

# Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 06/26/2015 Version: 2.0

# SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product form : Mixture

Product name : 5 Components in Hydrogen

Product code : SG-2006-00987

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

Use of the substance/mixture : Test gas/Calibration gas.

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

Air Liquide 2700 Post Oak Boulevard Houston, TX 77056 - USA T 1-800-819-1704 www.us.airliquide.com

# 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300

### **SECTION 2: Hazards identification**

### 2.1. Classification of the substance or mixture

### **GHS-US** classification

 Flam. Gas 1
 H220

 Compressed gas
 H280

 Acute Tox. 4 (Inhalation:gas)
 H332

 Repr. 1A
 H360

 STOT RE 1
 H372

Full text of H-phrases: see section 16

## 2.2. Label elements

# **GHS-US** labeling

Hazard pictograms (GHS-US)



 $\Diamond$ 

GHS04





Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H220 - Extremely flammable gas

H280 - Contains gas under pressure; may explode if heated

H332 - Harmful if inhaled

H360 - May damage fertility or the unborn child

H372 - Causes damage to organs (central nervous system) through prolonged or repeated

exposure (Inhalation)

CGA-HG03 - May increase respiration and heart rate CGA-HG04 - May form explosive mixtures with air CGA-HG10 - Asphyxiating even with adequate oxygen

Precautionary statements (GHS-US) : P202 - Do not handle until all safety precautions have been read and understood

P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking

P260 - Do not breathe gas

P271 - Use only outdoors or in a well-ventilated area

P280 - Wear eye protection, face protection, protective gloves, protective clothing P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing

P308+P313 - If exposed or concerned: Get medical advice/attention

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

P381 - Eliminate all ignition sources if safe to do so

P403 - Store in a well-ventilated place

P405 - Store locked up

P501 - Dispose of contents/container in accordance with local/regional/national/international

regulations

CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F)

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CGA-PG05 - Use a back flow preventive device in the piping CGA-PG06 - Close valve after each use and when empty CGA-PG10 - Use only with equipment rated for cylinder pressure CGA-PG14 - Approach suspected leak area with caution

CGA-PG21 - Open valve slowly

### 2.3. Other hazards

Other hazards not contributing to the classification

: This product contains a chemical asphyxiant.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

# SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	GHS-US classification
Hydrogen	(CAS No) 1333-74-0	67.8	Flam. Gas 1, H220 Compressed gas, H280
Carbon monoxide	(CAS No) 630-08-0	22	Flam. Gas 1, H220 Compressed gas, H280 Acute Tox. 3 (Inhalation:gas), H331 Repr. 1A, H360 STOT RE 1, H372
Carbon dioxide	(CAS No) 124-38-9	8	Liquefied gas, H280
Methane	(CAS No) 74-82-8	2	Flam. Gas 1, H220 Compressed gas, H280
Argon	(CAS No) 7440-37-1	0.1	Compressed gas, H280
Nitrogen	(CAS No) 7727-37-9	0.1	Compressed gas, H280

Full text of H-phrases: see section 16

# **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel

unwell, seek medical advice.

First-aid measures after skin contact : Adverse effects not expected from this product. First-aid measures after eye contact : Adverse effects not expected from this product.

First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Asphyxiating even with adequate oxygen. Harmful if inhaled. May increase respiration and

heart rate.

Symptoms/injuries after skin contact : Adverse effects not expected from this product. Symptoms/injuries after eye contact : Adverse effects not expected from this product.

Symptoms/injuries after ingestion : Ingestion is not considered a potential route of exposure.

Symptoms/injuries upon intravenous

administration

: Not known.

Chronic symptoms : May damage fertility. May damage the unborn child. Causes damage to organs (Central

nervous system.) through prolonged or repeated exposure (Inhalation).

## 4.3. Indication of any immediate medical attention and special treatment needed

If you feel unwell, seek medical advice. If breathing is difficult, give oxygen. Obtain medical attention if breathing difficulty persists.

# **SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media : Do not use water jet to extinguish.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : This product is flammable.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of

burns and injuries. May form flammable/explosive vapor-air mixture.

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Reactivity : None known.

#### 5.3. Advice for firefighters

Firefighting instructions : In case of fire: Evacuate area, Fight fire remotely due to the risk of explosion. Use water spray

or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.

Standard protective clothing and equipment (e.g., Self Contained Breathing Apparatus) for fire Protection during firefighting

fighters. Do not enter fire area without proper protective equipment, including respiratory

protection.

### **SECTION 6: Accidental release measures**

### Personal precautions, protective equipment and emergency procedures

General measures : Ensure adequate ventilation.

#### For non-emergency personnel 6.1.1.

Protective equipment : Wear protective equipment consistent with the site emergency plan.

Escape the danger area by the closest safe route. Close doors and windows of adjacent **Emergency procedures** 

premises. Keep containers closed. Mark the danger area. Seal off low-lying areas. Keep

upwind.

#### 6.1.2. For emergency responders

Standard protective clothing and equipment (e.g., Self Contained Breathing Apparatus) for fire Protective equipment

fighters. Equip cleanup crew with proper protection.

**Emergency procedures** Evacuate and limit access. Ventilate area. Remove ignition sources. Monitor concentration of released product. Consider the risk of potentially explosive atmospheres. Wear self-contained

breathing apparatus when entering atmospheres of unknown contaminant concentration until proven to be safe.

#### **Environmental precautions**

Try to stop release if safe to do so.

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

For containment : Try to stop release if safe to do so.

: Dispose of this material and its container in accordance with local regulations. Methods for cleaning up

# Reference to other sections

See also Sections 8 and 13.

# **SECTION 7: Handling and storage**

# Precautions for safe handling

: Pressurized container: Do not pierce or burn, even after use. Use equipment rated for cylinder Additional hazards when processed

pressure. Close valve after each use and when empty. Handle empty containers with care because residual vapors are flammable. In use, may form flammable vapor-air mixture.

: Do not handle until all safety precautions have been read and understood. Use only outdoors or Precautions for safe handling

in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools.

: Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations. Proper grounding procedures to avoid static electricity

should be followed.

Storage conditions Do not expose to temperatures exceeding 52°C (125°F). Keep container closed when not in

use. Protect cylinder from physical damage. Store in well ventilated area. Store locked up.

Incompatible products None known

Incompatible materials Oxidizing materials. Air.

#### 7.3. Specific end use(s)

See Section 1.2.

Hygiene measures

# **SECTION 8: Exposure controls/personal protection**

#### **Control parameters** 8.1.

5 Components in Hydrogen	
ACGIH	Not applicable
OSHA	Not applicable

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Carbon dioxide (124-38-9)			
ACGIH	ACGIH TWA (ppm)	5000 ppm	
ACGIH	ACGIH STEL (ppm)	30000 ppm	
OSHA	OSHA PEL (TWA) (mg/m³)	9000 mg/m³	
OSHA	OSHA PEL (TWA) (ppm)	5000 ppm	
Carbon monoxide (630-08-0)			
ACGIH	ACGIH TWA (ppm)	25 ppm	
OSHA	OSHA PEL (TWA) (mg/m³)	55 mg/m³	
OSHA	OSHA PEL (TWA) (ppm)	50 ppm	
Methane (74-82-8)			
ACGIH	ACGIH TWA (ppm)	1000 ppm	
OSHA	Not applicable		
Nitrogen (7727-37-9)			
ACGIH	Not applicable		
OSHA	Not applicable		
Hydrogen (1333-74-0)			
ACGIH	Not applicable		
OSHA	Not applicable		
Argon (7440-37-1)			
ACGIH	Not applicable		
OSHA	Not applicable		

## 8.2. Exposure controls

Appropriate engineering controls : Ensure exposure is below occupational exposure limits. Provide adequate general and local

exhaust ventilation. Systems under pressure should be regularly checked for leakages. Consider work permit system e.g. for maintenance activities. Alarm detectors should be used

when toxic gases may be released.

Hand protection : Wear working gloves when handling gas containers. 29 CFR 1910.138: Hand Protection.

Eye protection : Wear safety glasses with side shields. 29 CFR 1910.133: Eye and Face Protection. Skin and body protection : Wear suitable protective clothing, e.g. - lab coats, coveralls or flame resistant clothing.

Respiratory protection : None necessary during normal and routine operations. See Sections 5 & 6.

Thermal hazard protection : None necessary during normal and routine operations.

Environmental exposure controls : Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for

specific methods for waste gas treatment.

Other information : Wear safety shoes while handling containers. 29 CFR 1910.136: Foot Protection.

# SECTION 9: Physical and chemical properties

## 9.1. Information on basic physical and chemical properties

Physical state : Gas

Appearance : Clear, colorless gas.

Color : Colorless

: No data available Odor Odor threshold : No data available рΗ No data available No data available Melting point Freezing point No data available Boiling point No data available : No data available Flash point Relative evaporation rate (butyl acetate=1) : No data available

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Flammability (solid, gas) : See Section 2.1 and 2.2

Explosion limits : No data available

Explosive properties : Without adequate ventilation formation of explosive mixtures may be possible.

Oxidizing properties : None

Vapor pressure : No data available
Relative density : No data available
Relative vapor density at 20 °C : No data available

Molecular mass : Not applicable for gas-mixtures.

Relative gas density : Lighter or similar to air : No data available Solubility Log Pow : No data available Log Kow : No data available : No data available Auto-ignition temperature Decomposition temperature : No data available Viscosity : No data available Viscosity, kinematic No data available Viscosity, dynamic : No data available

### 9.2. Other information

No additional information available

# **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

None known.

# 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

None under recommended storage and handling conditions (see section 7).

# 10.5. Incompatible materials

Oxidizing materials. Air.

# 10.6. Hazardous decomposition products

Under normal conditions of storage and use hazardous decomposition products should not be produced.

# SECTION 11: Toxicological information

# 11.1. Information on toxicological effects

Acute toxicity : Inhalation:gas: Harmful if inhaled.

5 Components in Hydrogen			
ATE US (gases) 8545.455 ppmV/4h			
Carbon dioxide (124-38-9)			
LC50 inhalation rat (ppm) 820000 ppm/4h			
Carbon monoxide (630-08-0)			
LC50 inhalation rat (ppm) 1880 ppm/4h			
ATE US (gases) 1880.000 ppmV/4h			
Methane (74-82-8)			
LC50 inhalation rat (ppm)	820000 ppm/4h		
ATE US (gases)	820000.000 ppmV/4h		
Nitrogen (7727-37-9)			
LC50 inhalation rat (ppm)	820000 ppm/4h		
Hydrogen (1333-74-0)			
LC50 inhalation rat (ppm)	820000 ppm/4h		
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Hydrogen (1333-74-0)	
ATE US (gases)	820000.000 ppmV/4h
Argon (7440-37-1)	
LC50 inhalation rat (ppm)	820000 ppm/4h
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: May damage fertility or the unborn child.
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Causes damage to organs (central nervous system) through prolonged or repeated exposure (Inhalation).
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Asphyxiating even with adequate oxygen. Harmful if inhaled. May increase respiration and heart rate.
Symptoms/injuries after skin contact	: Adverse effects not expected from this product.
Symptoms/injuries after eye contact	: Adverse effects not expected from this product.
Symptoms/injuries after ingestion	: Ingestion is not considered a potential route of exposure.
Symptoms/injuries upon intravenous	: Not known.

# **SECTION 12: Ecological information**

# **Toxicity**

administration Chronic symptoms

No additional information available

# Persistence and degradability

Carbon dioxide (124-38-9)				
Persistence and degradability	No ecological damage caused by this product.			
Carbon monoxide (630-08-0)				
Persistence and degradability	Will not undergo hydrolysis. Not readily biodegradable. Not applicable for inorganic gases.			
Methane (74-82-8)				
Persistence and degradability	The substance is biodegradable. Unlikely to persist. No data available.			
Nitrogen (7727-37-9)				
Persistence and degradability	No ecological damage caused by this product.			
Hydrogen (1333-74-0)				
Persistence and degradability	No ecological damage caused by this product.			
Argon (7440-37-1)				
Persistence and degradability	No ecological damage caused by this product.			

: May damage fertility. May damage the unborn child. Causes damage to organs (Central

nervous system.) through prolonged or repeated exposure (Inhalation).

#### 12.3. **Bioaccumulative potential**

Carbon dioxide (124-38-9)		
BCF fish 1	(no bioaccumulation)	
Log Pow	0.83	
Bioaccumulative potential No ecological damage caused by this product.		
Carbon monoxide (630-08-0)		
Log Pow	1.78	

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Carbon monoxide (630-08-0)			
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.		
Methane (74-82-8)			
Log Pow	Not applicable for gas mixtures		
Log Kow	Not applicable for gas mixtures		
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.		
Nitrogen (7727-37-9)			
Log Pow	Not applicable for inorganic gases.		
Bioaccumulative potential	No ecological damage caused by this product.		
Hydrogen (1333-74-0)			
BCF fish 1	(no bioaccumulation expected)		
Log Pow	Not applicable for inorganic gases.		
Bioaccumulative potential	No ecological damage caused by this product.		
Argon (7440-37-1)			
Log Pow	Not applicable for inorganic gases.		
Bioaccumulative potential	No ecological damage caused by this product.		

# 12.4. Mobility in soil

Carbon dioxide (124-38-9)			
Ecology - soil	No ecological damage caused by this product.		
Carbon monoxide (630-08-0)			
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.		
Methane (74-82-8)			
Mobility in soil	No data available.		
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.		
Nitrogen (7727-37-9)			
Ecology - soil	No ecological damage caused by this product.		
Hydrogen (1333-74-0)			
Ecology - soil	No ecological damage caused by this product.		
Argon (7440-37-1)			
Ecology - soil	No ecological damage caused by this product.		

### 12.5. Other adverse effects

Effect on ozone layer : No known effects from this product.

Effect on the global warming : Contains greenhouse gas(es) not covered by 842/2006/EC.

# **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

Waste treatment methods : Contact supplier if guidance is required. Do not discharge into any place where its

accumulation could be dangerous. Ensure that the emission levels from local regulations or operating permits are not exceeded. Waste gas should be flared through a suitable burner with flash back arrestor. Do not discharge into areas where there is a risk of forming an explosive

mixture with air.

Waste disposal recommendations : Refer to the CGA Pamphlet P-63 "Disposal of Gases" available at www.cganet.com for more

guidance on suitable disposal methods.

# **SECTION 14: Transport information**

# **Department of Transportation (DOT)**

In accordance with DOT

Transport document description : UN1954 Compressed gas, flammable, n.o.s. (Hydrogen, Carbon Monoxide)

UN-No.(DOT) : UN1954

Proper Shipping Name (DOT) : Compressed gas, flammable, n.o.s.

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Hazard labels (DOT) : 2.1 - Flammable gas



DOT Packaging Non Bulk (49 CFR 173.xxx) : 302;305

DOT Packaging Bulk (49 CFR 173.xxx) : 314;315

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Packaging Exceptions (49 CFR 173.xxx) : 306
DOT Quantity Limitations Passenger aircraft/rail : Forbidden

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 150 kg

CFR 175.75)

DOT Vessel Stowage Location : D - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel

carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger

vessels in which the limiting number of passengers is exceeded.

DOT Vessel Stowage Other : 40 - Stow "clear of living quarters"

**Additional information** 

Other information : No supplementary information available.

**ADR** 

Transport document description : UN 1954 COMPRESSED GAS, FLAMMABLE, N.O.S., 2.1, (B/D)

Class (ADR) : 2 - Gases
Hazard identification number (Kemler No.) : 23
Classification code (ADR) : 1F

Hazard labels (ADR) : 2.1 - Flammable gases



Orange plates :

23 1954

Tunnel restriction code (ADR) : B/D
Limited quantities (ADR) : 0
Excepted quantities (ADR) : E0

Transport by sea

UN-No. (IMDG) : 1954

Proper Shipping Name (IMDG) : COMPRESSED GAS, FLAMMABLE, N.O.S.

Class (IMDG) : 2 - Gases

Air transport

UN-No. (IATA) : 1954

Proper Shipping Name (IATA) : COMPRESSED GAS, FLAMMABLE, N.O.S.

Class (IATA) : 2

# **SECTION 15: Regulatory information**

### 15.1. US Federal regulations

## Carbon dioxide (124-38-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

## Carbon monoxide (630-08-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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Methane (	\ <i>14</i> -0∠-	0

Listed on the United States TSCA (Toxic Substances Control Act) inventory

## Nitrogen (7727-37-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### Hydrogen (1333-74-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### Argon (7440-37-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

### **CANADA**

Carbon dioxide (124-38-9)			
Listed on the Canadian DSL (Domestic Sustances List)			
WHMIS Classification	Class A - Compressed Gas		
Carbon monoxide (630-08-0)			
Listed on the Canadian DSL (Domestic Sustance	s List)		
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects		
Methane (74-82-8)			
Listed on the Canadian DSL (Domestic Sustance	s List)		
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas		
Nitrogen (7727-37-9)			
Listed on the Canadian DSL (Domestic Sustance	s List)		
WHMIS Classification	Class A - Compressed Gas		
Hydrogen (1333-74-0)			
Listed on the Canadian DSL (Domestic Sustances List)			
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas		
Argon (7440-37-1)			
Listed on the Canadian DSL (Domestic Sustances List)			
WHMIS Classification	Class A - Compressed Gas		

### **EU-Regulations**

### Carbon dioxide (124-38-9)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

## Carbon monoxide (630-08-0)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

# Methane (74-82-8)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

# Nitrogen (7727-37-9)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### Hydrogen (1333-74-0)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

# Argon (7440-37-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

# Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

No additional information available

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#### **National regulations**

# Carbon dioxide (124-38-9)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

Listed on the Canadian IDL (Ingredient Disclosure List)

# Carbon monoxide (630-08-0)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on the Canadian IDL (Ingredient Disclosure List)

#### Methane (74-82-8)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

# Nitrogen (7727-37-9)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

# Hydrogen (1333-74-0)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

# Argon (7440-37-1)

Listed on the AICS (Australian Inventory of Chemical Substances)

Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)

Listed on the Korean ECL (Existing Chemicals List)

Listed on NZIoC (New Zealand Inventory of Chemicals)

Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

### 15.3. US State regulations

Carbon monoxide (630-08-0)				
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	Yes	No	No	

# Carbon dioxide (124-38-9)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

### Carbon monoxide (630-08-0)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) Environmental Hazard List

U.S. - Pennsylvania - RTK (Right to Know) List

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### Methane (74-82-8)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

### Nitrogen (7727-37-9)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

# Hydrogen (1333-74-0)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

# Argon (7440-37-1)

- U.S. Massachusetts Right To Know List
- U.S. New Jersey Right to Know Hazardous Substance List
- U.S. Pennsylvania RTK (Right to Know) List

# **SECTION 16: Other information**

Indication of changes : Revised safety data sheet in accordance with OSHA final rule on GHS implementation

promulgated March 26, 2012.

Other information : This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29

CFR, 1910.1200. Other government regulations must be reviewed for applicability to this

product.

#### Full text of H-phrases:

Acute Tox. 3 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 3
Acute Tox. 4 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 4
Compressed gas	Gases under pressure Compressed gas
Flam. Gas 1	Flammable gases Category 1
Liquefied gas	Gases under pressure Liquefied gas
Repr. 1A	Reproductive toxicity Category 1A
STOT RE 1	Specific target organ toxicity (repeated exposure) Category 1
H220	Extremely flammable gas
H280	Contains gas under pressure; may explode if heated
H331	Toxic if inhaled
H332	Harmful if inhaled
H360	May damage fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure

### SDS US (GHS HazCom 2012)

This Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of Air Liquide America Corporation's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this product is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.

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