

Safety Data Sheet 2704

Section 1: Product and Company Identification

Absolute Accuracy 4591 S Wayside Dr Houston, TX 77087 (832) 571-2387

Product Code: 2704 Synonyms: n/a Recommended Use: calibration gas Usage Restrictions: industrial calibration gas only

Section 2: Hazards Identification



Hazard Classification: Eye Effects (Category 1) Flammable (Category 1) Gases Under Pressure Specific target organ toxicity (Single Exposure) (Category 3)

Hazard Statements: Causes serious eye damage Contains gas under pressure; may explode if heated Extremely flammable gas May cause respiratory irritation;

Precautionary Statements

Prevention: Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only outdoors or in a well-ventilated area. Wear eye protection/face protection. Avoid breathing dust/fume/gas/mist/ vapors/spray. [In case of inadequate ventilation] wear respiratory protection.

Response:

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled: Remove person to fresh air and keep comfortable for breathing. Eliminate all ignition sources if safe to do so. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Call a poison center or doctor if you feel unwell.

Storage: Store locked up.

Disposal:

Dispose of contents and/or container in accordance with applicable regulations.

Section 3: Composition/Information on Ingredients

| | | CAS # | | Concentrat | ion |] |
|----------------------|---------------------|-----------------------|-------------------------|--------------|--|---|
| Argon | | 7440-37-1 | | % 4 | | |
| Methane | | 74-82-8 | | %8 | | 1 |
| Anhydrous A | Ammonia | 7664-41-7 | | % 10 | |] |
| Nitrogen | | 7727-37-9 | | % 24 | | |
| Hydrogen | Chemical Sul | stance ⁴⁻⁰ | Chemical Family | BALANCE | Trade Names | |
| Argon | ARGON, COMP | RESSED | Inorganic gases | | ARGON; UN 1006 | ; AR |
| Methane | METHANE, COM GAS | MPRESSED | Hydrocarbons, Aliphatic | c, Saturated | | RSH GAS; METHYL HYDRIDE; METHANE; UN 1971; R50; CH4 |
| Anhydrous Ammonia | AMMONIA, ANH | IYDROUS | Inorganic gases | | AMMONIA; SPIRI | IMONIA; AMMONIA GAS; T OF HARTSHORN; DROUS, LIQUIFIED; UN 1005; |
| Nitrogen | NITROGEN, CO GAS | MPRESSED | Inorganic gases | | | OGEN; DINITROGEN; POGEN-14; NITROGEN GAS; |
| Hydrogen | HYDROGEN | | Inorganic gases | | HYDROGEN GAS COMPRESSED; H DIHYDROGEN; U | YDROGEN (H2); |

Section 4: First Aid Measures

| | Skin Contact | Eye Contact | Ingestion | Inhalation | Note to Physicians |
|-------------|--|-------------------------------------|--|---|-------------------------------------|
| Argon | 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. |
| Methan e | 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. |

| | Skin Contact | Eye Contact | Ingestion | Inhalation | Note to Physicians |
|------------------------------|---|--|--|---|-------------------------------------|
| Anhydr ous Ammon ia | Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Thoroughly clean and dry contaminated clothing before reuse. Destroy contaminated shoes. | Immediately flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention. | Gas: Not a likely 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. Wear personal protective equipment if gas still present. | For inhalation, consider oxygen. |
| Nitroge n | 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. |
| Hydrog en | 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 |
|------------------------------|---|--|--|
| Argon | Non-flammable gas | Not applicable | ■ N/A ■ N/A |
| Methan e | Carbon dioxide, regular dry chemical Large fires: Use regular foam or flood with fine water spray. | Carbon monoxide, carbon dioxide, water | Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece. Respiratory protection may be needed for frequent or heavy exposure. Any self-contained breathing apparatus with a full facepiece. |
| Anhydr ous Ammon ia | Carbon dioxide, regular dry chemical Large fires: Use regular foam or flood with fine water spray. | Nitrogen dioxide, ammonium nitrate | Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply, with full-body encapsulating, chemical protective suit. Wear protective gear with respiratory support. |
| Nitroge n | Non-flammable. Use suitable extinguishing media for surrounding fire. Cylinders may rupture or explode if exposed to heat. | Non-flammable | Respiratory protection may be needed for frequent or heavy exposure. |
| Hydrog en | Carbon dioxide, regular dry chemical Large fires: Flood with fine water spray. | None known | Any self-contained breathing apparatus with a full facepiece. Any self-contained breathing apparatus with a full facepiece. |

Section 6: Accidental Release Measures

| | Personal Precautions | Environmental Precautions | Methods for Containment |
|------------------------------|--|---|--|
| Argon | 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. |
| Methan e | Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering. | Avoid heat, flames, sparks and other sources of ignition. | Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition. |
| Anhydr ous Ammoni a | Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Ventilate closed spaces before entering. Evacuation radius: 150 feet. | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. | Stop leak if possible without personal risk. Reduce vapors with water spray. Do not get water directly on material. Do not get water inside container. Trap spilled material at bottom in deep water pockets, excavated holding areas or within sand bag barriers. |
| Nitroge n | 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. |
| Hydrog en | 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 |
|-------------------|---|---|
| Argon | Leaks may be detected by a soapy-water solution. | |
| Methane | Not available | Not available |
| Anhydrous Ammonia | Small spills: Flood with water. Large spills: Dike for later disposal. Collect spilled material using mechanical equipment. Dike for later disposal. Add dilute acid. Absorb with sand or other non-combustible material. Collect runoff for disposal as potential hazardous waste. Do not direct water at source of leak of liquid ammonia. | Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA). |
| Nitrogen | N/A | N/A |
| Hydrogen | Stop leak if possible without personal risk. | None |

Section 7: Handling and Storage

| | Handling | Storage |
|-------------------|--|---|
| Argon | 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. |
| Methane | 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. |
| Anhydrous Ammonia | Store and use with adequate ventilation. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Store only where temperature will not exceed 125F (52C). Store full and empty cylinders separately. Use a first-in, first-out inventory system to prevent storing full cylinders for long periods. | Do not get liquid in eyes, on skin, or clothing. Protect cylinders from damage. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Open valve slowly. Close cylinder valve after each use; keep closed even when empty. If valve is hard to open, discontinue use and contact your supplier. |

| | Handling | Storage |
|----------|---|--|
| Nitrogen | 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. |
| Hydrogen | 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 |
|-------------------|---|
| Argon | ARGON, COMPRESSED: ARGON: ACGIH (simple asphyxiant) |
| Methane | METHANE, COMPRESSED GAS: ALIPHATIC HYDROCARBON GASES ALKANE (C1-C4): 1000 ppm ACGIH TWA METHANE: No occupational exposure limits established. ALIPHATIC HYDROCARBON GASES ALKANE (C1-C4): 1000 ppm ACGIH TWA |
| Anhydrous Ammonia | AMMONIA, ANHYDROUS: 50 ppm (35 mg/m3) OSHA TWA 35 ppm (27 mg/m3) OSHA STEL (vacated by 58 FR 35338, June 30, 1993) 25 ppm ACGIH TWA 35 ppm ACGIH STEL 25 ppm (18 mg/m3) NIOSH recommended TWA 10 hour(s) 35 ppm (27 mg/m3) NIOSH recommended STEL |
| Nitrogen | NITROGEN, COMPRESSED GAS: NITROGEN: ACGIH (simple asphyxiant) |
| Hydrogen | 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. | N/A |
| Methane | Eye protection not required, but recommended. | Protective clothing is not required. | Respiratory protection may be needed for frequent or heavy exposure. Any self- contained breathing apparatus with a full facepiece. |
| Anhydrous Ammonia | Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. | Wear appropriate chemical resistant clothing. | Any supplied-air respirator with full facepiece and operated in a pressure- demand or other positive-pressure mode in combination with a separate escape supply, with full-body encapsulating, chemical protective suit. |
| Nitrogen | Eye protection not required, but recommended. | Protective clothing is not required. | Respiratory protection may be needed for frequent or heavy exposure. |
| Hydrogen | 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 |
|-------|----------------|------------|-----------|-------------------------|---------------|----------|-----------|
| Argon | Gas | Colorless | Colorless | N/A | Gas | Odorless | Tasteless |
| Meth | Gas | Colorless | Colorless | N/A | Gas | Odorless | Tasteless |
| ane | | | | | | | |

| | Physical State | Appearance | Color | Change in Appearance | Physical Form | Odor | Taste |
|------------------------------|----------------|------------|-----------|-------------------------|---------------|-----------------|-----------|
| Anhy drous Amm onia | Gas | Colorless | Colorless | N/A | Gas, liquid | Pungent odor | N/A |
| Nitro gen | Gas | Clear | Colorless | N/A | Gas | Odorless | Tasteless |
| Hydro gen | Gas | Colorless | Colorless | N/A | Gas | Odorless | Tasteless |

| | Flash Point | Flammability | Partition Coefficient | Autoignitio n Temperatur e | Upper Explosive Limits | Lower Explosive Limits |
|------------------------------|--|---------------|---|-------------------------------------|---------------------------|---------------------------|
| Argo n | Not flammable | | | Nonflammable | Nonflammable | Nonflammable |
| Meth ane | -369 F (-223 C) | Not available | 724.44 (log = 2.87) (estimated from water solubility) | 999 F (537 C) | 15% | 5% |
| Anhy drous Amm onia | Not available | | | 1204 F (651 C) | 0.28 | 0.15 |
| Nitro gen | Not flammable | Not available | Not available | Nonflammable | Nonflammable | Nonflammable |
| Hydr ogen | 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 | рН | Odor Threshol d | Evaporati on Rate | Viscosi ty |
|--|---------------------|---------------------|----------------------|-------------------|--|---------------------|---------------------------------|-----------------------|----------------------|--|
| Arg on | -303 F (- 186 C) | -308 F (- 189 C) | 500 mmHg @ -190 C | 1.38 (Air=1) | Not applicable | 3.36% @ 20 C | Not applic able | Not available | Not applicable | 0.0225 cP @ 25 C |
| Me tha ne | -260 F (- 162 C) | -297 F (- 183 C) | 760 mmHg @ -161 C | 0.555 (Air=1) | Not applicable | 3.5% @ 17 C | Not applic able | Not available | Not applicable | 0.01118 cP @ 27 C |
| An hyd rou s Am mo nia | -27 F (-33 C) | -108 F (-78 C) | 6658 mmHg @ 21 C | 0.5967 (Air=1) | Not applicable (gas); 0.682 @ -33.4 C (liquefied gas) | 38% @ 20 C | 11.6 (1.0 N solutio n) | 1-5 ppm | Not applicable | 0.255 mPa.s (0.255 centipois es) @ - 33.5 C (liquefied gas) |
| Nit rog en | -321 F (- 196 C) | -346 F (- 210 C) | 760 mmHg @ -196 C | 0.967 (Air=1) | Not applicable | 1.6% @ 20 C | Not applic able | Not available | Not applicable | 0.01787 cP @ 27 C |
| Hy dro gen | -423 F (- 253 C) | -434 F (- 259 C) | 760 mmHg @ -253 C | 0.07 (Air=1) | Not applicable | 1.82% @ 20 C | Not applic able | Not available | Not applicable | 0.008957 cP @ 26.8 C |

| | Molecular Weight | Molecular Formula | Density | Weight per Gallon | Volatility by Volume | Volatility | Solvent Solubility |
|----------------------------------|---------------------|----------------------|----------------------|----------------------|-------------------------|-------------------|--|
| Argo n | 39.948 | AR | 1.784 g/L @ 0 C | Not available | 100% | Not applicable | Soluble: Organic solvents |
| Meth ane | 16.04 | C-H4 | 0.717 g/L @ 0 C | Not available | Not applicable | Not applicable | Soluble: Alcohol, ether, benzene, organic solvents |
| Anhy drou s Amm onia | 17.03 | N-H3 | 0.7067 g/L @ 25 C | Not available | Not available | Not applicable | Soluble: Methanol, ethanol, chloroform, ether, organic solvents |
| Nitro gen | 28.0134 | N2 | 1.2506 g/L | Not available | 100% | 1 | Soluble: Liquid ammonia |

| | Molecular Weight | Molecular Formula | Density | Weight per Gallon | Volatility by Volume | Volatility | Solvent Solubility |
|------|---------------------|----------------------|-------------|----------------------|-------------------------|------------|-----------------------|
| Hydr | 2 | H2 | 0.08987 g/L | Not available | Not available | Not | Soluble: Not |
| ogen | | | @ 0 C | | | applicable | available |

Section 10: Stability and Reactivity

| | Stability | Conditions to Avoid | Incompatible Materials |
|----------------------|---|---|--|
| Argon | Stable at normal temperatures and pressure. | Stable at normal temperatures and pressure. | No data available. |
| Methane | Stable at normal temperatures and pressure. | Stable at normal temperatures and pressure. | Halogens, oxidizing materials, combustible materials |
| Anhydrous Ammonia | Stable at normal temperatures and pressure. | Stable at normal temperatures and pressure. | Acids, combustible materials, metals, oxidizing materials, metal salts, halo carbons, halogens, amines, reducing agents, cyanides, bases |
| Nitrogen | Stable at normal temperatures and pressure. | Stable at normal temperatures and pressure. | Metals, oxidizing materials |
| Hydrogen | 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 triflouride, oxygen diflouride, magnesium and calcium carbonate, sodium, potassium |

| | Hazardous Decomposition Products | Possibility of Hazardous Reactions |
|-----------|--------------------------------------|------------------------------------|
| Argon | No data available. | Will not polymerize. |
| Methane | Oxides of carbon | Will not polymerize. |
| Anhydrous | Ammonia, oxides of nitrogen | Will not polymerize. |
| Ammonia | | |
| Nitrogen | Oxides of nitrogen | 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 |
| Methan e | Not available | Not available | Nausea, vomiting, difficulty breathing, irregular heartbeat, headache, drowsiness, fatigue, dizziness, disorientation, mood swings, tingling sensation, loss of coordination, suffocation, convulsions, unconsciousness, coma |
| Anhydro us Ammoni a | 2000 ppm/4 hour(s) inhalation- rat LC50 | Not established | Burns, severe irritant, pulmonary edema at concentrations over 1500 ppm |
| Nitroge n | Not available | Not available | Nausea, vomiting, difficulty breathing, headache, drowsiness, dizziness, tingling sensation, loss of coordination, convulsions, coma |
| Hydroge n | 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 | |
| Metha | No information on significant adverse effects | No information on significant adverse effects | Difficulty breathing |
| ne | | | |
| Anhyd | Burns, blindness | Burns, liquefied gas can cause frostbite | Acute toxicity, Category 3, inhalation; |
| rous | | | H331: Toxic if inhaled. Skin corrosion, |
| Ammo | | | Category 1B; H314: Causes severe skin |
| nia | | | burns and eye damage. |
| Nitrog | Contact with rapidly expanding gas may | No information on significant adverse effects | Difficulty breathing |
| en | cause burns or frostbite | | |

| | Eye Irritation | Skin Irritation | Sensitization |
|-------|----------------|-----------------|----------------------|
| Hydro | Not irritating | Not irritating | Difficulty breathing |
| gen | | | |

Chronic Effects

| | Carcinogenicity | Mutagenicity | Reproductive Effects | Develo pmenta l Effects |
|------------------------------|-----------------|-----------------|----------------------|----------------------------------|
| Argon | Not established | Not established | Not established | No data |
| Methan e | Not available | Not available | Not available | No data |
| Anhydr ous Ammon ia | Not listed | Available. | Not established | No data |
| Nitroge n | Not hazardous | Not available | Not available | No data |
| Hydrog en | Not available | Not available | Not available | No data |

Section 12: Ecological Information

| | Eco toxicity | Persistence / Degradability | Bioaccumulation / Accumulation | Mobility in Environment |
|------------------------------|--|---|--|--|
| Argon | Fish toxicity: Not available Invertibrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available | Not available | Not available | Not available |
| Meth ane | Fish toxicity: Not available Invertibrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available | Relatively non-persistent in the environment. Moderately volatile from water. | Accumulates very little in the bodies of living organisms. | Not expected to leach through the soil or the sediment. |
| Anhy drous Amm onia | Fish toxicity: Acute LC50 0.88 mg/L 96 hour(s) Orangethroat; 1600 ug/L 96 hour(s) LC50 (Mortality) Common jollytail (Galaxias maculatus) Invertibrate toxicity: 7700 ug/L 96 hour(s) LC50 (Immobilization) Ark shell (Anadara granosa) Algal toxicity: 2100- 2300 ug/L NR hour(s) (Abundance) Algae, phytoplankton, algal mat (Algae) Phyto toxicity: 16500 ug/L 30 hour(s) (Abundance) Common water- nymph (Najas | Not available | Not available | Not available |

| | guadalupensis) Other toxicity: Not available | | | |
|--------------|--|---------------|---------------|---------------|
| Nitro gen | Fish toxicity: Not available Invertibrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available | Not available | Not available | Not available |
| Hydro gen | Fish toxicity: Not available Invertibrate 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. |
|-------------------|---|
| Methane | Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. |
| Anhydrous Ammonia | Dispose in accordance with all applicable regulations. |
| Nitrogen | 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. (Hydrogen, Nitrogen) |
|----------------------------------|--|
| 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 Requiremen ts | Passenger Aircraft or Railcar Quantity Limitations | Cargo Aircraft Only Quantity Limitations | Additional Shipping Descriptio n |
|-----------------------------|----------------------------|--------------|-----------------------------|------------------|------------------------------|--|--|---|
| A r g o n | Argon, compressed | UN1006 | 2.2 | Not applicable | 2.2 | 75 kg or L | 150 kg | N/A |
| M et h a n e | Methane, compressed | UN1971 | 2.1 | Not applicable | 2.1 | Forbidden | 150 kg | N/A |

| | Proper Shipping Name | ID Number | Hazard Class or Division | Packing Group | Labeling Requiremen ts | Passenger Aircraft or Railcar Quantity Limitations | Cargo Aircraft Only Quantity Limitations | Additional Shipping Descriptio n |
|---------------------------------|----------------------------|--------------|-----------------------------|------------------|------------------------------|--|--|---|
| A nh yd r ou s A m mo ni a | Ammonia, anhydrous | UN1005 | 2.2, 2.3 | Not applicable | 2.3; 8 | Forbidden | Forbidden | Toxic- Inhalation Hazard Zone D |
| N it o g e n | Nitrogen, compressed | UN1066 | 2.2 | Not applicable | 2.2 | 75 kg or L | 150 kg | N/A |
| H y d r g e n | 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 |
|--|---|-----------|--------|-------------------------------|
| Arg on | Argon, compressed | UN1006 | 2.2 | Not applicable |
| Met han e | Methane, compressed | UN1971 | 2.1 | Not applicable |
| An hyd rou s Am mo nia | AMMONIA, ANHYDROUS; or ANHYDROUS AMMONIA | UN1005 | 2.3; 8 | Not applicable |
| Nitr oge n | Nitrogen, compressed | UN1066 | 2.2 | Not applicable |
| Hy dro gen | 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. |
| Metha | Not regulated. | Not regulated. | Not regulated. |
| ne | | | |
| Anhyd | 100 LBS RQ | 500 LBS TPQ | 100 LBS RQ |
| rous | | | |
| Ammo | | | |

| nia | | | |
|--------|----------------|----------------|----------------|
| Nitrog | Not regulated. | Not regulated. | Not regulated. |
| en | | | |
| Hydro | Not regulated. | Not regulated. | Not regulated. |
| gen | | | - |

SARA 370.21

| | Acute | Chronic | Fire | Reactive | Sudden Release |
|--------------------------------------|-------|---------|------|----------|----------------|
| Argo n | Yes | No | No | No | Yes |
| Met hane | Yes | No | Yes | No | Yes |
| Anh ydro us Am moni a | Yes | No | No | No | Yes |
| Nitr ogen | Yes | No | No | No | Yes |
| Hydr ogen | Yes | No | Yes | No | Yes |

SARA 372.65

| Argon | Not regulated. |
|-------------------|--------------------|
| Methane | Not regulated. |
| Anhydrous Ammonia | AMMONIA, ANHYDROUS |
| Nitrogen | Not regulated. |
| Hydrogen | Not regulated. |

OSHA Process Safety

| Argon | Not regulated. | |
|-------------------|----------------|--|
| Methane | Not regulated. | |
| Anhydrous Ammonia | 10000 LBS TQ | |
| Nitrogen | Not regulated. | |
| Hydrogen | Not regulated. | |

State Regulations

| - | CA Proposition 65 |
|-------------------|-------------------|
| Argon | Not regulated. |
| Methane | Not regulated. |
| Anhydrous Ammonia | Not regulated. |
| Nitrogen | Not regulated. |
| Hydrogen | Not regulated. |

Canadian Regulations

| | WHMIS Classification |
|-------------------|----------------------|
| Argon | A |
| Methane | A, B1 |
| Anhydrous Ammonia | A, B1, D1A, E |
| Nitrogen | A |
| Hydrogen | A, B1. |

National Inventory Status

| | US Inventory (TSCA) | TSCA 12b Export Notification | Canada Inventory (DSL/NDSL) |
|-------|----------------------|------------------------------|-----------------------------|
| Argo | Listed on inventory. | Not listed. | Listed on inventory. |
| n | | | |
| Meth | Listed on inventory. | Not listed. | Listed on inventory. |
| ane | | | |
| Anhy | Listed on inventory. | Not listed. | Not determined. |
| drou | | | |
| S | | | |
| Amm | | | |
| onia | | | |
| Nitro | Listed on inventory. | Not listed. | Listed on inventory. |
| gen | | | |

| Hydr | Listed on inventory. | Not listed. | Listed on inventory. |
|------|----------------------|-------------|----------------------|
| ogen | | | |

Section 16: Other Information

| | NFPA Rating | |
|--|---|--|
| Argon | HEALTH=0 FIRE=0 REACTIVITY=0 SPECIAL=SA | |
| Methane | HEALTH=0 FIRE=4 REACTIVITY=0 | |
| Anhydrous Ammonia | HEALTH=3 FIRE=1 REACTIVITY=0 | |
| Nitrogen | HEALTH=0 FIRE=0 REACTIVITY=0 SPECIAL=SA | |
| Hydrogen | HEALTH=0 FIRE=4 REACTIVITY=0 | |
| O minimal because 1 alight because 0 mendeusta because 0 accurate because 4 automate because | | |

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