

Safety Data Sheet



Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name

- **Propane**

Synonyms

- HD5 Propane; Liquefied Petroleum Gas; LP-Gas; Odorized Propane; Propane (Stenched); Propane (Unstenched); Propane Commercial; Propane for Process; Propane Motor Fuel; Unodorized Propane

Product Description

- LPG fuel.

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

- Relevant identified use(s)**
- Propane is used as a LPG fuel

1.3 Details of the supplier of the safety data sheet

Manufacturer

- Delek Refining, Ltd.
425 McMurrey Drive
Tyler, TX 75702
United States
www.delekus.com

Telephone (General) • 903-579-3400

Telephone (General) • 903-579-3502 - Fax

1.4 Emergency telephone number

Manufacturer

- (800) 424-9300 - 24 Hour CHEMTREC - National

Manufacturer

- (703) 527-3887 - 24 Hour CHEMTREC - International

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP

- Flammable Gases 1 - H220
Liquefied Gas - H280

DSD/DPD

- Extremely Flammable (F+)
R12

2.2 Label Elements

CLP

DANGER



- Hazard statements**
- H220 - Extremely flammable gas
 - H280 - Contains gas under pressure; may explode if heated

Precautionary statements

- Prevention**
- P210 - Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
- Response**
- P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
 - P381 - Eliminate all ignition sources if safe to do so.
- Storage/Disposal**
- P410+P403 - Protect from sunlight. Store in a well-ventilated place.

DSD/DPD



- Risk phrases**
- R12 - Extremely flammable.
- Safety phrases**
- S9 - Keep container in a well ventilated place
 - S16 - Keep away from sources of ignition - No Smoking.

2.3 Other Hazards

CLP

- Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite. This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces. According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD

- Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite. This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces. According to European Directive 1999/45/EC this material is considered dangerous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012

- Flammable Gases 1
- Liquefied Gas
- Simple Asphyxiant

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements**
- Extremely flammable gas
 - Contains gas under pressure; may explode if heated
 - May displace oxygen and cause rapid suffocation.

Precautionary statements

- Prevention**
- Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
- Response**
- Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
- Storage/Disposal**
- Protect from sunlight. Store in a well-ventilated place.

2.3 Other hazards

OSHA HCS 2012

- Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

2.1 Classification of the substance or mixture**WHMIS**

- Compressed Gas - A
Flammable Gases - B1

2.2 Label elements**WHMIS**

- Compressed Gas - A
Flammable Gases - B1

2.3 Other hazards**WHMIS**

- Contact with gas or liquefied gas will cause burns, severe injury and/or frostbite. This material is a simple asphyxiant. May displace or reduce oxygen available for breathing especially in confined spaces. In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

2.4 Other information

- Propane may be a weak cardiac sensitizer

See Section 12 for Ecological Information.

Section 3 - Composition/Information on Ingredients**3.1 Substances**

- Material does not meet the criteria of a substance.

3.2 Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Propane	CAS:74-98-6 EC Number:200-827-9 EU Index:601-003-00-5	> 65%	NDA	EU DSD/DPD: Annex VI, Table 3.2: F+; R12 EU CLP: Annex VI, Table 3.1: Flam. Gas 1, H220; Press. Gas OSHA HCS 2012: Flam. Gas 1; Press. Gas; Simp. Asphyx.	NDA
Propene	CAS:115-07-1 EC Number:204-062-1 EU Index:601-011-00-9	< 35%	NDA	EU DSD/DPD: Annex VI, Table 3.2: F+; R12 EU CLP: Annex VI, Table 3.1: Flam. Gas 1, H220; Press. Gas OSHA HCS 2012: Flam. Gas 1; Press. Gas; Simp. Asphyx.	NDA
	CAS:74-84-0 EC Number:200-			EU DSD/DPD: Annex VI, Table 3.2: F+; R12 EU CLP: Annex VI, Table 3.1: Flam. Gas 1, H220;	

Ethane	814-8 EU Index:601-002-00-X	< 6%	NDA	Press. Gas OSHA HCS 2012: Flam. Gas 1; Press Gas; Simp. Asphyx.	NDA
Butane	CAS:106-97-8 EC Number:203-448-7	< 5%	Inhalation-Rat LC50 • 658 g/m ³ 4 Hour(s)	EU DSD/DPD: Annex VI, Table 3.2: F+; R12 EU CLP: Annex VI, Table 3.1: Flam. Gas 1; Press. Gas OSHA HCS 2012: Flam. Gas 1; Press. Gas; STOT SE 3: Narc. (Inhl); Simp. Asphyx.	NDA
Ethaneethiol	CAS:75-08-1 EC Number:200-837-3 EU Index:016-022-00-9	< 0.1%	Ingestion/Oral-Rat LD50 • 682 mg/kg	EU CLP: Community workplace exposure limit OSHA HCS 2012: Exposure limits	NDA

See Section 11 for Toxicological Information.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation

- Move victim to fresh air. Administer oxygen if breathing is difficult. If breathing has stopped, apply artificial respiration. Obtain medical attention immediately if inhaled.

Skin

- If frostbite has occurred, seek medical attention immediately; do NOT rub the affected areas or flush them with water. In order to prevent further tissue damage, do NOT attempt to remove frozen clothing from frostbitten areas. If frostbite has NOT occurred, immediately and thoroughly wash contaminated skin with soap and water.

Eye

- If eye tissue is frozen, seek medical attention immediately; if tissue is not frozen, immediately and thoroughly flush the eyes with large amounts of water for at least 15 minutes, occasionally lifting the lower and upper eyelids. If irritation, pain, swelling, lacrimation, or photophobia persist, get medical attention as soon as possible.

Ingestion

- Never give anything by mouth to an unconscious person. If frostbite has occurred, seek medical attention immediately; do NOT rub the affected areas or flush them with water. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

- Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in person exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

See Section 2 for Potential Health Effects.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media

- SMALL FIRES: Dry chemical or CO₂.
LARGE FIRES: Water spray or fog.

Unsuitable Extinguishing Media

- No data available

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

- EXTREMELY FLAMMABLE
Will be easily ignited by heat, sparks or flames.
Will form explosive mixtures with air.
Containers may explode when heated.

Vapors from liquefied gas are initially heavier than air and spread along ground.
 Vapors may travel to source of ignition and flash back.
 Cylinders exposed to fire may vent and release flammable gas through pressure relief devices.
 Ruptured cylinders may rocket.
 Empty containers may contain product residue which could produce explosive vapors.

Hazardous Combustion Products

- Products of combustion may contain carbon dioxide or carbon monoxide.

5.3 Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. Always wear thermal protective clothing when handling refrigerated/cryogenic liquids. **DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED**
 Move containers from fire area if you can do it without risk.
FIRE: If tank, rail car or tank truck is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also, consider initial evacuation for 1600 meters (1 mile) in all directions.
FIRE INVOLVING TANKS: ALWAYS stay away from tanks engulfed in fire.
FIRE INVOLVING TANKS AND CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: Cool containers with flooding quantities of water until well after fire is out.
FIRE INVOLVING TANKS: Do not direct water at source of leak or safety devices; icing may occur.
FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Ventilate the area before entry. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Always wear thermal protective clothing when handling refrigerated/cryogenic liquids.

Emergency Procedures

- **ELIMINATE** all ignition sources (no smoking, flares, sparks or flames in immediate area). As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (330 feet) in all directions. Keep unauthorized personnel away. All equipment used when handling this product must be grounded. Stay upwind. **LARGE SPILL:** Consider initial downwind evacuation for at least 800 meters (1/2 mile)

6.2 Environmental precautions

- Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk.
 If possible, turn leaking containers so that gas escapes rather than liquid.
 All equipment used when handling the product must be grounded.
 Do not direct water at spill or source of leak.
 Prevent spreading of vapors through sewers, ventilation systems and confined areas.
 Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
 Isolate area until gas has dispersed.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

- Keep away from heat and sparks. Keep away from fire - No Smoking. Take precautionary measures against static charges. Use only non-sparking tools. All equipment used when handling the product must be grounded. Cylinders should be firmly secured to prevent falling or being knocked-over. Use explosion-proof electrical/ventilating/lighting/equipment. Do not attempt to repair, adjust, or in any other way modify cylinders. If there is a malfunction or another type of operational problem, contact nearest distributor immediately. Empty containers retain product residue and can be hazardous. Do not cut, weld, puncture or incinerate container. Do not breathe gas. Wear appropriate protective clothing.

7.2 Conditions for safe storage, including any incompatibilities

Storage

- Cylinders should be stored in dry, well-ventilated areas away from sources of heat, ignition and direct sunlight. Protect cylinders against physical damage. Cylinders should be firmly secured to prevent falling or being knocked-over. Do not store with strong oxidizers.

7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines				
	Result	ACGIH	NIOSH	OSHA
Ethanethiol (75-08-1)	Ceilings	Not established	0.5 ppm Ceiling (15 min); 1.3 mg/m ³ Ceiling (15 min)	10 ppm Ceiling; 25 mg/m ³ Ceiling
	TWAs	0.5 ppm TWA	Not established	Not established
Butane (106-97-8)	STELs	1000 ppm STEL	Not established	Not established
	TWAs	Not established	800 ppm TWA; 1900 mg/m ³ TWA	Not established
Ethane (74-84-0)	TWAs	1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)	Not established	Not established
Propene (115-07-1)	TWAs	500 ppm TWA	Not established	Not established
Propane (74-98-6)	TWAs	1000 ppm TWA (listed under Aliphatic hydrocarbon gases: Alkane C1-4)	1000 ppm TWA; 1800 mg/m ³ TWA	1000 ppm TWA; 1800 mg/m ³ TWA

8.2 Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use explosion-proof - electrical, ventilating and/or lighting equipment.

Personal Protective Equipment

Respiratory

- Respiratory protection only required when exposure limits are exceeded. In the event an exposure limit is exceeded follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

Eye/Face

- Wear protective eyewear (goggles, face shield, or safety glasses).

Skin/Body

- Wear protective gloves .

Environmental Exposure Controls

- Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene
 NIOSH = National Institute of Occupational Safety and Health
 OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures
 TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Gas	Appearance/Description	Colorless, odorless liquefied gas unless an odorant is added.
Color	Colorless	Odor	Odorless
Odor Threshold	Data lacking		
General Properties			
Boiling Point	-44 F(-42.2222 C)	Melting Point	-309.46 F(-189.7 C)
Decomposition Temperature	Data lacking	pH	Data lacking
Specific Gravity/Relative Density	0.508 to 0.51 Water=1	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	108 psia @ 70 F(21.1111 C)	Vapor Density	1.5 Air=1
Evaporation Rate	1 n-Butyl Acetate = 1	Volatiles (Wt.)	100 %
Volatiles (Vol.)	100 %		
Flammability			
Flash Point	-156 F(-104.4444 C)	UEL	9.5 %
LEL	2.1 %	Autoignition	432 C(809.6 F)
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Sources of ignition. Keep away from heat and flame. Excess heat. Incompatible materials.

10.5 Incompatible materials

- Strong oxidizing agents.

10.6 Hazardous decomposition products

- Carbon dioxide, Carbon monoxide.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Propane (> 65%)	74-98-6	Acute Toxicity: Inhalation-Rat LC50 • >80000 ppm 15 Minute(s); <i>Behavioral:General anesthetic; Behavioral:Ataxia; Lungs, Thorax, or Respiration:Respiratory depression</i>
Butane (< 5%)	106-97-8	Acute Toxicity: Inhalation-Rat LC50 • 658 g/m ³ 4 Hour(s)

GHS Properties	Classification
Acute toxicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Aspiration Hazard	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Carcinogenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Germ Cell Mutagenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin corrosion/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-RE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-SE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Toxicity for Reproduction	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Respiratory sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Serious eye damage/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking

Potential Health Effects

Inhalation

Acute (Immediate)

- May cause asphyxiation. The signs and symptoms may include nausea, drowsiness, blue coloration of the skin and lips, unconsciousness, and death.

Chronic (Delayed)

- No data available

Skin

Acute (Immediate)

- Contact may cause frostbite. Skin may be flushed and irritated as frostbite develops. Skin may change to white or grayish yellow and blisters may appear.

Chronic (Delayed)

- No data available

Eye

Acute (Immediate)

- Contact may cause frostbite.

Chronic (Delayed)

- No data available

Ingestion**Acute (Immediate)**

- Under normal conditions of use, no health effects are expected. Intentional ingestion may cause frostbite to areas of contact.

Chronic (Delayed)

- No data available.

Key to abbreviations

LC = Lethal Concentration

Section 12 - Ecological Information**12.1 Toxicity**

Component	CAS	Data	Comments
Ethanethiol (< 0.1%)	75-08-1	Crustacea: 48 Hour(s) EC50 Water Flea 90-280 mg/L	

12.2 Persistence and degradability

- Material Data Lacking.

12.3 Bioaccumulative potential

- Material Data Lacking.

12.4 Mobility in Soil

- Material Data Lacking.

12.5 Results of PBT and vPvB assessment

- PBT and vPvB assessment has not been conducted for this material.

12.6 Other adverse effects

- No studies have been found.

12.7 Other Information

- This material contains a component known to have harmful effects to the aquatic environment.

Section 13 - Disposal Considerations**13.1 Waste treatment methods****Product waste**

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	UN1075	Petroleum gases, liquefied	2.1	NDA	NDA
TDG	UN1075	PETROLEUM GASES, LIQUEFIED	2.1	NDA	NDA

IMO/IMDG	UN1075	PETROLEUM GASES, LIQUEFIED	2.1	NDA	NDA
IATA/ICAO	UN1075	Petroleum gases, liquefied	2.1	NDA	NDA

14.6 Special precautions for user

- Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated during transportation.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

- Not relevant.

Section 15 - Regulatory Information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****SARA Hazard Classifications** • Acute, Fire, Pressure(Sudden Release of)

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
Butane	106-97-8	Yes	No	Yes	No	Yes
Ethane	74-84-0	Yes	No	Yes	No	Yes
Ethanethiol	75-08-1	Yes	No	Yes	No	Yes
Propane	74-98-6	Yes	No	Yes	No	Yes
Propene	115-07-1	Yes	No	Yes	No	Yes

Canada**Labor****Canada - WHMIS - Classifications of Substances**

• Ethane	74-84-0	A, B1
• Ethanethiol	75-08-1	B2
• Propane	74-98-6	A, B1
• Butane	106-97-8	A, B1
• Propene	115-07-1	A, B1

Canada - WHMIS - Ingredient Disclosure List

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	1 %
• Propane	74-98-6	Not Listed
• Butane	106-97-8	1 %
• Propene	115-07-1	Not Listed

Environment**Canada - CEPA - Priority Substances List**

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

Other Agency Information

Other

AIHA - Emergency Response Planning Guidelines - ERPG-1 Values

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

U.S. - CAA (Clean Air Act) - Accidental Release Prevention - Flammable Substances

• Ethane	74-84-0	10000 lb threshold quantity
• Ethanethiol	75-08-1	10000 lb threshold quantity
• Propane	74-98-6	10000 lb threshold quantity
• Butane	106-97-8	10000 lb threshold quantity
• Propene	115-07-1	10000 lb threshold quantity

U.S. - CAA (Clean Air Act) - Accidental Release Prevention - Toxic Substances

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed

• Propene	115-07-1	Not Listed
U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities		
• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs		
• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed
U.S. - CERCLA/SARA - Section 313 - Emission Reporting		
• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	1.0 % de minimis concentration
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Ethane	74-84-0	Not Listed
• Ethanethiol	75-08-1	Not Listed
• Propane	74-98-6	Not Listed
• Butane	106-97-8	Not Listed
• Propene	115-07-1	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Last Revision Date

- 28/May/2015

Preparation Date

- 15/February/2011

Disclaimer/Statement of Liability

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Key to abbreviations

NDA = No Data Available