

# HY - 1-Butene 0.1PPM-0.8% (21 Component Range)

## Safety Data Sheet P-18-31376

This SDS conforms to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

Date of issue: 01/11/2018 :

### SECTION: 1. Product and company identification

#### 1.1. Product identifier

Product form : Mixture  
 Product name : HY - 1-Butene 0.1PPM-0.8% (21 Component Range)  
 Other means of identification : Mixture of 1-Butene 0.1ppm-0.8%, Argon 0.1ppm-1%, Benzene 0.095%-0.15%, Butane 0.1ppm-3%, Carbon Dioxide 1%-3%, Carbon Monoxide 0.95%-1.5%, Cis-2-Butene 0.1ppm-0.3%, Ethane 0.1ppm-7%, Ethylene 0.1ppm-3%, Helium 0.1ppm-2%, Heptane 0.1ppm-0.3%, Hexane 0.1ppm-0.3%, Isobutane 0.1ppm-1.5%, Isopentane 0.1ppm-0.2%, Methane 0.1ppm-12%, Nitrogen 0.1ppm-1%, Pentane 0.1ppm-1.5%, Propane 0.1ppm-3%, Propylene 0.1ppm-0.8%, Trans-2-Butene 0.1ppm-0.3% and Hydrogen

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

Use of the substance/mixture : Industrial use; Use as directed.

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

Praxair, Inc.  
 10 Riverview Drive  
 Danbury, CT 06810-6268 - USA  
 T 1-800-772-9247 (1-800-PRAXAIR) - F 1-716-879-2146  
[www.praxair.com](http://www.praxair.com)

#### 1.4. Emergency telephone number

Emergency number : Onsite Emergency: 1-800-645-4633

CHEMTREC, 24 hr/day 7 days/week  
 — Within USA: 1-800-424-9300, Outside USA: 001-703-527-3887  
 (collect calls accepted, Contract 17729)

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Flam. Gas 1	H220
Press. Gas (Comp.)	H280
Carc. 1A	H350
Repr. 1A	H360
STOT RE 1	H372

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H220 - EXTREMELY FLAMMABLE GAS  
 H280 - CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED  
 H350 - May cause cancer.  
 H360 - May damage fertility or the unborn child  
 H372 - CAUSES DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE  
 CGA-HG04 - MAY FORM EXPLOSIVE MIXTURES WITH AIR  
 OSHA-H01 - MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.

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### Precautionary statements (GHS-US)

CGA-HG03 - MAY INCREASE RESPIRATION AND HEART RATE.

: P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P210 - Keep away from Heat/Open flames/Sparks/Hot surfaces. - No smoking  
P260 - Do not breathe gas/vapours  
P264 - Wash exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P308+P313 - If exposed or concerned: Get medical advice/attention.  
P314 - Get medical advice/attention if you feel unwell.  
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.  
P381 - Eliminate all ignition sources if safe to do so.  
CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52°C (125°F).  
P405 - Store locked up.  
P271+P403 - Use and store only outdoors or in a well-ventilated place.  
P501 - Dispose of contents/container to in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

### 2.3. Other hazards

Other hazards not contributing to the classification : Asphyxiant in high concentrations.

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

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%
Hydrogen	(CAS-No.) 1333-74-0	57.35 - 97.95483
Methane	(CAS-No.) 74-82-8	0.00001 - 12
Ethane	(CAS-No.) 74-84-0	0.00001 - 7
Butane	(CAS-No.) 106-97-8	0.00001 - 3
Propane	(CAS-No.) 74-98-6	0.00001 - 3
Ethylene	(CAS-No.) 74-85-1	0.00001 - 3
Carbon dioxide	(CAS-No.) 124-38-9	1 - 3
Helium	(CAS-No.) 7440-59-7	0.00001 - 2
n-Pentane	(CAS-No.) 109-66-0	0.00001 - 1.5
Isobutane	(CAS-No.) 75-28-5	0.00001 - 1.5
Carbon monoxide	(CAS-No.) 630-08-0	0.95 - 1.5
Argon	(CAS-No.) 7440-37-1	0.00001 - 1
Nitrogen	(CAS-No.) 7727-37-9	0.00001 - 1
1-Butene	(CAS-No.) 106-98-9	0.00001 - 0.8
Propylene	(CAS-No.) 115-07-1	0.00001 - 0.8
n-Heptane	(CAS-No.) 142-82-5	0.00001 - 0.3
n-Hexane	(CAS-No.) 110-54-3	0.00001 - 0.3
cis-2-Butene	(CAS-No.) 590-18-1	0.00001 - 0.3
trans-2-Butene	(CAS-No.) 624-64-6	0.00001 - 0.3
Isopentane	(CAS-No.) 78-78-4	0.00001 - 0.2
Benzene	(CAS-No.) 71-43-2	0.095 - 0.15

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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped. Remove to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, trained personnel should give oxygen. Call a physician.
- First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Hold the eyelids open and away from the eyeballs to ensure that all surfaces are flushed thoroughly. Contact an ophthalmologist immediately..

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

No additional information available

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

Obtain medical assistance.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide, Dry chemical, Water spray or fog. Use extinguishing media appropriate for surrounding fire.

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

- Fire hazard : EXTREMELY FLAMMABLE GAS.
- Explosion hazard : EXTREMELY FLAMMABLE GAS. Forms explosive mixtures with air and oxidizing agents.
- Reactivity : No reactivity hazard other than the effects described in sub-sections below.

#### 5.3. Advice for firefighters

- Firefighting instructions : Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. Remove containers from area of fire if safe to do so. On-site fire brigades must comply with their provincial and local fire code regulations.
- Protection during firefighting : Compressed gas: asphyxiant. Suffocation hazard by lack of oxygen. **Danger! FLAMMABLE, HIGH PRESSURE GAS..**
- Special protective equipment for fire fighters : Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.
- Other information : Containers are equipped with a pressure relief device. (Exceptions may exist where authorized by TC.).

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : If venting or leaking gas catches fire, do not extinguish flames. Flammable vapors may spread from leak, creating an explosive reignition hazard. Vapors can be ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static discharge, or other ignition sources at locations distant from product handling point. Explosive atmospheres may linger. Before entering an area, especially a confined area, check the atmosphere with an appropriate device. Ensure adequate air ventilation. Evacuate area. Monitor concentration of released product.

##### 6.1.1. For non-emergency personnel

No additional information available

##### 6.1.2. For emergency responders

No additional information available

#### 6.2. Environmental precautions

Try to stop release. Prevent waste from contaminating the surrounding environment. Prevent soil and water pollution. Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

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

No additional information available

### 6.4. Reference to other sections

See also sections 8 and 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Use only explosion-proof equipment.

Wear leather safety gloves and safety shoes when handling cylinders. Protect cylinders from physical damage; do not drag, roll, slide or drop. While moving cylinder, always keep in place removable valve cover. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Never insert an object (e.g. wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Slowly open the valve. If the valve is hard to open, discontinue use and contact your supplier. Close the container valve after each use; keep closed even when empty. Never apply flame or localized heat directly to any part of the container. High temperatures may damage the container and could cause the pressure relief device to fail prematurely, venting the container contents. For other precautions in using this product, see section 16.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store only where temperature will not exceed 125°F (52°C). Post "No Smoking/No Open Flames" signs in storage and use areas. There must be no sources of ignition. Separate packages and protect against potential fire and/or explosion damage following appropriate codes and requirements (e.g. NFPA 30, NFPA 55, NFPA 70, and/or NFPA 221 in the U.S.) or according to requirements determined by the Authority Having Jurisdiction (AHJ). Always secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand when the container is not in use. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods. For other precautions in using this product, see section 16.

Store in a cool, well-ventilated place. Store and use with adequate ventilation. Store only where temperature will not exceed 125°F (52°C). Firmly secure containers upright to keep them from falling or being knocked over. Install valve protection cap, if provided, firmly in place by hand. Store full and empty containers separately. Use a first-in, first-out inventory system to prevent storing full containers for long periods.

**OTHER PRECAUTIONS FOR HANDLING, STORAGE, AND USE:** When handling product under pressure, use piping and equipment adequately designed to withstand the pressures to be encountered. Never work on a pressurized system. Use a back flow preventive device in the piping. Gases can cause rapid suffocation because of oxygen deficiency; store and use with adequate ventilation. If a leak occurs, close the container valve and blow down the system in a safe and environmentally correct manner in compliance with all international, federal/national, state/provincial, and local laws; then repair the leak. Never place a container where it may become part of an electrical circuit.

### 7.3. Specific end use(s)

None.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Benzene (71-43-2)		
ACGIH	ACGIH TLV-TWA (ppm)	0.5 ppm
ACGIH	ACGIH TLV-STEL (ppm)	2.5 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	10 ppm 1 ppm

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<b>Benzene (71-43-2)</b>		
USA OSHA	OSHA PEL (STEL) (ppm)	5 ppm (see 29 CFR 1910.1028)
USA OSHA	OSHA PEL (Ceiling) (ppm)	25 ppm
<b>Isopentane (78-78-4)</b>		
ACGIH	ACGIH TLV-TWA (ppm)	1000 ppm
USA OSHA	Not established	
<b>n-Heptane (142-82-5)</b>		
ACGIH	ACGIH TLV-TWA (ppm)	400 ppm
ACGIH	ACGIH TLV-STEL (ppm)	500 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2000 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	500 ppm
<b>n-Hexane (110-54-3)</b>		
ACGIH	ACGIH TLV-TWA (ppm)	50 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	500 ppm
<b>cis-2-Butene (590-18-1)</b>		
ACGIH	ACGIH TLV-TWA (ppm)	250 ppm
USA OSHA	Not established	
<b>trans-2-Butene (624-64-6)</b>		
ACGIH	ACGIH TLV-TWA (ppm)	250 ppm
<b>Argon (7440-37-1)</b>		
ACGIH	Not established	
USA OSHA	Not established	
<b>1-Butene (106-98-9)</b>		
ACGIH	ACGIH TLV-TWA (ppm)	250 ppm
USA OSHA	Not established	
<b>Propylene (115-07-1)</b>		
ACGIH	ACGIH TLV-TWA (ppm)	500 ppm
<b>Nitrogen (7727-37-9)</b>		
ACGIH	Not established	
USA OSHA	Not established	
<b>n-Pentane (109-66-0)</b>		
ACGIH	ACGIH TLV-TWA (ppm)	1000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2950 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
<b>Isobutane (75-28-5)</b>		
ACGIH	ACGIH TLV-TWA (ppm)	1000 ppm
ACGIH	ACGIH TLV-STEL (ppm)	1000 ppm
USA OSHA	Not established	
<b>Carbon monoxide (630-08-0)</b>		
ACGIH	ACGIH TLV-TWA (ppm)	25 ppm

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Carbon monoxide (630-08-0)		
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	55 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	50 ppm
Helium (7440-59-7)		
ACGIH	Not established	
USA OSHA	Not established	
Methane (74-82-8)		
ACGIH	Not established	
USA OSHA	Not established	
Butane (106-97-8)		
ACGIH	ACGIH TLV-STEL (ppm)	1000 ppm
USA OSHA	Not established	
Propane (74-98-6)		
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1800 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
ACGIH	Not established	
Ethylene (74-85-1)		
ACGIH	ACGIH TLV-TWA (ppm)	200 ppm
ACGIH	Remark (ACGIH)	Asphyxia
Carbon dioxide (124-38-9)		
ACGIH	ACGIH TLV-TWA (ppm)	5000 ppm
ACGIH	ACGIH TLV-STEL (ppm)	30000 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	9000 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	5000 ppm
Ethane (74-84-0)		
ACGIH	Not established	
USA OSHA	Not established	
Hydrogen (1333-74-0)		
ACGIH	Remark (ACGIH)	Simple asphyxiant
USA OSHA	Not established	

### 8.2. Exposure controls

Appropriate engineering controls	: Use an explosion-proof local exhaust system. Local exhaust and general ventilation must be adequate to meet exposure standards. MECHANICAL (GENERAL): <b>Inadequate - Use only in a closed system.</b> Use explosion proof equipment and lighting. Alarm detectors should be used when toxic gases may be released. Product to be handled in a closed system and under strictly controlled conditions. Ensure exposure is below occupational exposure limits (where available). Provide adequate general and local exhaust ventilation.
Eye protection	: Wear safety glasses with side shields.
Skin and body protection	: Wear metatarsal shoes and work gloves for cylinder handling, and protective clothing where needed. Wear appropriate chemical gloves during cylinder changeout or wherever contact with product is possible.

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Respiratory protection	: When workplace conditions warrant respirator use, follow a respiratory protection program that meets OSHA 29 CFR 1910.134, ANSI Z88.2, or MSHA 30 CFR 72.710 (where applicable). Use an air-supplied or air-purifying cartridge if the action level is exceeded. Ensure that the respirator has the appropriate protection factor for the exposure level. If cartridge type respirators are used, the cartridge must be appropriate for the chemical exposure. For emergencies or instances with unknown exposure levels, use a self-contained breathing apparatus (SCBA).
Thermal hazard protection	: Wear cold insulating gloves when transfilling or breaking transfer connections.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Gas
Colour	: Colourless
Odour	: No data available
Odour threshold	: No data available
pH	: Not applicable.
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: Not applicable.
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: Not applicable.
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Water: No data available
Log Pow	: Not applicable.
Log Kow	: Not applicable.
Viscosity, kinematic	: Not applicable.
Viscosity, dynamic	: Not applicable.
Explosive properties	: Not applicable.
Oxidizing properties	: None.
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

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### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

<b>Benzene (71-43-2)</b>	
LD50 oral rat	810 mg/kg
LD50 dermal rabbit	> 8200 mg/kg
LC50 inhalation rat (mg/l)	44.66 mg/l/4h
LC50 inhalation rat (ppm)	26458 ppm/1h
ATE US (oral)	810 mg/kg bodyweight
ATE US (gases)	13229 ppmv/4h
ATE US (vapours)	44.66 mg/l/4h
ATE US (dust,mist)	44.66 mg/l/4h
<b>n-Heptane (142-82-5)</b>	
LC50 inhalation rat (ppm)	50266 ppm/1h
ATE US (gases)	25133 ppmv/4h
<b>n-Hexane (110-54-3)</b>	
LD50 oral rat	25 g/kg
LD50 dermal rabbit	3000 mg/kg
LC50 inhalation rat (ppm)	48000 ppm/4h
ATE US (oral)	25000 mg/kg bodyweight
ATE US (dermal)	3000 mg/kg bodyweight
ATE US (gases)	48000 ppmv/4h
<b>Propylene (115-07-1)</b>	
<b>n-Pentane (109-66-0)</b>	
LC50 inhalation rat (mg/l)	(Exposure time: 4 h)
LC50 inhalation rat (ppm)	246702 ppm/1h
ATE US (dermal)	3000 mg/kg bodyweight
ATE US (gases)	123351 ppmv/4h
ATE US (vapours)	364 mg/l/4h
ATE US (dust,mist)	364 mg/l/4h
<b>Isobutane (75-28-5)</b>	
LC50 inhalation rat (ppm)	285000 ppm/1h
ATE US (gases)	142500 ppmv/4h
ATE US (vapours)	658 mg/l/4h
ATE US (dust,mist)	658 mg/l/4h
<b>Carbon monoxide (630-08-0)</b>	
LC50 inhalation rat (ppm)	3760 ppm/1h
ATE US (gases)	1880 ppmv/4h
<b>Propane (74-98-6)</b>	
<b>Ethane (74-84-0)</b>	
ATE US (vapours)	658 mg/l/4h
ATE US (dust,mist)	658 mg/l/4h



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Skin corrosion/irritation	: Not classified
	pH: Not applicable.
Serious eye damage/irritation	: Not classified
	pH: Not applicable.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer.

Benzene (71-43-2)	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	1 - Evidence of Carcinogenicity, 2 - Known Human Carcinogens

Propylene (115-07-1)	
IARC group	3 - Not classifiable

Ethylene (74-85-1)	
IARC group	3 - Not classifiable

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 THROUGH PROLONGED OR REPEATED EXPOSURE.
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Benzene (71-43-2)	
LC50 fish 1	12.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	12.18 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	5.3 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 Daphnia 2	10 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Isopentane (78-78-4)	
EC50 Daphnia 1	2.3 mg/l (Exposure time: 48 h - Species: Daphnia magna)

n-Heptane (142-82-5)	
LC50 fish 1	375 mg/l (Exposure time: 96 h - Species: Cichlid fish)

n-Hexane (110-54-3)	
LC50 fish 1	2.54 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

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)

### 12.2. Persistence and degradability

HY - 1-Butene 0.1PPM-0.8% (21 Component Range)	
Persistence and degradability	No ecological damage caused by this product.

Isopentane (78-78-4)	
Persistence and degradability	Not established.

cis-2-Butene (590-18-1)	
Persistence and degradability	No data available.

trans-2-Butene (624-64-6)	
Persistence and degradability	No data available.

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<b>Argon (7440-37-1)</b>	
Persistence and degradability	No ecological damage caused by this product.
<b>1-Butene (106-98-9)</b>	
Persistence and degradability	Not readily biodegradable.
<b>Propylene (115-07-1)</b>	
Persistence and degradability	The substance is biodegradable. Unlikely to persist.
<b>Nitrogen (7727-37-9)</b>	
Persistence and degradability	No ecological damage caused by this product.
<b>Isobutane (75-28-5)</b>	
Persistence and degradability	The substance is biodegradable. Unlikely to persist.
<b>Helium (7440-59-7)</b>	
Persistence and degradability	No ecological damage caused by this product.
<b>Methane (74-82-8)</b>	
Persistence and degradability	The substance is biodegradable. Unlikely to persist.
<b>Butane (106-97-8)</b>	
Persistence and degradability	The substance is biodegradable. Unlikely to persist.
<b>Propane (74-98-6)</b>	
Persistence and degradability	The substance is biodegradable. Unlikely to persist.
<b>Ethylene (74-85-1)</b>	
Persistence and degradability	The substance is biodegradable. Unlikely to persist.
<b>Carbon dioxide (124-38-9)</b>	
Persistence and degradability	No ecological damage caused by this product.
<b>Ethane (74-84-0)</b>	
Persistence and degradability	The substance is biodegradable. Unlikely to persist.
<b>Hydrogen (1333-74-0)</b>	
Persistence and degradability	No ecological damage caused by this product.

### 12.3. Bioaccumulative potential

<b>HY - 1-Butene 0.1PPM-0.8% (21 Component Range)</b>	
Log Pow	Not applicable.
Log Kow	Not applicable.
Bioaccumulative potential	No ecological damage caused by this product.
<b>Benzene (71-43-2)</b>	
BCF fish 1	3.5 - 4.4
Log Pow	2.1
<b>Isopentane (78-78-4)</b>	
Log Pow	3.2 - 3.3
Bioaccumulative potential	Not established.
<b>n-Heptane (142-82-5)</b>	
Log Pow	4.66
<b>cis-2-Butene (590-18-1)</b>	
Log Pow	2.33
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
<b>trans-2-Butene (624-64-6)</b>	
Log Pow	2.32
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.

# HY - 1-Butene 0.1PPM-0.8% (21 Component Range)

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<b>Argon (7440-37-1)</b>	
Log Pow	Not applicable.
Log Kow	Not applicable.
Bioaccumulative potential	No ecological damage caused by this product.
<b>1-Butene (106-98-9)</b>	
Log Pow	2.4
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
<b>Propylene (115-07-1)</b>	
Log Pow	1.77
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
<b>Nitrogen (7727-37-9)</b>	
Log Pow	Not applicable for inorganic gases.
Log Kow	Not applicable.
Bioaccumulative potential	No ecological damage caused by this product.
<b>n-Pentane (109-66-0)</b>	
Log Pow	3.39
<b>Isobutane (75-28-5)</b>	
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.
<b>Carbon monoxide (630-08-0)</b>	
Log Kow	Not applicable.
<b>Helium (7440-59-7)</b>	
Log Pow	Not applicable for inorganic gases.
Log Kow	Not applicable.
Bioaccumulative potential	No ecological damage caused by this product.
<b>Methane (74-82-8)</b>	
Log Pow	1.09
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
<b>Butane (106-97-8)</b>	
Log Pow	2.89
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
<b>Propane (74-98-6)</b>	
Log Pow	2.36
Log Kow	Not applicable.
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
<b>Ethylene (74-85-1)</b>	
BCF fish 1	4 - 4.6
Log Pow	1.13
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
<b>Carbon dioxide (124-38-9)</b>	
BCF fish 1	(no bioaccumulation)
Log Pow	0.83
Log Kow	Not applicable.
Bioaccumulative potential	No ecological damage caused by this product.
<b>Ethane (74-84-0)</b>	
Log Pow	1.81
Log Kow	Not applicable.

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<b>Ethane (74-84-0)</b>	
Bioaccumulative potential	Not expected to bioaccumulate due to the low log Kow (log Kow < 4). Refer to section 9.
<b>Hydrogen (1333-74-0)</b>	
BCF fish 1	(no bioaccumulation expected)
Log Pow	Not applicable.
Log Kow	Not applicable.
Bioaccumulative potential	No ecological damage caused by this product.
<b>12.4. Mobility in soil</b>	
<b>HY - 1-Butene 0.1PPM-0.8% (21 Component Range)</b>	
Mobility in soil	No data available.
<b>cis-2-Butene (590-18-1)</b>	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
<b>trans-2-Butene (624-64-6)</b>	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
<b>Argon (7440-37-1)</b>	
Mobility in soil	No data available.
Ecology - soil	No ecological damage caused by this product.
<b>1-Butene (106-98-9)</b>	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
<b>Propylene (115-07-1)</b>	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
<b>Nitrogen (7727-37-9)</b>	
Mobility in soil	No data available.
Ecology - soil	No ecological damage caused by this product.
<b>Isobutane (75-28-5)</b>	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
<b>Carbon monoxide (630-08-0)</b>	
Mobility in soil	No data available.
<b>Helium (7440-59-7)</b>	
Mobility in soil	No data available.
Ecology - soil	No ecological damage caused by this product.
<b>Methane (74-82-8)</b>	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
<b>Butane (106-97-8)</b>	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
<b>Propane (74-98-6)</b>	
Mobility in soil	No data available.
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
<b>Ethylene (74-85-1)</b>	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.
<b>Carbon dioxide (124-38-9)</b>	
Mobility in soil	No data available.
Ecology - soil	No ecological damage caused by this product.
<b>Ethane (74-84-0)</b>	
Mobility in soil	No data available.
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution.

# HY - 1-Butene 0.1PPM-0.8% (21 Component Range)

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### Hydrogen (1333-74-0)

Mobility in soil	No data available.
Ecology - soil	No ecological damage caused by this product.

### 12.5. Other adverse effects

Effect on the ozone layer : None.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose of contents/container in accordance with local/regional/national/international regulations. Contact supplier for any special requirements.

## SECTION 14: Transport information

In accordance with DOT

Transport document description : UN1954 Compressed gas, flammable, n.o.s., 2.1  
 UN-No.(DOT) : UN1954  
 Proper Shipping Name (DOT) : Compressed gas, flammable, n.o.s.  
 Hazard labels (DOT) : 2.1 - Flammable gas



DOT Symbols : G - Identifies proper shipping name (PSN) requiring the addition of technical name(s) in parentheses following the PSN.

### Additional information

Other information : No supplementary information available.

Special transport precautions : Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers:  
 - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.

### Transport by sea

UN-No. (IMDG) : 1954  
 Proper Shipping Name (IMDG) : COMPRESSED GAS, FLAMMABLE, N.O.S.  
 Class (IMDG) : 2.1 - Flammable 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

### Benzene (71-43-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory  
 Subject to reporting requirements of United States SARA Section 313

CERCLA RQ	10 lb received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule
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# HY - 1-Butene 0.1PPM-0.8% (21 Component Range)

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<b>Benzene (71-43-2)</b>	
SARA Section 313 - Emission Reporting	0.1 %
<b>n-Hexane (110-54-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
CERCLA RQ	5000 lb
SARA Section 313 - Emission Reporting	1 %
<b>Propylene (115-07-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	1 %
<b>n-Pentane (109-66-0)</b>	
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.
<b>Ethylene (74-85-1)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313	
SARA Section 313 - Emission Reporting	1 %

### 15.2. International regulations

#### CANADA

<b>Benzene (71-43-2)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Isopentane (78-78-4)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>n-Heptane (142-82-5)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>n-Hexane (110-54-3)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Argon (7440-37-1)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Propylene (115-07-1)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Nitrogen (7727-37-9)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>n-Pentane (109-66-0)</b>
Listed on the Canadian DSL (Domestic Substances List)
<b>Isobutane (75-28-5)</b>
Listed on the Canadian DSL (Domestic Substances List)

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

Listed on the Canadian DSL (Domestic Substances List)

### Helium (7440-59-7)

Listed on the Canadian DSL (Domestic Substances List)

### Methane (74-82-8)

Listed on the Canadian DSL (Domestic Substances List)

### Butane (106-97-8)

Listed on the Canadian DSL (Domestic Substances List)

### Propane (74-98-6)

Listed on the Canadian DSL (Domestic Substances List)

### Ethylene (74-85-1)

Listed on the Canadian DSL (Domestic Substances List)

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

Listed on the Canadian DSL (Domestic Substances List)

### Ethane (74-84-0)

Listed on the Canadian DSL (Domestic Substances List)

### Hydrogen (1333-74-0)

Listed on the Canadian DSL (Domestic Substances List)

## EU-Regulations

### Benzene (71-43-2)

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

### n-Hexane (110-54-3)

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

### Propylene (115-07-1)

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

### Ethylene (74-85-1)

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

## 15.2.2. National regulations

### Benzene (71-43-2)

Listed on IARC (International Agency for Research on Cancer)  
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)  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed as carcinogen on NTP (National Toxicology Program)  
Listed on the Canadian IDL (Ingredient Disclosure List)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on Turkish inventory of chemical

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### n-Hexane (110-54-3)

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)  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on the Canadian IDL (Ingredient Disclosure List)  
Listed on INSQ (Mexican National Inventory of Chemical Substances)  
Listed on Turkish inventory of chemical

### Propylene (115-07-1)

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 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 INSQ (Mexican National Inventory of Chemical Substances)  
Listed on Turkish inventory of chemical

### Ethylene (74-85-1)

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 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 INSQ (Mexican National Inventory of Chemical Substances)  
Listed on Turkish inventory of chemical

### 15.3. US State regulations

#### HY - 1-Butene 0.1PPM-0.8% (21 Component Range)()

U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No

#### Benzene (71-43-2)

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)
Yes	Yes	No	Yes	

#### Isopentane (78-78-4)

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	No	No	No	

#### n-Heptane (142-82-5)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity -	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
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# HY - 1-Butene 0.1PPM-0.8% (21 Component Range)

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<b>n-Heptane (142-82-5)</b>				
		Female		
No	No	No	No	
<b>n-Hexane (110-54-3)</b>				
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	No	No	No	
<b>cis-2-Butene (590-18-1)</b>				
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	No	No	No	
<b>trans-2-Butene (624-64-6)</b>				
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	No	No	No	
<b>Argon (7440-37-1)</b>				
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	No	No	No	
<b>1-Butene (106-98-9)</b>				
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	No	No	No	
<b>Propylene (115-07-1)</b>				
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	No	No	No	
<b>Nitrogen (7727-37-9)</b>				
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	No	No	No	
<b>n-Pentane (109-66-0)</b>				
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	No	No	No	

# HY - 1-Butene 0.1PPM-0.8% (21 Component Range)

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<b>Isobutane (75-28-5)</b>				
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	No	No	No	
<b>Carbon monoxide (630-08-0)</b>				
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	
<b>Helium (7440-59-7)</b>				
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	No	No	No	
<b>Methane (74-82-8)</b>				
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	No	No	No	
<b>Butane (106-97-8)</b>				
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	No	No	No	
<b>Propane (74-98-6)</b>				
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	No	No	No	
<b>Ethylene (74-85-1)</b>				
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	No	No	No	
<b>Carbon dioxide (124-38-9)</b>				
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	No	No	No	
<b>Ethane (74-84-0)</b>				
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)

# HY - 1-Butene 0.1PPM-0.8% (21 Component Range)

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<b>Ethane (74-84-0)</b>				
No	No	No	No	
<b>Hydrogen (1333-74-0)</b>				
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	No	No	No	
<b>Benzene (71-43-2)</b>				
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) - Special Hazardous Substances U.S. - Pennsylvania - RTK (Right to Know) List				
<b>Isopentane (78-78-4)</b>				
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				
<b>n-Heptane (142-82-5)</b>				
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				
<b>n-Hexane (110-54-3)</b>				
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				
<b>cis-2-Butene (590-18-1)</b>				
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				
<b>trans-2-Butene (624-64-6)</b>				
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				
<b>Argon (7440-37-1)</b>				
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				
<b>1-Butene (106-98-9)</b>				
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				
<b>Propylene (115-07-1)</b>				
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				
<b>Nitrogen (7727-37-9)</b>				
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				

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### 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

### 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

### 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

### Helium (7440-59-7)

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

### 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

### 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

### Propane (74-98-6)

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

### Ethylene (74-85-1)

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

### 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

### Ethane (74-84-0)

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

### 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

# HY - 1-Butene 0.1PPM-0.8% (21 Component Range)

## Safety Data Sheet P-18-31376

This SDS conforms to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

Date of issue: 01/11/2018

### SECTION 16: Other information

#### Other information

: When you mix two or more chemicals, you can create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an industrial hygienist or other trained person when you evaluate the end product. Before using any plastics, confirm their compatibility with this product.

Praxair asks users of this product to study this SDS and become aware of the product hazards and safety information. To promote safe use of this product, a user should (1) notify employees, agents, and contractors of the information in this SDS and of any other known product hazards and safety information, (2) furnish this information to each purchaser of the product, and (3) ask each purchaser to notify its employees and customers of the product hazards and safety information.

The opinions expressed herein are those of qualified experts within Praxair, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use are not within the control of Praxair, Inc, it is the user's obligation to determine the conditions of safe use of the product.

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SDS US (GHS HazCom 2012) - PDI

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*