



# Safety Data Sheet

## Compressed Gas, N.O.S. (Nitrogen, Hydrogen)

[www.arc3gases.com](http://www.arc3gases.com)

### Section 1: Product and Company Identification

#### Arc3 Gases

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Dunn, NC 28335  
phone: (910) 892-4016  
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Emergency contact: INFOTRAC 1-800-535-5053

Product Code: Compressed Gas, N.O.S. (Nitrogen, Hydrogen)

**Synonyms:** Nitrogen Balance, Hydrogen 5%  
**Recommended Use:** Not known  
**Usage Restrictions:** Not known

### Section 2: Hazards Identification



## Warning

#### Hazard Classification:

Gases Under Pressure

#### Hazard Statements:

Contains gas under pressure; may explode if heated

#### Precautionary Statements

#### Storage:

Protect from sunlight.  
Store in well-ventilated place.

## Section 3: Composition/Information on Ingredients

	CAS #	Concentration
Nitrogen	7727-37-9	Balance
Hydrogen	1333-74-0	5%

	Chemical Substance	Chemical Family	Trade Names
Nitrogen	NITROGEN, COMPRESSED GAS	inorganic, gas	DIATOMIC NITROGEN; DINITROGEN; NITROGEN; NITROGEN-14; NITROGEN GAS; UN 1066; N2
Hydrogen	HYDROGEN	inorganic, gas	HYDROGEN GAS; HYDROGEN COMPRESSED; HYDROGEN (H2); DIHYDROGEN; UN 1049; H2

## Section 4: First Aid Measures

	Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Nitrogen	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.
Hydrogen	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
Nitrogen	Non-flammable. Use suitable extinguishing media for surrounding fire. Cylinders may rupture or explode if exposed to heat.	Non-flammable	<ul style="list-style-type: none"> <li>Respiratory protection may be needed for frequent or heavy exposure.</li> </ul>
Hydrogen	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
Nitrogen	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.	No significant effects from contamination expected.	Stop leak if possible without personal risk.
Hydrogen	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
Nitrogen	N/A	N/A
Hydrogen	Stop leak if possible without personal risk.	None

## Section 7: Handling and Storage

	Handling	Storage
<b>Nitrogen</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.
<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>Nitrogen</b>	NITROGEN, COMPRESSED GAS: NITROGEN: ACGIH (simple asphyxiant)
<b>Hydrogen</b>	HYDROGEN: ACGIH (simple asphyxiant)

### Engineering Controls

Handle only in fully enclosed systems.

	Eye Protection	Skin Protection	Respiratory Protection
<b>Nitrogen</b>	Eye protection not required, but recommended.	Protective clothing is not required.	Respiratory protection may be needed for frequent or heavy exposure.
<b>Hydrogen</b>	Eye protection not required, but recommended.	Protective clothing is not required.	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	Taste
<b>Nitrogen</b>	Gas	Clear	Colorless	N/A	Gas	Odorless	Tasteless
<b>Hydrogen</b>	Gas	Colorless	Colorless	N/A	Gas	Odorless	Tasteless

	Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
<b>Nitrogen</b>	Not flammable	Not available	Not available	Nonflammable	Nonflammable	Nonflammable
<b>Hydrogen</b>	Flammable gas (burns at all ambient temperatures)	Not available	Not available	752 F (400 C)	0.75	0.04

	Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
<b>Nitrogen</b>	-321 F (-196 C)	-346 F (-210 C)	760 mmHg @ -196 C	0.967 (Air=1)	Not applicable	1.6% @ 20 C	Not applicable	Not available	Not applicable	0.01787 cP @ 27 C
<b>Hydrogen</b>	-423 F (-253 C)	-434 F (-259 C)	760 mmHg @ -253 C	0.07 (Air=1)	Not applicable	1.82% @ 20 C	Not applicable	Not available	Not applicable	0.008957 cP @ 26.8 C

	Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
<b>Nitrogen</b>	28.0134	N2	1.2506 g/L	Not available	100%	1	Soluble: Liquid ammonia
<b>Hydrogen</b>	2	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
<b>Nitrogen</b>	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Metals, oxidizing materials
<b>Hydrogen</b>	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	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
<b>Nitrogen</b>	Oxides of nitrogen	Will not polymerize.
<b>Hydrogen</b>	Miscellaneous decomposition products	Will not polymerize.

## Section 11: Toxicology Information

### Acute Effects

	Oral LD50	Dermal LD50	Inhalation
<b>Nitrogen</b>	Not available	Not available	Nausea, vomiting, difficulty breathing, headache, drowsiness, dizziness, tingling sensation, loss of coordination, convulsions, coma
<b>Hydrogen</b>	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
<b>Nitrogen</b>	Contact with rapidly expanding gas may cause burns or frostbite	No information on significant adverse effects	Difficulty breathing
<b>Hydrogen</b>	Not irritating	Not irritating	Difficulty breathing

### Chronic Effects

	Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
<b>Nitrogen</b>	Not hazardous	Not available	Not available	No data
<b>Hydrogen</b>	Not available	Not available	Not available	No data

## Section 12: Ecological Information

### Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
<b>Nitrogen</b>	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
<b>Hydrogen</b>	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

<b>Nitrogen</b>	Dispose in accordance with all applicable regulations.
<b>Hydrogen</b>	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, n.o.s. (Nitrogen, Hydrogen)
UN Number	UN1956
Hazard Class	2.2
Hazard Information	Non-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
Nitrogen	Nitrogen, compressed	UN1066	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
Nitrogen	Nitrogen, compressed	UN1066	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
Nitrogen	Not regulated.	Not regulated.	Not regulated.
Hydrogen	Not regulated.	Not regulated.	Not regulated.

### SARA 370.21

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

### SARA 372.65

Nitrogen	Not regulated.
Hydrogen	Not regulated.

### OSHA Process Safety

Nitrogen	Not regulated.
Hydrogen	Not regulated.

### State Regulations

	CA Proposition 65
Nitrogen	Not regulated.
Hydrogen	Not regulated.

### Canadian Regulations

	WHMIS Classification
Nitrogen	A
Hydrogen	A, B1.

### National Inventory Status

	US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
<b>Nitrogen</b>	Listed on inventory.	Not listed.	Listed on inventory.
<b>Hydrogen</b>	Listed on inventory.	Not listed.	Listed on inventory.

## Section 16: Other Information

	NFPA Rating
<b>Nitrogen</b>	HEALTH=1 FIRE=0 REACTIVITY=0
<b>Hydrogen</b>	HEALTH=0 FIRE=4 REACTIVITY=0

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