for transport by air.

Limited Quantities Packing

Instructions  
 Passenger and Cargo Aircraft Forbidden for transport by air.

Limited Quantities Max net Qty

Passenger and Cargo Aircraft Forbidden for transport by air.  
 Max net Qty

Passenger and Cargo Aircraft Forbidden for transport by air.  
 Max net Qty

Special Provisions A1  
 Emergency Response 10L

Guidebook (ERG) Code

ADR Classification Code 1F  
 ADR HIN 23



ADR Transport Category 2  
 Tunnel Restriction Code B/D  
 Emergency Action Code 2SE  
 Advice on Additional Personal Protection (APP) Not applicable  
 14.4 Packing group  
 Packing group Not applicable  
 Labels 2.1



Special Provisions 274 660  
 Limited Quantities 0  
 Excepted Quantities E0  
 Mixed Packing Instructions for Packages P200  
 Special Packing Provisions for Packages Not applicable  
 Mixed Packing Instructions for Packages MP9

14.5 Environmental hazards  
 Environmental hazards Not classified as a Marine Pollutant.

14.6 Special precautions for user  
 Special precautions for user Not known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
 Packing Instructions for Portable (M)

Tanks  
 Special Provisions for Portable Tanks Not applicable  
 Tank Code for Tanks CxBN(M)  
 Special Provisions for Tanks TA4 TT9  
 Vehicle for Tank Carriage FL  
 Special Provisions for Carriage - Packages Not applicable  
 Special Provisions for Carriage - Bulk Not applicable

Special Provisions for Carriage - CV9 CV10 CV36

Loading, Unloading and Handling

Special Provisions for Carriage - S2 S20

Operation

## 15. SECTION 15: REGULATORY INFORMATION

### 15.1 European Regulations

Authorisations and/or Restrictions On Use

Candidate List of Substances of Very High Concern for

Authorisation

Authorisation

REACH: ANNEX XIV list of substances subject to

authorisation

authorisation

REACH: Annex XVII Restrictions on the manufacture, placing on

the market and use of certain

dangerous substances, mixtures

and articles

and articles

Community Rolling Action Plan (CoRAP)

(CoRAP)

Regulation (EC) N° 850/2004 of the European Parliament and of

the Council on persistent organic

pollutants

pollutants

Regulation (EC) N° 2037/2000 on substances that deplete the

ozone layer

ozone layer

Regulation (EU) N° 649/2012 of the European Parliament and of

the Council concerning the export

and import of hazardous

chemicals

chemicals

### 15.2 National regulations

Other

Not known.

**16. SECTION 16: OTHER INFORMATION**

The following sections contain 1-16.  
revisions or new statements:

LEGEND:

Hazard Pictogram(s)



GHS02



GHS04

Hazard Statement(s)

H220: Extremely flammable gas.

H280: Contains gas under pressure; may explode if heated.

Precautionary Statement(s)

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P377: Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381: Eliminate all ignition sources if safe to do so.

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

Additional Information required by Federal Standard 313 Rev. E:

Contract or Solicitation Number: SPE4A6-16-D-0226

Prime Contractor: Hudson Technologies, Inc.

Prime Contractor CAGE: 7DSQ0

National Stock Number (NSN): 6830015227666

Specification Reference:

**Disclaimers**

Information contained in this publication or as otherwise supplied to Users is believed to be accurate and is given in good faith, but it is for the Users to satisfy themselves of the suitability of the product for their own particular purpose. Hudson Technologies Company gives no warranty as to the fitness of the product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that exclusion is prevented by law. Hudson Technologies Company accepts no liability for loss or damage (other than that arising from death or personal injury caused by defective product, if proved), resulting from reliance on this information. Freedom under Patents, Copyright and Designs cannot be assumed.