

Safety Data Sheet

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

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Product name : Isopentane (0.00001% - 2.00%), n-Pentane (0.00001% - 2.00%), 1-Butene (0.00001% -

45.00%), Isobutane (0.00001% - 50.00%) in n-Butane

Product code : SG-2005-03046

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 9811 Katy Freeway, Suite 100 Houston, TX 77024 - USA

T 1-800-819-1704 www.us.airliquide.com

1.4. Emergency telephone number

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

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Flam. Gas 1 H220 - Extremely flammable gas

Liquefied gas H280 - Contains gas under pressure; may explode if heated

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)





GHS02

GHS04

Signal word (GHS-US) : Danger

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

H280 - Contains gas under pressure; may explode if heated OSHA-H01 - May displace oxygen and cause rapid suffocation

CGA-HG01 - May cause frostbite

CGA-HG04 - May form explosive mixtures with air

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

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

P280 - Wear eye protection, face protection, protective gloves, protective clothing

P302 - IF ON SKIN: Thaw frosted parts with lukewarm water. Do not rub affected area, Get

immediate medical advice/attention

P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing

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

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)

CGA-PG05 - Use a back flow preventive device in the piping

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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

No additional information available

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
n-Butane	(CAS No) 106-97-8	1 - 99.99996	Flam. Gas 1, H220 Liquefied gas, H280
Isobutane	(CAS No) 75-28-5	0.00001 - 50	Flam. Gas 1, H220 Liquefied gas, H280
1-Butene	(CAS No) 106-98-9	0.00001 - 45	Flam. Gas 1, H220 Liquefied gas, H280
Isopentane	(CAS No) 78-78-4	0.00001 - 2	Flam. Liq. 1, H224 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
n-Pentane	(CAS No) 109-66-0	0.00001 - 2	Flam. Liq. 2, H225 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

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 : Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical

advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Get immediate medical advice/attention.

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 : May displace oxygen and cause rapid suffocation.

Symptoms/injuries after skin contact : May cause frostbite.

Symptoms/injuries after eye contact : Contact with the product may cause cold burns or frostbite. Symptoms/injuries after ingestion : Ingestion is not considered a potential route of exposure.

Symptoms/injuries upon intravenous : Not known.

administration
Chronic symptoms

: Adverse effects not expected from this product.

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.

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.

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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.

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.

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

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

protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Ensure adequate ventilation.

6.1.1. For non-emergency personnel

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

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

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

upwind.

6.1.2. For emergency responders

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

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

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.

6.2. Environmental precautions

Try to stop release if safe to do so.

6.3. Methods and material for containment and cleaning up

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

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

6.4. Reference to other sections

See also Sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

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.

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

in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Use only non-sparking tools.

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

7.2. 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.

Incompatible products : None known.

Incompatible materials : Oxidizing materials. Air.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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n-Butane (106-97-8)			
ACGIH	ACGIH STEL (ppm)	1000 ppm	
1-Butene (106-98-9)			
ACGIH	ACGIH TWA (ppm)	250 ppm	
Isobutane (75-28-5)			
ACGIH	ACGIH STEL (ppm)	1000 ppm	
Isopentane (78-78-4)	Isopentane (78-78-4)		
ACGIH	ACGIH TWA (ppm)	600 ppm	
n-Pentane (109-66-0)			
ACGIH	ACGIH TWA (ppm)	600 ppm	
OSHA	OSHA PEL (TWA) (mg/m³)	2950 mg/m³	
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm	

8.2. Exposure controls

Respiratory protection

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. Oxygen detectors should be used when asphyxiating gases may be released. Consider work permit

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

system e.g. for maintenance activities.

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.

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

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

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Relative gas density : Heavier than air Solubility : No data available Log Pow : No data available Auto-ignition temperature : No data available Decomposition temperature : No data available Viscosity : No data available Viscosity, kinematic : No data available Viscosity, dynamic : No data available

9.2. Other information

Additional information : Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

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 : Not classified

n-Butane (106-97-8)		
LC50 inhalation rat (mg/l)	658 g/m³ (Exposure time: 4 h)	
LC50 inhalation rat (ppm)	276789.28 ppm/4h	
1-Butene (106-98-9)		
LC50 inhalation rat (ppm)	500000 ppm/4h	
Isobutane (75-28-5)		
LC50 inhalation rat (mg/l)	658 mg/l/4h	
LC50 inhalation rat (ppm)	276713.11 ppm/4h	
Isopentane (78-78-4)		
LC50 inhalation rat (ppm)	94859.36 ppm/4h	
ATE US (gases)	94859.360 ppmV/4h	
ATE US (vapors)	280.000 mg/l/4h	
n-Pentane (109-66-0)		
LD50 dermal rabbit	3000 mg/kg	
LC50 inhalation rat (mg/l)	364 g/m³ (Exposure time: 4 h)	
LC50 inhalation rat (ppm)	123317.17 ppm/4h	
ATE US (dermal)	3000.000 mg/kg body weight	
ATE US (gases)	123317.170 ppmV/4h	
ATE US (vapors)	364.000 mg/l/4h	

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n-Pentane (109-66-0)	
ATE US (dust, mist)	364.000 mg/l/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	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: May displace oxygen and cause rapid suffocation.
Symptoms/injuries after skin contact	: May cause frostbite.
Symptoms/injuries after eye contact	: Contact with the product may cause cold burns or frostbite.
Symptoms/injuries after ingestion	: Ingestion is not considered a potential route of exposure.
Symptoms/injuries upon intravenous administration	: Not known.

SECTION 12: Ecological information

12.1. Toxicity

Chronic symptoms

Isopentane (78-78-4)	
EC50 Daphnia 1	2.3 mg/l (Exposure time: 48 h - Species: Daphnia magna)
n-Pentane (109-66-0)	
LC50 fish 1	9.87 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
EC50 Daphnia 1	9.74 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	11.59 mg/l (Exposure time: 96 h - Species: Pimephales promelas)

: Adverse effects not expected from this product.

12.2. Persistence and degradability

n-Butane (106-97-8)		
Persistence and degradability	No data available.	
1-Butene (106-98-9)		
Persistence and degradability	Not readily biodegradable.	
Isobutane (75-28-5)		
Persistence and degradability	The substance is biodegradable. Unlikely to persist.	
Isopentane (78-78-4)		
Persistence and degradability	No data available.	

12.3. Bioaccumulative potential

n-Butane (106-97-8)	
Log Pow	2.89
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.
1-Butene (106-98-9)	
Log Pow	2.4

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1-Butene (106-98-9)	
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
Isobutane (75-28-5)	
BCF fish 1	1.57 - 1.97
Log Pow	2.76
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
Isopentane (78-78-4)	
Log Pow	3.2 - 3.3
Log Kow	Not applicable for gas-mixtures.
Bioaccumulative potential	No data available.
n-Pentane (109-66-0)	
Log Pow	3.39

12.4. Mobility in soil

n-Butane (106-97-8)	
Mobility in soil	No data available.
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
1-Butene (106-98-9)	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
Isobutane (75-28-5)	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
Isopentane (78-78-4)	
Mobility in soil	No data available.

12.5. Other adverse effects

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

Effect on the global warming : No known ecological damage caused by this product.

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 : UN3161 Liquefied gas, flammable, n.o.s.

UN-No.(DOT) : UN3161

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

Hazard labels (DOT) : 2.1 - Flammable gas



DOT Packaging Non Bulk (49 CFR 173.xxx) : 304

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

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the

applicable liquefied compressed gases are authorized to be transported in portable tanks in

accordance with the requirements of 173.313 of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx)

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 guarters"

Other information : No supplementary information available.

TDG

Transport document description : UN3161 LIQUEFIED GAS, FLAMMABLE, N.O.S., 2.1

UN-No. (TDG) · UN3161

TDG Proper Shipping Name : LIQUEFIED GAS, FLAMMABLE, N.O.S. **TDG Primary Hazard Classes** : 2.1 - Class 2.1 - Flammable Gas.

Transport by sea

UN-No. (IMDG) : 3161

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

Class (IMDG) · 2 - Gases

Air transport

UN-No. (IATA) : 3161

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

Class (IATA)

SECTION 15: Regulatory information

15.1. US Federal regulations

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

1-Butene (106-98-9)

n-Butane (106-97-8)

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

Isobutane (75-28-5)

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

Isopentane (78-78-4)

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

n-Pentane (109-66-0)

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

EPA TSCA Regulatory Flag T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

15.2. International regulations

CANADA

n-Butane (106-97-8)	
Listed on the Canadian DSL (Domestic Sustance	s List)
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas

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1-Butene (106-98-9)		
Listed on the Canadian DSL (Domestic Sustances List)		
Isobutane (75-28-5)		
Listed on the Canadian DSL (Domestic Sustance	s List)	
WHMIS Classification	Class A - Compressed Gas Class B Division 1 - Flammable Gas	
Isopentane (78-78-4)		
Listed on the Canadian DSL (Domestic Sustances List)		
WHMIS Classification	Class B Division 2 - Flammable Liquid	
n-Pentane (109-66-0)		
Listed on the Canadian DSL (Domestic Sustances List)		
WHMIS Classification	Class B Division 2 - Flammable Liquid	

EU-Regulations

No additional information available

National regulations

n-Butane (106-97-8)

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)

Listed on the Canadian IDL (Ingredient Disclosure List)

1-Butene (106-98-9)

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)

Isobutane (75-28-5)

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)

Isopentane (78-78-4)

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)

n-Pentane (109-66-0)

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)

15.3. US State regulations

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n-Butane (106-97-8)

- 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

1-Butene (106-98-9)

- 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

Isobutane (75-28-5)

- 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

Isopentane (78-78-4)

- 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

n-Pentane (109-66-0)

- 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

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:

Aquatic Chronic 2	Hazardous to the aquatic environment - Chronic Hazard Category 2
Asp. Tox. 1	Aspiration hazard Category 1
Flam. Gas 1	Flammable gases Category 1
Flam. Liq. 1	Flammable liquids Category 1
Flam. Liq. 2	Flammable liquids Category 2
Liquefied gas	Gases under pressure Liquefied gas
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H220	Extremely flammable gas
H224	Extremely flammable liquid and vapor
H225	Highly flammable liquid and vapor
H280	Contains gas under pressure; may explode if heated
H304	May be fatal if swallowed and enters airways
H336	May cause drowsiness or dizziness
H411	Toxic to aquatic life with long lasting effects

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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