SECTION 1: IDENTIFICATION

Product Identifier
- Product Form: Substance
- Product Name: Hydrogen Gas
- CAS No: 1333-74-0

Intended Use of the Product
Hydrogen gas is produced as a byproduct during sodium chlorate production. The cell line hydrogen produced is further purified (chlorine removed) and compressed before shipping. Used in Hydrogen Peroxide production.

Name, Address, and Telephone of the Responsible Party
Manufacturer
CHEMTRADE LOGISTICS INC.
155 Gordon Baker Road
Suite 300
Toronto, Ontario M2H 3N5
For SDS Info: (416) 496-5856
www.chemtradelogistics.com

Emergency Telephone Number
Emergency Number : Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300
INTERNATIONAL: +1-703-741-5970
Chemtrade Emergency Contact: (866) 416-4404
For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture
GHS Classification
- Simple Asphy
- Flam. Gas 1 : H220
- Compressed gas : H280

Full text of hazard classes and H-statements : see section 16

Label Elements

GHS Labeling
- Hazard Pictograms : 

  - GHS02
  - GHS04

Signal Word : Danger
Hazard Statements : H220 - Extremely flammable gas.
H280 - Contains gas under pressure; may explode if heated.
May displace oxygen and cause rapid suffocation.

Precautionary Statements : 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 - In case of leakage, eliminate all ignition sources.
P403 - Store in a well-ventilated place.
P410+P403 - Protect from sunlight. Store in a well-ventilated place.

Other Hazards
Contact with gas escaping the container can cause frostbite. Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown acute toxicity
No data available
Hydrogen Gas  
Safety Data Sheet  

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS  

<table>
<thead>
<tr>
<th>Substance</th>
<th>Product Identifier</th>
<th>%</th>
<th>GHS Ingredient Classification</th>
</tr>
</thead>
</table>
| Hydrogen  | (CAS No) 1333-74-0 | 100 | Simple Asphy  
|           |                    |    | Flam. Gas 1, H220  
|           |                    |    | Compressed gas, H280         |

Full text of H-phrases: see section 16

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES  

Description of First-aid Measures  

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention.

Inhalation: First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention.

Eye Contact: If frostbite or freezing occurs, immediately flush with plenty of lukewarm water to GENTLY warm the affected area. Do not use hot water. Do not rub affected area. Get immediate medical attention.

Ingestion: Though risk of ingestion is extremely unlikely, in case of frostbite or freeze burns due to oral exposure seek immediate medical attention.

Most Important Symptoms and Effects Both Acute and Delayed  

General: Contact with gas escaping the container can cause frostbite. Asphyxia by lack of oxygen: risk of death.

Inhalation: In elevated concentrations may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death.

Skin Contact: Contact with gas escaping the container can cause frostbite and freeze burns.

Eye Contact: Contact with gas escaping the container can cause frostbite, freeze burns, and permanent eye damage.

Ingestion: Not considered a potential route of exposure, but contact with gas escaping the container can cause freeze burns and frostbite.

Chronic Symptoms: Chronic exposure is likely to have adverse effects to the blood, central nervous system, and cardiovascular system.

Indication of Any Immediate Medical Attention and Special Treatment Needed  

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES  

Extinguishing Media  

Suitable Extinguishing Media: Do not extinguish burning gas if flow cannot be shut off immediately. Extinguish secondary fires with appropriate materials. Water spray, fog.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture  

Fire Hazard: Extremely flammable gas. Burns at all ambient temperatures with a nearly invisible or light blue flame. A fireball forms if gas cloud ignites immediately after release.

Explosion Hazard: May form flammable/explosive gas-air mixture. Container may explode in heat of fire.

Reactivity: May react violently with incompatible materials, increasing risk of fire or explosion.

Advice for Firefighters  

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.
Firefighting Instructions: Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers. May form flammable/explosive gas-air mixture.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: None known.

Other Information: Use water spray to disperse vapors. Do not allow run-off from fire fighting to enter drains or water courses.

Reference to Other Sections
Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Check oxygen content before entering area. Eliminate every possible source of ignition. Keep away from extremely high or low temperatures, ignition sources, and incompatible materials. - No smoking. Do not breathe gas. Do not get in eyes, on skin, or on clothing. Use only outdoors or in a well-ventilated area.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).


For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Eliminate ignition sources. Evacuate unnecessary personnel, isolate, and ventilate area. Ventilate area.

Environmental Precautions
Prevent entry to sewers and public waters.

Methods and Materials for Containment and Cleaning Up

For Containment: Stop leak, if possible without risk. As an immediate precautionary measure, isolate spill or leak area in all directions. Use only non-sparking tools.

Methods for Cleaning Up: Stop the source of the release, if safe to do so. Consider the use of water spray to disperse vapors. Isolate the area until gas has dispersed. Ventilate and gas test area before entering. Clean up spills immediately and dispose of waste safely. Contact competent authorities after a spill.

Reference to Other Sections
See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable. Do not pressurize, cut, or weld containers. Ruptured cylinders may rocket. Asphyxiating gas at high concentrations. Gas escaping from cylinder can cause frost-type burns.

Precautions for Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Do not breathe gas.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed. Use explosion proof equipment.

Storage Conditions: Store in a dry, cool place. Keep container closed when not in use. Keep in fireproof place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling.


Specific End Use(s)

Hydrogen gas is produced as a byproduct during sodium chlorate production. The cell line hydrogen produced is further purified (chlorine removed) and compressed before shipping. Used in Hydrogen Peroxide production.
Hydrogen Gas
Safety Data Sheet

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters
For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH chemical category</th>
<th>Simple asphyxiant See Appendix F: Minimal Oxygen Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen (1333-74-0)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Exposure Controls
Appropriate Engineering Controls: Gas detectors should be used when flammable gases or vapors may be released. Ensure adequate ventilation, especially in confined areas. Proper grounding procedures to avoid static electricity should be followed. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use explosion-proof equipment. Oxygen detectors should be used when asphyxiating gases may be released. Ensure all national/local regulations are observed.


Materials for Protective Clothing: Wear fire/flame resistant/retardant clothing.

Hand Protection: Wear protective gloves. If material is cold, wear thermally resistant protective gloves.

Eye Protection: Chemical safety goggles.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Thermal Hazard Protection: Wear thermally resistant protective clothing.

Other Information: When using, do not eat, drink or smoke

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Gas</td>
</tr>
<tr>
<td>Appearance</td>
<td>Colorless, tasteless gas</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>-259.2 °C (-434.56 °F) at 54 mm Hg</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>-252.77 °C (-422.99 °F)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>500 °C (932 °F)</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Extremely flammable gas</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>4 % (% by volume)</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
<td>75 % (% by volume)</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>$1.24 \times 10^6\text{ mmHg} @ 25^\circ\text{C}(77^\circ\text{F})$</td>
</tr>
<tr>
<td>Relative Vapor Density at 20°C</td>
<td>$0.000083\text{ g/ml (AIR = 1)}$</td>
</tr>
<tr>
<td>Relative Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.0695 (Gas)</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Hydrogen Gas
Safety Data Sheet

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Contains gas under pressure; may explode if heated</td>
</tr>
<tr>
<td>Heat of vaporization</td>
<td>0.90 kJ/mol</td>
</tr>
</tbody>
</table>

**SECTION 10: STABILITY AND REACTIVITY**

- **Reactivity**: May react violently with incompatible materials, increasing risk of fire or explosion.
- **Chemical Stability**: Contains gas under pressure; may explode if heated.
- **Possibility of Hazardous Reactions**: Hazardous polymerization will not occur.
- **Conditions to Avoid**: Direct sunlight, extremely high or low temperatures, open flames, sources of ignition and incompatible materials.
- **Incompatible Materials**:  Strong oxidizers. Oxygen. Halogens. Air. Metal catalysts such as nickel and platinum.
- **Hazardous Decomposition Products**: None known.

**SECTION 11: TOXICOLOGICAL INFORMATION**

- **Information on Toxicological Effects - Product**
  - **Acute Toxicity (Oral)**: Not classified
  - **Acute Toxicity (Dermal)**: Not classified
  - **Acute Toxicity (Inhalation)**: Not classified
  - **LD50 and LC50 Data**: Not available
  - **Skin Corrosion/Irritation**: Not classified
  - **pH**: Not applicable
  - **Eye Damage/Irritation**: Not classified
  - **pH**: Not applicable
  - **Respiratory or Skin Sensitization**: Not classified
  - **Germ Cell Mutagenicity**: Not classified
  - **Carcinogenicity**: Not classified
  - **Specific Target Organ Toxicity (Repeated Exposure)**: Not classified
  - **Reproductive Toxicity**: Not classified
  - **Specific Target Organ Toxicity (Single Exposure)**: Not classified
  - **Aspiration Hazard**: Not classified
  - **Symptoms/Effects After Inhalation**: In elevated concentrations may cause asphyxiation, central nervous system effects, and increased breathing rate. Symptoms of asphyxiation include headache, dizziness, rapid breathing, increased pulse, mood changes, tremors, cyanosis, muscular weakness, narcosis, numbness of the extremities, unconsciousness and death.
  - **Symptoms/Effects After Skin Contact**: Contact with gas escaping the container can cause frostbite and freeze burns.
  - **Symptoms/Effects After Eye Contact**: Contact with gas escaping the container can cause frostbite, freeze burns, and permanent eye damage.
  - **Symptoms/Effects After Ingestion**: Not considered a potential route of exposure, but contact with gas escaping the container can cause freeze burns and frostbite.
  - **Chronic Symptoms**: Chronic exposure is likely to have adverse effects to the blood, central nervous system, and cardiovascular system.

- **Information on Toxicological Effects - Ingredient(s)**
  - **LD50 and LC50 Data**:
    - **Hydrogen (1333-74-0)**
    - **LC50 Inhalation Rat**: > 7500 ppm/4h

**SECTION 12: ECOLOGICAL INFORMATION**

- **Toxicity**
  - **Ecology - General**: Not classified.

- **Persistence and Degradability**
  - **Hydrogen Gas (1333-74-0)**
  - **Persistence and Degradability**: Not established.
Hydrogen Gas
Safety Data Sheet

Bioaccumulative Potential

<table>
<thead>
<tr>
<th>Bioaccumulative Potential</th>
<th>Not established.</th>
</tr>
</thead>
</table>

Hydrogen Gas (1333-74-0)

<table>
<thead>
<tr>
<th>BCF Fish 1</th>
<th>(no bioaccumulation expected)</th>
</tr>
</thead>
</table>

Mobility in Soil
Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations

Additional Information: Container may remain hazardous when empty. Continue to observe all precautions. Handle empty containers with care because residual vapors are flammable. Empty gas cylinders should be returned to the vendor for recycling orfilling. Do not puncture or incinerate container.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

<table>
<thead>
<tr>
<th>TRANSPORTATION CLASSIFICATION</th>
<th>DOT</th>
<th>TDG</th>
<th>IMDG</th>
<th>IATA</th>
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<tr>
<td>Identification Number</td>
<td>UN1049</td>
<td>UN1049</td>
<td>UN1049</td>
<td>UN1049</td>
</tr>
<tr>
<td>Proper Shipping Name</td>
<td>HYDROGEN, COMPRESSED</td>
<td>HYDROGEN, COMPRESSED</td>
<td>HYDROGEN, COMPRESSED</td>
<td>HYDROGEN, COMPRESSED</td>
</tr>
<tr>
<td>Transport Hazard Class(es)</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Packing Group</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Environmental Hazards</td>
<td>Marine Pollutant: No</td>
<td>Marine Pollutant: No</td>
<td>Marine Pollutant: No</td>
<td>Marine Pollutant: N/A</td>
</tr>
<tr>
<td>Emergency Response</td>
<td>ERG Number: 115</td>
<td>ERAP Index: 3000</td>
<td>EMS: F-D, S-U</td>
<td>ERG code (IATA): 10L</td>
</tr>
<tr>
<td>Additional Information</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>CERCLA RQ</th>
<th>EPCRA 304 RQ</th>
<th>SARA 302 TPQ</th>
<th>SARA 313</th>
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</thead>
<tbody>
<tr>
<td>Hydrogen (1333-74-0)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>No</td>
</tr>
<tr>
<td>SARA 311/312</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hydrogen Gas (1333-74-0)

Fire hazard. Sudden release of pressure hazard. Immediate (acute) health hazard. Delayed (chronic) health hazard.

US TSCA Flags
Not present

US State Regulations

California Proposition 65

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>Carcinogenicity</th>
<th>Developmental Toxicity</th>
<th>Female Reproductive Toxicity</th>
<th>Male Reproductive Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen (1333-74-0)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

State Right-To-Know Lists
# Hydrogen Gas

## Safety Data Sheet


## Hydrogen (1333-74-0)

<table>
<thead>
<tr>
<th>Country/State</th>
<th>Right To Know List</th>
<th>Special Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - Massachusetts</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>U.S. - New Jersey</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>U.S. - Pennsylvania</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>U.S. - Pennsylvania</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

## Canadian Regulations

- Listed on the Canadian DSL (Domestic Substances List)
- Not listed on the Canadian NDSL (Non-Domestic Substances List)

## International Inventories/Lists

<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>AICS</th>
<th>CICR</th>
<th>ECL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>SVHC</th>
<th>NLP</th>
<th>INSQ</th>
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</thead>
<tbody>
<tr>
<td>Hydrogen (1333-74-0)</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Chemical Name (CAS No.)</th>
<th>IECSC</th>
<th>ENCS</th>
<th>ISHL</th>
<th>PDSCL</th>
<th>PRTR</th>
<th>PICCS</th>
<th>New Zealand</th>
<th>US TSCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen (1333-74-0)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
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## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

- **Revision Date**: 01/18/2017
- **Revision Summary**:

<table>
<thead>
<tr>
<th>Section</th>
<th>Change</th>
<th>Date Changed</th>
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<tr>
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<td>Language modified</td>
<td>01/18/2017</td>
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<tr>
<td>7</td>
<td>Language modified</td>
<td>01/18/2017</td>
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<td>16</td>
<td>Language modified</td>
<td>01/18/2017</td>
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</table>

## Other Information

- This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada’s Hazardous Products Regulations (HPR).

## GHS Full Text Phrases:

<table>
<thead>
<tr>
<th>Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compressed gas</td>
<td>Gases under pressure Compressed gas</td>
</tr>
<tr>
<td>Flam. Gas 1</td>
<td>Flammable gases Category 1</td>
</tr>
<tr>
<td>Simple Asphy</td>
<td>Simple Asphyxiant</td>
</tr>
<tr>
<td>H220</td>
<td>Extremely flammable gas</td>
</tr>
<tr>
<td>H280</td>
<td>Contains gas under pressure; may explode if heated</td>
</tr>
<tr>
<td>H380</td>
<td>May displace oxygen and cause rapid suffocation</td>
</tr>
</tbody>
</table>
Hydrogen Gas
Safety Data Sheet

**NFPA 704**

**NFPA Health Hazard:** 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

**NFPA Fire Hazard:** 4 - Will rapidly or completely vaporize at normal pressure and temperature, or is readily dispersed in air and will burn readily.

**NFPA Reactivity Hazard:** 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

**NFPA Specific Hazards:** SA - This denotes gases which are simple asphyxiants.

**HMIS Rating**

**Health:** 0 Minimal Hazard - No significant risk to health
* Chronic - Chronic (long-term) health effects may result from repeated overexposure

**Flammability:** 4 Severe Hazard

**Physical:** 0 Minimal Hazard

**PPE** See Section 8

**Abbreviations and Acronyms**

AICS – Australian Inventory of Chemical Substances
ACGIH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
ATE - Acute Toxicity Estimate
BCF - Bioconcentration factor
BEI - Biological Exposure Indices (BEI)
CAS No. - Chemical Abstracts Service number
CERCLA RG - Comprehensive Environmental Response, Compensation, and Liability Act - Reportable Quantity
CICR - Turkish Inventory and Control of Chemicals
EC50 - Median effective concentration
ECL - Korea Existing Chemicals List
EINECS - European Inventory of Existing Commercial Chemical Substances
ELINCS - European List of Notified Chemical Substances
EmS - IMDG Emergency Schedule Fire & Spillage
ENCs - Japanese Existing and New Chemical Substances Inventory
EPA – Environmental Protection Agency
EPICRA 304 RQ – EPICRA 304 Extremely Hazardous Substance Emergency Planning and Community Right-to-Know Act – Reportable Quantity
ERAP Index – Emergency Response Assistance Plan Quantity Limit
ErCSO - ECSO in Terms of Reduction Growth Rate
ERG code (IATA) - Emergency Response Drill Code as found in the International Civil Aviation Organization (ICAO)
ERG no. - Emergency Response Guide Number
HCCl - Hazard Communication Carcinogen List
HMIS – Hazardous Materials Information System
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association – Dangerous Goods Regulations
IDLH - Immediately Dangerous to Life or Health
IECSC - Inventory of Existing Chemical Substances Produced or Imported in China
IMDG - International Maritime Dangerous Goods Code
INSQ - Mexican National Inventory of Chemical Substances

**See Section 8**

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