Normal Butane C/ISOM Grade

Version 3.0 Revision Date 2025-12-11

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

Product information

Product Name	:	Normal Butane C/ISOM Grade
Material	:	1012529
Use	:	Feedstock
Uses advised against	:	This material should not be used for purposes other than the identified uses in section 1 without expert advice.
Company	:	Chevron Phillips Chemical Company LP 9500 Lakeside Blvd. The Woodlands, TX 77381

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 (Giftlinjen): +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: POISON CENTER MILAN – Azienda Ospedaliera Niguarda Ca` Grande Tel. +39 02 66101029; POISON CENTER ROME – Policlinico “Agostino Gemelli”, Servizio di tossicologia clinica Tel. +39 06 3054343; POISON CENTER ROME – Ospedale Pediatrico Bambino Gesù Tel. +39 06 68593726;POISON CENTER ROME – Policlinico “Umberto I” Tel. +39 06 4997 8000; POISON CENTER FOGGIA – Azienda Ospedaliera Universitaria Riuniti Tel. +39 0881 732326; POISON CENTER NAPLES – Azienda Ospedaliera “Antonio Cardarelli” Tel. +39 081 7472870; POISON CENTER FLORENCE – Azienda Ospedaliera universitaria Careggi Tel. +39 055 7947819; POISON CENTER PAVIA – IRCCS Fondazione Salvatore Maugeri Tel. +39 0382 24444; POISON CENTER BERGAMO – Azienda Ospedaliera “Papa Giovanni XXIII” Tel. 800 883 300; POISON CENTER VERONA – Azienda Ospedaliera Universitaria integrata Tel. 800 011 858;
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
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

Organization that prepared the SDS	:	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 1A
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, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response:
P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 In case of leakage, eliminate all ignition sources.
Storage:
P410 + P403 Protect from sunlight. Store in a well-ventilated place.

Potential Health Effects

Symptoms of Overexposure : No data available

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.

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 : Consult a physician after significant exposure. If unconscious, place in recovery position and seek medical advice.

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.

Notes to physician

Symptoms : No data available.

Risks	:	No data available.
Treatment	:	Treat symptomatically.

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 (CO2). 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 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	:	Use personal protective equipment. 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	:	Do not spray on a naked flame or any incandescent material.

against fire and explosion | 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.

Uses advised against : This material should not be used for purposes other than the identified uses in section 1 without expert advice.

Use : Feedstock

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,	
Isobutane	ACGIH	STEL	1,000 ppm,	
n-Pentane	OSHA Z-1	TWA	1,000 ppm, 2,950 mg/m3	
	OSHA Z-1-A	TWA	600 ppm, 1,800 mg/m3	
	OSHA Z-1-A	STEL	750 ppm, 2,250 mg/m3	
	ACGIH	TWA	1,000 ppm,	
Propane	OSHA Z-1	TWA	1,000 ppm, 1,800 mg/m3	
	OSHA Z-1-A	TWA	1,000 ppm, 1,800 mg/m3	
1-Butene	ACGIH	TWA	250 ppm,	

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 airborned 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	:	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

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	:	C4H10
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)
Evaporation rate	:	> 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 pathways

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

1-Butene 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.

Normal Butane C/ISOM Grade
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

Toxicity to fish (Chronic toxicity)

n-Pentane : EL10: 2.03 mg/l
Exposure time: 60 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: QSAR modeled data
The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

n-Pentane : EL10: 3.54 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

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.

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

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

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI 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.

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.

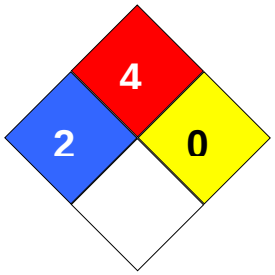
1,3-Butadiene	106-99-0
n-hexane	110-54-3

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) TSCA	:	On or in compliance with the active portion of the TSCA inventory
Canada DSL	:	All components of this product are on the Canadian DSL
Australia AIIC	:	On the inventory, or in compliance with the inventory
New Zealand NZIoC	:	On the inventory, or in compliance with the inventory
Japan ENCS	:	On the inventory, or in compliance with the inventory
Korea KECI	:	Not in compliance with the inventory
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



Revision Date : 2025-12-11
Date of last issue : 2022-11-21

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%
AIIC	Australian Inventory of Industrial Chemicals	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
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