



# Safety Data Sheet

## Argon/Hydrogen

Central McGowan  
 123 Roosevelt Road, St. Cloud, MN, 56301  
 800-569-1322

### Section 1: Product and Company Identification

**Central McGowan**  
 123 Roosevelt Road, St. Cloud, MN, 56301

Product Code: **Argon/Hydrogen**

**Synonyms:** A/H K 65/35

**Recommended Use:**

**Usage Restrictions:**

### Section 2: Hazards Identification



**Danger**

Hazard Classification:	Flammable (Category 1) Gases Under Pressure
Hazard Statements:	Extremely flammable gas Contains gas under pressure; may explode if heated
Precautionary Statements Prevention:	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Response:	Eliminate all ignition sources if safe to do so. Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
Storage:	Protect from sunlight. Store in well-ventilated place.

### Section 3: Composition/Information on Ingredients

	CAS #	Concentration
<b>Argon</b>	7440-37-1	65%
<b>Hydrogen</b>	1333-74-0	35%

	Chemical Substance	Chemical Family	Trade Names
<b>Argon</b>	ARGON, COMPRESSED	Inorganic gases	ARGON; UN 1006; AR
<b>Hydrogen</b>	HYDROGEN	Inorganic gases	HYDROGEN GAS; HYDROGEN COMPRESSED; HYDROGEN (H2); DIHYDROGEN; UN 1049; H2

## Section 4: First Aid Measures

	Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
<b>Argon</b>	Not applicable route of exposure	Flush eyes with plenty of water.	Not applicable route of exposure	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.
<b>Hydrogen</b>	Wash exposed skin with soap and water.	Flush eyes with plenty of water.	If a large amount is swallowed, get medical attention.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.

## Section 5: Fire Fighting Measures

	Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
<b>Argon</b>	Non-flammable gas	Not applicable	<ul style="list-style-type: none"> <li>▪ N/a</li> <li>▪ N/A</li> </ul>
<b>Hydrogen</b>	Carbon dioxide, regular dry chemical Large fires: Flood with fine water spray.	None known	<ul style="list-style-type: none"> <li>▪ Any self-contained breathing apparatus with a full facepiece.</li> <li>▪ Any self-contained breathing apparatus with a full facepiece.</li> </ul>

## Section 6: Accidental Release Measures

	Personal Precautions	Environmental Precautions	Methods for Containment
<b>Argon</b>	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.	None known.	Stop leak if possible without personal risk.
<b>Hydrogen</b>	Keep unnecessary people away, isolate hazard area and deny entry. Do not touch spilled material. Ventilate closed spaces before entering.	Avoid heat, flames, sparks and other sources of ignition.	Reduce vapors with water spray. Remove sources of ignition.

	Methods for Cleanup	Other Information
<b>Argon</b>	Leaks may be detected by a soapy-water solution.	
<b>Hydrogen</b>	Stop leak if possible without personal risk.	None

## Section 7: Handling and Storage

	Handling	Storage
<b>Argon</b>	Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Keep separated from incompatible substances.	Avoid using in confined spaces.
<b>Hydrogen</b>	Store and handle in accordance with all current regulations and standards. Grounding and bonding required. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.	Keep separated from incompatible substances.

## Section 8: Exposure Controls/Personal Protection

	Exposure Guidelines
<b>Argon</b>	ARGON, COMPRESSED: ARGON: ACGIH (simple asphyxiant)
<b>Hydrogen</b>	HYDROGEN: ACGIH (simple asphyxiant)

## Engineering Controls

Handle only in fully enclosed systems.

	Eye Protection	Skin Protection	Respiratory Protection
Argon	Eye protection not required, but recommended.	Protective clothing is not required. Wear appropriate chemical resistant gloves.	N/a
Hydrogen	Eye protection not required, but recommended.	Protective clothing is not required. Wear appropriate chemical resistant gloves.	Any self-contained breathing apparatus with a full facepiece.

## General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

## Section 9: Physical and Chemical Properties

	Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor
Argon	Gas	Colorless	Colorless	N/A	Gas	Odorless
Hydrogen	Gas	Colorless	Colorless	N/A	Gas	Odorless

	Taste	Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits
Argon	Tasteless	Not flammable			Nonflammable	Nonflammable
Hydrogen	Tasteless	Flammable gas (burns at all ambient temperatures)	Not available	Not available	752 F (400 C)	0.75

	Lower Explosive Limits	Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity
Argon	Nonflammable	-303 F (-186 C)	-308 F (-189 C)	500 mmHg @ -190 C	1.38 (Air=1)	Not applicable
Hydrogen	0.04	-423 F (-253 C)	-434 F (-259 C)	760 mmHg @ -253 C	0.07 (Air=1)	Not applicable

	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity	Molecular Weight
Argon	3.36% @ 20 C	Not applicable	Not available	Not applicable	0.0225 cP @ 25 C	39.948
Hydrogen	1.82% @ 20 C	Not applicable	Not available	Not applicable	0.008957 cP @ 26.8 C	2

	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
Argon	AR	1.784 g/L @ 0 C	Not available	100%	Not applicable	Soluble : Organic solvents
Hydrogen	H2	0.08987 g/L @ 0 C	Not available	Not available	Not applicable	Soluble : Not available

## Section 10: Stability and Reactivity

	Stability	Conditions to Avoid	Incompatible Materials
Argon	Stable at normal temperatures and pressure.	Protect from physical damage and heat. Containers may rupture or explode if exposed to heat.	No data available.

	Stability	Conditions to Avoid	Incompatible Materials
Hydrogen	Stable at normal temperatures and pressure.	Avoid heat, flames, sparks and other sources of ignition. Minimize contact with material. Containers may rupture or explode if exposed to heat.	Metals, oxidizing materials, metal oxides, combustible materials, halogens, metal salts, halo carbons, nitrogen trifluoride, oxygen difluoride, magnesium and calcium carbonate, sodium, potassium

	Hazardous Decomposition Products	Possibility of Hazardous Reactions
Argon	No data available.	Will not polymerize.
Hydrogen	Miscellaneous decomposition products	Will not polymerize.

## Section 11: Toxicology Information

### Acute Effects

	Oral LD50	Dermal LD50	Inhalation
Argon	Not established	Not established	Nausea, vomiting, difficulty breathing, irregular heartbeat, headache, dizziness, disorientation, mood swings, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma
Hydrogen	Not available	Not available	Nausea, vomiting, difficulty breathing, irregular heartbeat, headache, fatigue, dizziness, disorientation, mood swings, tingling sensation, loss of coordination, convulsions, unconsciousness, coma

	Eye Irritation	Skin Irritation	Sensitization
Argon	No information on significant adverse effects	No information on significant adverse effects	
Hydrogen	Not irritating	Not irritating	Difficulty breathing

### Chronic Effects

	Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Argon	Not established	Not established	Not established	No data
Hydrogen	Not available	Not available	Not available	No data

## Section 12: Ecological Information

### Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Argon	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Not available	Not available	Not available
Hydrogen	Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Not available	Not available	Not available

## Section 13: Disposal Considerations

Argon	Dispose in accordance with all applicable regulations.
Hydrogen	Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001.

## Section 14: Transportation Information

### U.S. DOT 49 CFR 172.101

#### DOT Information For This Mixture

Shipping Name	Compressed gas, flammable, n.o.s. (Argon, Hydrogen)
UN Number	UN1954
Hazard Class	2.1
Hazard Information	FLAMMABLE GAS

#### Individual Component Information

	Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Argon	Argon, compressed	UN1006	2.2	Not applicable	2.2	75 kg or L	150 kg	N/A
Hydrogen	Hydrogen, compressed	UN1049	2.1	Not applicable	2.1	Forbidden	150 kg	None

#### Canadian Transportation of Dangerous Goods

	Shipping Name	UN Number	Class	Packing Group / Risk Group
Argon	Argon, compressed	UN1006	2.2	Not applicable
Hydrogen	Hydrogen, compressed	UN1049	2.1	Not applicable

## Section 15: Regulatory Information

### U.S. Regulations

	CERCLA Sections	SARA 355.30	SARA 355.40
Argon	Not regulated.	Not regulated.	Not regulated.
Hydrogen	Not regulated.	Not regulated.	Not regulated.

### SARA 370.21

	Acute	Chronic	Fire	Reactive	Sudden Release
Argon	Yes	No	No	No	Yes
Hydrogen	Yes	No	Yes	No	Yes

### SARA 372.65

Argon	Not regulated.
Hydrogen	Not regulated.

### OSHA Process Safety

Argon	Not regulated.
Hydrogen	Not regulated.

### State Regulations

	CA Proposition 65
Argon	Not regulated.
Hydrogen	Not regulated.

### Canadian Regulations

	WHMIS Classification
Argon	A
Hydrogen	A, B1.

### National Inventory Status

	US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Argon	Listed on inventory.	Not listed.	Listed on inventory.

Hydrogen	Listed on inventory.	Not listed.	Listed on inventory.
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**Section 16: Other Information**

	NFPA Rating
Argon	HEALTH=0 FIRE=0 REACTIVITY=0 SPECIAL=SA
Hydrogen	HEALTH=0 FIRE=4 REACTIVITY=0

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard