



## Normal Butane C/ISOM Grade

Version 2.2

Revision Date 2022-11-21

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

#### Product information

Product Name : Normal Butane C/ISOM Grade  
 Material : 1012529

**Company** : Chevron Phillips Chemical Company LP  
 10001 Six Pines Drive  
 The Woodlands, TX 77380

#### Emergency telephone:

##### Health:

866.442.9628 (North America)  
 1.832.813.4984 (International)

##### Transport:

CHEMTREC 800.424.9300 or 703.527.3887(int'l)  
 Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090  
 Mexico CHEMTREC 01-800-681-9531 (24 hours)  
 South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600  
 Argentina: +(54)-1159839431  
 EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)  
 Austria: VIZ +43 1 406 43 43 (24 hours/day, 7 days/week)  
 Belgium: 070 245 245 (24 hours/day, 7 days/week)  
 Bulgaria: +359 2 9154 233  
 Croatia: +3851 2348 342 (24 hours/day, 7 days/week)  
 Cyprus: 1401  
 Czech Republic: Toxicological Information Center +420 224 919 293, +420 224 915 402  
 Denmark: Danish Poison Center (Gifftlinjen): +45 8212 1212  
 Estonia: BIG +32.14.584545 (phone) or +32.14583516 (telefax)  
 Finland: 0800 147 111 09 471 977 (24 hours/day)  
 France: ORFILA number (INRS): + 33 (0) 1 45 42 59 59 (24 hours/day, 7 days/week)  
 Germany: BIG +32.14.584545 (phone) or +32.14583516 (telefax)  
 Greece: (0030) 2107793777 (24 hours/day, 7 days/week)  
 Hungary: +36-80-201-199 (24 hours/day, 7 days/week)  
 Iceland: 543 2222 (24 hours/day, 7 days/week)  
 Ireland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)  
 Italy: BIG +32.14.584545 (phone) or +32.14583516 (telefax)  
 Latvia: State Fire and Rescue Service, phone number: 112; Toxicology and Sepsis Clinic  
 Poisoning and Drug Information Center, Hipokrāta 2, Riga, Latvia, LV-1038, phone number +371  
 67042473. (24 hours.)  
 Liechtenstein: BIG +32.14.584545 (phone) or +32.14583516 (telefax)  
 Lithuania: +370 (85) 2362052

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Luxembourg: (+352) 8002 5500 (24 hours/day, 7 days/week)  
 Malta: +356 2395 2000  
 The Netherlands: NVIC: +31 (0)88 755 8000  
 Norway: 22 59 13 00 (24 hours/day, 7 days/week)  
 Poland: BIG +32.14.584545 (phone) or +32.14583516 (telefax)  
 Portugal: CIAV phone number: +351 800 250 250  
 Romania: +40213183606  
 Slovakia: +421 2 5477 4166  
 Slovenia: Phone number: 112  
 Spain: National Emergency Telephone Number of Spanish Poison Centre: +34 91 562 04 20 (24 hours/day, 7 days/week)  
 Sweden: 112 – ask for Poisons Information

Responsible Department : Product Safety and Toxicology Group  
 E-mail address : SDS@CPChem.com  
 Website : www.CPChem.com

**SECTION 2: Hazards identification****Classification of the substance or mixture**

This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

**Classification**

: Flammable gases, Category 1  
 Gases under pressure, Liquefied gas

**Labeling**

Symbol(s) :



Signal Word : 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/ 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:**  
 P410 + P403 Protect from sunlight. Store in a well-ventilated place.

**Carcinogenicity:****IARC**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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**NTP**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**SECTION 3: Composition/information on ingredients**

Synonyms : Normal Butane  
n-Butane

Molecular formula : C4H10

Component	CAS-No.	Weight %
n-Butane	106-97-8	94 - 100
Isobutane	75-28-5	0 - 6
n-Pentane	109-66-0	0 - 2
Propane	74-98-6	0 - 1
1-Butene	106-98-9	0 - 1

**SECTION 4: First aid measures**

General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance.

If inhaled : If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of eye contact : Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

**SECTION 5: Firefighting measures**

Flash point : -73°C (-99°F)  
estimated

Autoignition temperature : 288°C (550°F)  
estimated

Suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical.

Unsuitable extinguishing media : High volume water jet.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool

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fully closed containers.

Fire and explosion protection : Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

**SECTION 6: Accidental release measures**

Personal precautions : Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

**SECTION 7: Handling and storage****Handling**

Advice on safe handling : For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

**Storage**

Requirements for storage areas and containers : Prevent unauthorized access. No smoking. Keep container tightly closed in a dry and well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

**SECTION 8: Exposure controls/personal protection****Ingredients with workplace control parameters****US**

Components	Basis	Value	Control parameters	Note
n-Butane	OSHA Z-1-A	TWA	800 ppm, 1,900 mg/m3	
	ACGIH	STEL	1,000 ppm,	CNS impair, EX,
Isobutane	ACGIH	STEL	1,000 ppm,	CNS impair, EX,
	OSHA Z-1	TWA	1,000 ppm, 2,950 mg/m3	
n-Pentane	OSHA Z-1-A	TWA	600 ppm, 1,800 mg/m3	
	OSHA Z-1-A	STEL	750 ppm, 2,250 mg/m3	
Propane	ACGIH	TWA	1,000 ppm,	
	OSHA Z-1	TWA	1,000 ppm, 1,800 mg/m3	

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	OSHA Z-1-A	TWA	1,000 ppm, 1,800 mg/m3
1-Butene	ACGIH	TWA	250 ppm,

CNS impair Central Nervous System impairment

EX Explosion hazard: the substance is a flammable asphyxiant or excursions above the TLV ® could approach 10% of the lower explosive limit.

**Immediately Dangerous to Life or Health Concentrations (IDLH)**

Substance name	CAS-No.	Control parameters	Update
n-Butane	106-97-8	Immediately Dangerous to Life or Health Concentration Value 1600 parts per million	2017-02-03
n-Pentane	109-66-0	Immediately Dangerous to Life or Health Concentration Value 1500 parts per million	1995-03-01
Propane	74-98-6	Immediately Dangerous to Life or Health Concentration Value 2100 parts per million	1995-03-01

**Engineering measures**

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**Personal protective equipment**

- Respiratory protection : If ventilation or other engineering controls are not adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure, a supplied-air NIOSH approved respirator may be appropriate. If exposure to harmful levels of airborne material may occur, a NIOSH approved respirator that provides protection may be appropriate, such as:. A positive pressure, air-supplying respirator may be appropriate if there is potential for uncontrolled release, aerosolization, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.
- Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection : Eye wash bottle with pure water. Safety glasses.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate:. Flame retardant antistatic protective clothing. Workers should wear antistatic footwear.
- Hygiene measures : Wash hands before breaks and at the end of workday.

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**SECTION 9: Physical and chemical properties****Information on basic physical and chemical properties****Appearance**

Form	: compressed liquefied gas
Physical state	: Gaseous
Color	: Colorless
Odor	: Odorless
Odor Threshold	: No data available

**Safety data**

Flash point	: -73°C (-99°F) estimated
Lower explosion limit	: 1.5 %(V)
Upper explosion limit	: 9 %(V)
Oxidizing properties	: No
Autoignition temperature	: 288°C (550°F) estimated
Thermal decomposition	: No data available
Molecular formula	: C <sub>4</sub> H <sub>10</sub>
Molecular weight	: 58.14 g/mol
pH	: Not applicable
Pour point	: No data available
Freezing point	: No data available
Boiling point/boiling range	: -0.56°C (30.99°F)
Vapor pressure	: 51.60 PSI at 38°C (100°F)
Density	: 2.5 g/l
Water solubility	: negligible
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: No data available
Relative vapor density	: 1.2 (Air = 1.0)

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Evaporation rate : &gt; 1

**SECTION 10: Stability and reactivity****Reactivity** : Stable under recommended storage conditions.**Chemical stability** : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.**Possibility of hazardous reactions****Hazardous reactions** : Hazardous reactions: Vapors may form explosive mixture with air.**Conditions to avoid** : Heat, flames and sparks.**Thermal decomposition** : No data available**Other data** : No decomposition if stored and applied as directed.**SECTION 11: Toxicological information****Normal Butane C/ISOM Grade****Acute oral toxicity** : Negligible or unlikely exposure pathwaysAcute toxicity estimate: > 5,000 mg/kg  
Method: Calculation method**Normal Butane C/ISOM Grade****Acute inhalation toxicity** : LC50: > 20000 ppm

Exposure time: 4 h

Test atmosphere: gas

Method: Acute toxicity estimate

**Normal Butane C/ISOM Grade****Acute dermal toxicity** : Negligible or unlikely exposure pathways**Normal Butane C/ISOM Grade****Skin irritation** : No skin irritation. Contact with liquid or refrigerated gas can cause cold burns and frostbite.**Normal Butane C/ISOM Grade****Eye irritation** : No eye irritation. Contact with liquid or refrigerated gas can cause cold burns and frostbite.**Normal Butane C/ISOM Grade**

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**Sensitization** : Does not cause sensitization. Estimated based on individual component values.

**Repeated dose toxicity**

n-Butane : Species: Rat, Male and female  
Sex: Male and female  
Application Route: Inhalation  
Dose: 0, 1017, 4489 ppm  
Exposure time: 90 day  
Number of exposures: 6 hr/d, 5 d/wk  
NOEL: 4489 ppm

n-Pentane Species: Rat, Male and female  
Sex: Male and female  
Application Route: inhalation (gas)  
Dose: 0, 5000, 10,000, 20,000 mg/m3  
Exposure time: 13 wk  
Number of exposures: 6 h/d, 5 d/wk  
NOEL: 20,000 mg/m3  
Method: OECD Test Guideline 413

Propane Species: Monkey  
Application Route: Inhalation  
Dose: 0, 750 ppm  
Exposure time: 90 day  
Number of exposures: daily  
NOEL: > 750 ppm

1-Butene Species: Rat, Male and female  
Sex: Male and female  
Application Route: Inhalation  
Dose: 0, 500, 2000, 8000 ppm  
Exposure time: 28 d  
Number of exposures: 6 hr/d, 7 d/wk  
NOEL: 8000 ppm  
Method: OECD Guideline 422  
No adverse effect has been observed in chronic toxicity tests.

**Genotoxicity in vitro**

n-Butane : Test Type: Ames test  
Result: negative

Isobutane Test Type: Ames test  
Result: negative

n-Pentane Test Type: Ames test  
Metabolic activation: with and without metabolic activation  
Result: negative

Test Type: Chromosome aberration test in vitro  
Metabolic activation: with and without metabolic activation  
Result: Ambiguous

Propane Test Type: Ames test  
Result: negative

1-Butene Test Type: Ames test  
Metabolic activation: with and without metabolic activation



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Result: negative

**Genotoxicity in vivo**

- n-Pentane : Test Type: Micronucleus test  
Species: Rat  
Cell type: Bone marrow  
Result: negative
- 1-Butene Test Type: Micronucleus test  
Species: Mouse  
Dose: 1000, 3260, 10000 ppm  
Method: Mutagenicity (micronucleus test)  
Result: negative

**Carcinogenicity**

- 1-Butene : Species: Rat  
Sex: male  
Dose: 0, 500, 2000, 8000 ppm  
Exposure time: 2 years  
Number of exposures: 6 hr/d, 5 d/wk  
Remarks: increased incidence of thyroid tumors, Information given is based on data obtained from similar substances.
- Species: Rat  
Sex: female  
Dose: 0, 500, 2000, 8000 ppm  
Exposure time: 2 years  
Number of exposures: 6 hr/d, 5 d/wk  
Remarks: no increase incidence of tumors, Information given is based on data obtained from similar substances.
- Species: Mouse  
Sex: male  
Dose: 0, 500, 2000, 8000 ppm  
Exposure time: 2 years  
Number of exposures: 6 hr/d, 5 d/wk  
Remarks: no increase incidence of tumors, Information given is based on data obtained from similar substances.
- Species: Mouse  
Sex: female  
Dose: 0, 500, 2000, 8000 ppm  
Exposure time: 2 years  
Number of exposures: 6 hr/d, 5 d/wk  
Remarks: no increase incidence of tumors, Information given is based on data obtained from similar substances.

**Reproductive toxicity**

- n-Pentane : Species: Rat  
Sex: male  
Application Route: Inhalation  
Dose: 0, 5, 10, 20 mg/l  
Exposure time: 13 wk  
Test period: 6hrs/day, 5 days/wk  
NOAEL Parent: 20 mg/l

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no abnormalities observed

Species: Rat  
 Sex: female  
 Application Route: Inhalation  
 Dose: 0, 5, 10, 20 mg/l  
 Exposure time: 13 wk  
 Test period: 6hrs/day, 5days/wk  
 NOAEL Parent: 20 mg/l  
 no abnormalities observed

Propane

Species: Rat  
 Sex: male and female  
 Application Route: Inhalation  
 Dose: 0, 1200, 4000, 12000 ppm  
 Exposure time: 6 weeks  
 Number of exposures: 6 hours/day, 7 days/week  
 Test period: 6 weeks  
 Test substance: yes  
 Method: OECD Guideline 422  
 NOAEL Parent: 12000 ppm  
 NOAEL F1: 12000 ppm

1-Butene

Species: Rat  
 Sex: male and female  
 Application Route: Inhalation  
 Dose: 0, 500, 2000, 8000 ppm  
 Method: OECD Guideline 422  
 NOAEL Parent: 8000 ppm  
 NOAEL F1: 8000 ppm

**Developmental Toxicity**

n-Pentane

: Species: Rat  
 Application Route: Inhalation  
 Dose: 0, 1000, 3000, 10000 ppm  
 Number of exposures: 6 h/d  
 Test period: GD 6-15  
 NOAEL Teratogenicity: 10,000 ppm

**Normal Butane C/ISOM Grade****Aspiration toxicity**

: No aspiration toxicity classification.

**CMR effects**

n-Butane

: Carcinogenicity: Weight of evidence does not support classification as a carcinogen  
 Mutagenicity: Weight of evidence does not support classification as a germ cell mutagen.  
 Teratogenicity: Not available  
 Reproductive toxicity: Weight of evidence does not support classification for reproductive toxicity

Propane

Carcinogenicity: Weight of evidence does not support classification as a carcinogen  
 Mutagenicity: In vitro tests did not show mutagenic effects  
 Teratogenicity: No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

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1-Butene

Reproductive toxicity: Weight of evidence does not support classification for reproductive toxicity

Carcinogenicity: Weight of evidence does not support classification as a carcinogen

Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Teratogenicity: Animal testing did not show any effects on fetal development.

Reproductive toxicity: Animal testing did not show any effects on fertility.

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**Further information** : No data available.

**SECTION 12: Ecological information****Ecotoxicity effects**

**Toxicity to fish** : No data available

**Toxicity to daphnia and other aquatic invertebrates** : No data available

**Toxicity to algae** : No data available

Biodegradability : This material is expected to be readily biodegradable.

Elimination information (persistence and degradability)

Bioaccumulation : This material is not expected to bioaccumulate. Information refers to the main ingredient.

Mobility : The product evaporates readily.

Results of PBT assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Additional ecological information : No data available

**Ecotoxicology Assessment**

Short-term (acute) aquatic hazard : No data available

Long-term (chronic) aquatic hazard : No data available

**SECTION 13: Disposal considerations**

The information in this SDS pertains only to the product as shipped.

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Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product : Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

**SECTION 14: Transport information**

**The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).**

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

**US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)**

UN1965, HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S., (N-BUTANE, ISOBUTANE),  
2.1  
NON- ODORIZED

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**

UN1965, HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S., (N-BUTANE, ISOBUTANE),  
2.1, (-73 °C c.c.)

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**

UN1965, HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S., (N-BUTANE, ISOBUTANE),  
2.1

**ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))**

UN1965, HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S., (N-BUTANE, ISOBUTANE), 2.1, (B/D)

**RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))**

23, UN1965, HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S., (N-BUTANE, ISOBUTANE),  
2.1

**ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)**

UN1965, HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S., (N-BUTANE, ISOBUTANE),  
2.1

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**Maritime transport in bulk according to IMO instruments****SECTION 15: Regulatory information****National legislation**

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
Gases under pressure

CERCLA Reportable  
Quantity : 100000 lbs  
1,3-Butadiene

SARA 302 Reportable  
Quantity : This material does not contain any components with a SARA  
302 RQ.

SARA 302 Threshold  
Planning Quantity : This material does not contain any components with a section  
302 EHS TPQ.

SARA 304 Reportable  
Quantity : This material does not contain any components with a section  
304 EHS RQ.

SARA 313 Components : This material does not contain any chemical components with  
known CAS numbers that exceed the threshold (De Minimis)  
reporting levels established by SARA Title III, Section 313.

**Clean Air Act**

Ozone-Depletion  
Potential : This product neither contains, nor was manufactured with a Class I or  
Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR  
82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air  
Act Section 112 (40 CFR 61).

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental  
Release Prevention (40 CFR 68.130, Subpart F):

: n-Butane - 106-97-8  
Isobutane - 75-28-5  
n-Pentane - 109-66-0

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Propane - 74-98-6  
1-Butene - 106-98-9

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

: n-Pentane - 109-66-0  
1-Butene - 106-98-9

**US State Regulations****Pennsylvania Right To Know**

: n-Butane - 106-97-8  
Isobutane - 75-28-5  
n-Pentane - 109-66-0  
Propane - 74-98-6  
1-Butene - 106-98-9  
1,3-Butadiene - 106-99-0

**California Prop. 65 Components**

: WARNING: This product can expose you to chemicals including [listed below], which is [are] known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov/food](http://www.P65Warnings.ca.gov/food).

1,3-Butadiene 106-99-0

WARNING: This product can expose you to chemicals including [listed below], which is [are] known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

1,3-Butadiene 106-99-0  
n-hexane 110-54-3

**Notification status**

Europe REACH : Not in compliance with the inventory  
Switzerland CH INV : On the inventory, or in compliance with the inventory  
United States of America (USA) : On or in compliance with the active portion of the TSCA inventory  
Canada DSL : All components of this product are on the Canadian DSL  
Other AIIIC : On the inventory, or in compliance with the inventory  
Japan ENCS : On the inventory, or in compliance with the inventory  
Korea KECI : A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still

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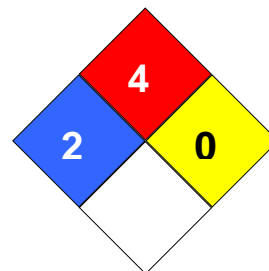
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permitted provided the Korean Importer of Record has themselves notified the substance or the exported amount does not exceed the minimum threshold quantity of the non-registered substance(s).

Philippines PICCS : On the inventory, or in compliance with the inventory  
 Taiwan TCSI : On the inventory, or in compliance with the inventory  
 China IECSC : On the inventory, or in compliance with the inventory

**SECTION 16: Other information**

**NFPA Classification** : Health Hazard: 2  
 Fire Hazard: 4  
 Reactivity Hazard: 0

**Further information**

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit

**Normal Butane C/SOM Grade**

Version 2.2

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IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical Substances in China	TWA	Time Weighted Average
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%	ATE	Acute toxicity estimate