

# SAFETY DATA SHEET

According to EC No 1907/2006 as amended as at the date of this SDS

## Butane

Version	Revision Date:	SDS Number:	Date of last issue: 10.03.2022
1.5	29.03.2023	800010034953	Print Date 05.04.2023

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

#### 1.1 Product identifier

Trade name	: Butane
Product code	: 16423

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

Use of the Substance/Mixture	: This product is exempt from the obligation to register under REACH in accordance with Article 2(7). Feedstock in chemical industry.
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Uses advised against	: This product must not be used in applications other than those listed in Section 1 without first seeking the advice of the supplier.
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#### 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier	: <b>Shell Chemicals Europe B.V.</b> PO Box 2334 3000 CH Rotterdam Netherlands
Telephone	: +31 (0)10 441 5137 / +31 (0)10 441 5191
Telefax	: +31 (0)20 716 8316 / +31 (0)20 713 9230
Contact for Safety Data Sheet	: sccmsds@shell.com

#### 1.4 Emergency telephone number

+44 (0) 1235 239 670  
Nationaal Vergiftigingen Informatie Centrum (NVIC): Tel. nr. +31(0)88 755 8000 (24 uur per dag en 7 dagen per week).  
(Uitsluitend bestemd om artsen te informeren bij accidentele vergiftigingen).

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Flammable gases, Category 1A	H220: Extremely flammable gas.
Gases under pressure, Liquefied gas	H280: Contains gas under pressure; may explode if heated.

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### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements :  
H220 Extremely flammable gas.  
H280 Contains gas under pressure; may explode if heated.  
HEALTH HAZARDS:  
Not classified as a health hazard under CLP criteria.  
ENVIRONMENTAL HAZARDS:  
Not classified as environmental hazard according to CLP criteria.

Precautionary statements : **Prevention:**  
P102 Keep out of reach of children.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P243 Take precautionary measures against static discharge.  
**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.  
**Disposal:**  
No precautionary phrases.

### 2.3 Other hazards

The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Vapours are heavier than air. Vapours may travel across the ground and reach remote ignition

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sources causing a flashback fire danger.  
High gas concentrations will displace available air; unconsciousness and death may occur suddenly from lack of oxygen.

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

##### Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)
Petroleum gases, liquefied; Petroleum gas	68476-85-7 270-704-2	100

##### Further information

Contains:

Chemical name	Identification number	Classification	Concentration (% w/w)
1,3-butadiene	106-99-0, 203-450-8	Flam. Gas1A; H220 Press. GasLiquefied gas; H280 Muta.1B; H340 Carc.1A; H350	< 0,1
butane	106-97-8, 203-448-7	Flam. Gas1; H220 Press. GasLiquefied gas; H280	>= 60 - <= 80
Butene	25167-67-3, 246- 689-3	Flam. Gas1A; H220 Press. GasLiquefied gas; H280	>= 20 - <= 40

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General advice : Not expected to be a health hazard when used under normal conditions.
- Protection of first-aiders : When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury and surroundings.
- If inhaled : Call emergency number for your location / facility.  
Remove to fresh air. Do not attempt to rescue the victim unless proper respiratory protection is worn. If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting,

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or unresponsive, give 100% oxygen with rescue breathing or Cardio-Pulmonary Resuscitation as required and transport to the nearest medical facility.

In case of skin contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.  
If persistent irritation occurs, obtain medical attention.  
In the event of frostbite, slowly warm the exposed area by rinsing with warm water.  
Transport to the nearest medical facility for additional treatment.

In case of eye contact : Flush eye with copious quantities of water.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
If persistent irritation occurs, obtain medical attention.  
In the event of frostbite, slowly warm the exposed area by rinsing with warm water.  
Transport to the nearest medical facility for additional treatment.

If swallowed : In the unlikely event of ingestion, obtain medical attention immediately.

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

Symptoms : High gas concentrations will displace available air; unconsciousness and death may occur suddenly from lack of oxygen.  
Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache and nausea.  
Rapid release of gases which are liquids under pressure may cause frost burns of exposed tissues (skin, eye) due to evaporative cooling.

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

Treatment : IMMEDIATE TREATMENT IS EXTREMELY IMPORTANT!  
Potential for cardiac sensitisation, particularly in abuse situations. Hypoxia or negative inotropes may enhance these effects. Consider: oxygen therapy.  
Artificial respiration and/or oxygen may be necessary.  
Call a doctor or poison control center for guidance.  
Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Shut off supply. If not possible and no risk to surroundings, let the fire burn itself out.  
Dry chemical

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Carbon dioxide (CO<sub>2</sub>)  
Keep containers and surroundings cool with water spray.  
Large fires should only be fought by properly trained fire fighters.

Unsuitable extinguishing media : Do not use direct water jets on the burning product as they could cause a steam explosion and spread of the fire.

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

Specific hazards during fire-fighting : Hazardous combustion products may include:  
Carbon monoxide may be evolved if incomplete combustion occurs.  
Unidentified organic and inorganic compounds.  
Sustained fire attack on vessels may result in a Boiling Liquid Expanding Vapor Explosion (BLEVE).  
Contents are under pressure and can explode when exposed to heat or flames.  
The vapour is heavier than air, spreads along the ground and distant ignition is possible.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant Standards (e.g. Europe: EN469).

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : Clear fire area of all non-emergency personnel.  
Keep adjacent containers cool by spraying with water.  
If possible remove containers from the danger zone.  
If the fire cannot be extinguished the only course of action is to evacuate immediately.

## SECTION 6: Accidental release measures

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

Personal precautions : 6.1.1 For non emergency personnel:  
Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area and evacuate all personnel. Attempt to disperse the gas or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas meter.  
Vapour may form an explosive mixture with air.

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6.1.2 For emergency responders:  
Test atmosphere for flammable gas concentrations to ensure safe working conditions before personnel are allowed to enter the area.  
Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

### 6.2 Environmental precautions

Environmental precautions : Use appropriate containment to avoid environmental contamination.  
Risk of explosion. Inform the emergency services if product enters surface water drains.

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

Methods for cleaning up : Allow to evaporate.  
Attempt to disperse the gas or to direct its flow to a safe location, for example by using fog sprays.

### 6.4 Reference to other sections

For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet.,  
For guidance on disposal of spilled material see Section 13 of this Safety Data Sheet., Local authorities should be advised if significant spillages cannot be contained.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Technical measures : Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Section 8 of this Safety Data Sheet.  
Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.  
Air-dry contaminated clothing in a well-ventilated area before laundering.  
Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols.  
Take precautionary measures against static discharges.

Advice on safe handling : This product can create a low temperature exposure hazard when released as a liquid.  
Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks.  
Avoid prolonged or repeated contact with skin.  
Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.  
Earth all equipment.  
Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols.

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This product is intended for use in closed systems only.  
Ensure that all local regulations regarding handling and storage facilities are followed.

Product Transfer : Do not use compressed air for filling discharge or handling. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Delivery lines may become cold enough to present a cold burns hazard.

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

Further information on storage stability : Store only in purpose-designed, appropriately labelled pressure vessels or cylinders. Must be stored in a well-ventilated area, away from sunlight, ignition sources and other sources of heat. Do not store near cylinders containing compressed oxygen or other strong oxidizers.

Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Packaging material : Suitable material: For containers and container linings, use materials specifically approved for use with this product., Examples of suitable materials are: PA-11, PEEK, PVDF, PTFE, GRE (Epoxy), GRVE (vinyl ester), Viton (FKM), type F and GB, Neoprene (CR). Unsuitable material: Some forms of cast iron., Examples of materials to avoid are: ABS, polymethyl methacrylate (PMMA), polyethylene (PE / HDPE), polypropylene (PP), PVC, natural rubber (NR), Nitrile (NBR) ethylene propylene rubber (EPDM), Butyl (IIR), Hypalon (CSM), polystyrene, polyvinyl chloride (PVC), polyisobutylene., For containers and container linings, aluminium should not be used if there is a risk of caustic contamination of the product.

Container Advice : Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.

### 7.3 Specific end use(s)

Specific use(s) : Not applicable

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Petroleum gases,	68476-85-7	TLV-8hr (Mist)	5 mg/m3	NL WG

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liquefied; Petroleum gas				
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### Biological occupational exposure limits

No biological limit allocated.

### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Remarks:	No DNEL value has been established.
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### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Remarks:	Exposure assessments have not been presented for the environment therefore PNEC values not required.	

## 8.2 Exposure controls

### Engineering measures

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include:

Use sealed systems as far as possible.

Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits.

Local exhaust ventilation is recommended.

### General Information:

Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

Define procedures for safe handling and maintenance of controls.

Educate and train workers in the hazards and control measures relevant to normal activities associated with this product.

Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation.

Drain down system prior to equipment break-in or maintenance.

### Personal protective equipment

Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

The provided information is made in consideration of the PPE directive (Council Directive 89/686/EEC) and the CEN European Committee for Standardisation (CEN) standards.

Eye protection : Wear goggles for use against liquids and gas, combined with face shield with chin guard.

Approved to EU Standard EN166.

Hand protection

Remarks : Suitability and durability of a glove is dependent on usage,



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e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection. Neoprene rubber. Nitrile rubber. If contact with liquefied product is possible or anticipated, gloves should be thermally insulated to prevent cold burns. Glove thickness should be typically greater than 0.35 mm depending on the glove make and model.

- Skin and body protection : Chemical and cold resistant gloves/gauntlets, boots, and apron.
- Respiratory protection : If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.
- Select a filter suitable for organic gases and vapours [Type AX boiling point < 65°C (149°F)] meeting EN14387.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Physical state : Liquid under pressure.
- Colour : colourless
- Odour : Unstented
- Odour Threshold : Data not available
- : Data not available
- Initial boiling point and boiling range : Typical -42 - -1 °C

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### Flammability

Flammability (solid, gas) : Extremely flammable.

### Lower explosion limit and upper explosion limit / flammability limit

Upper explosion limit /  
upper flammability limit : Data not available

Lower explosion limit /  
Lower flammability limit : Typical 1,9 %(V)

Flash point : Data not available

Auto-ignition temperature : Typical 287 - 537 °C

Decomposition temperature  
Decomposition temperature : Data not available

pH : Not applicable

### Viscosity

Viscosity, kinematic : Not applicable

### Solubility(ies)

Water solubility : negligible

Solubility in other solvents : Data not available

Partition coefficient: n-  
octanol/water : Data not available

Vapour pressure : 350 - 1.300 kPa (38,0 °C)

Relative density : Data not available

Density : 578 kg/m<sup>3</sup> (15,0 °C)  
Method: ASTM D4052

### Particle characteristics

Particle size : Data not available

## 9.2 Other information

Explosives : no data available

Oxidizing properties : Data not available

Evaporation rate : Data not available

Conductivity : Low conductivity: < 100 pS/m

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Surface tension : Data not available

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No, product will not become self-reactive.

#### 10.2 Chemical stability

Stable.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions : No hazardous reaction is expected when handled and stored according to provisions

#### 10.4 Conditions to avoid

Conditions to avoid : Avoid heat, sparks, open flames and other ignition sources.  
Prevent vapour accumulation.  
In certain circumstances product can ignite due to static electricity.

#### 10.5 Incompatible materials

Materials to avoid : Strong oxidising agents.

#### 10.6 Hazardous decomposition products

Hazardous decomposition products are not expected to form during normal storage.

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### SECTION 11: Toxicological information

#### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure : Inhalation is the primary route of exposure although exposure may occur through skin or eye contact.

##### Acute toxicity

##### Product:

Acute oral toxicity : Remarks: Not applicable

Acute inhalation toxicity : LC 50 (Rat): > 20000 ppmV  
Exposure time: 4 h  
Remarks: Low toxicity  
Based on available data, the classification criteria are not met.

Acute dermal toxicity : Remarks: Not applicable

Acute toxicity (other routes of administration) : Remarks: Inhalation of vapours or mists may cause irritation to the respiratory system.

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### Skin corrosion/irritation

**Product:**

Remarks : Not irritating to skin.

### Serious eye damage/eye irritation

**Product:**

Remarks : Essentially non-irritating to eyes.

### Respiratory or skin sensitisation

**Product:**

Remarks : Not a sensitiser.  
Based on available data, the classification criteria are not met.

### Germ cell mutagenicity

**Product:**

Genotoxicity in vivo : Remarks: Non mutagenic  
Based on available data, the classification criteria are not met.

Germ cell mutagenicity- Assessment : This product does not meet the criteria for classification in categories 1A/1B.

### Carcinogenicity

**Product:**

Remarks : Not a carcinogen.  
Based on available data, the classification criteria are not met.

Carcinogenicity - Assessment : This product does not meet the criteria for classification in categories 1A/1B.

Material	GHS/CLP Carcinogenicity Classification
Petroleum gases, liquefied; Petroleum gas	No carcinogenicity classification.
1,3-butadiene	Carcinogenicity Category 1A
butane	No carcinogenicity classification.
Butene	No carcinogenicity classification.

Material	Other Carcinogenicity Classification
Petroleum gases, liquefied; Petroleum gas	IARC: Group 1: Carcinogenic to humans
1,3-butadiene	IARC: Group 1: Carcinogenic to humans

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### Reproductive toxicity

#### Product:

Effects on fertility : Remarks: Not a developmental toxicant., Does not impair fertility., Based on available data, the classification criteria are not met.

Reproductive toxicity - Assessment : This product does not meet the criteria for classification in categories 1A/1B.

### STOT - single exposure

#### Product:

Remarks : High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

### STOT - repeated exposure

#### Product:

Remarks : Low systemic toxicity on repeated exposure.

### Aspiration toxicity

#### Product:

Not an aspiration hazard., Based on available data, the classification criteria are not met.

## 11.2 Information on other hazards

### Endocrine disrupting properties

#### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### Further information

#### Product:

Remarks : Rapid release of gases which are liquids under pressure may cause frost burns of exposed tissues (skin, eye) due to evaporative cooling.  
High gas concentrations will displace available air; unconsciousness and death may occur suddenly from lack of oxygen.

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Exposure to very high concentrations of similar materials has been associated with irregular heart rhythms and cardiac arrest.

Remarks : Classifications by other authorities under varying regulatory frameworks may exist.

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : Remarks: LL/EL/IL50 > 100 mg/l  
Practically non toxic:  
Based on available data, the classification criteria are not met.

Toxicity to daphnia and other aquatic invertebrates : Remarks: LL/EL/IL50 > 100 mg/l  
Practically non toxic:  
Based on available data, the classification criteria are not met.

Toxicity to algae/aquatic plants : Remarks: LL/EL/IL50 > 100 mg/l  
Practically non toxic:  
Based on available data, the classification criteria are not met.

Toxicity to fish (Chronic toxicity) : Remarks: Data not available

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Remarks: Data not available

Toxicity to microorganisms :  
Remarks: LL/EL/IL50 > 100 mg/l  
Practically non toxic:  
Based on available data, the classification criteria are not met.

### 12.2 Persistence and degradability

#### Product:

Biodegradability : Remarks: Oxidises rapidly by photo-chemical reactions in air.  
Readily biodegradable.

### 12.3 Bioaccumulative potential

#### Product:

Bioaccumulation : Remarks: Does not bioaccumulate significantly.

### 12.4 Mobility in soil

#### Product:

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Mobility	:	Remarks: Because of their extreme volatility, air is the only environmental compartment that hydrocarbon gases will be found.
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### 12.5 Results of PBT and vPvB assessment

#### Product:

Assessment	:	The substance does not fulfill all screening criteria for persistence, bioaccumulation and toxicity and hence is not considered to be PBT or vPvB..
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### 12.6 Endocrine disrupting properties

#### Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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### 12.7 Other adverse effects

#### Product:

Additional ecological information	:	In view of the high rate of loss from solution, the product is unlikely to pose a significant hazard to aquatic life.
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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product	:	<p>It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.</p> <p>Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.</p> <p>Do not dispose into the environment, in drains or in water courses.</p> <p>Given the nature and uses of this product, the need for disposal seldom arises. If necessary, dispose by controlled combustion in purpose-designed equipment. If this is not possible, contact the supplier.</p> <p>MARPOL - see International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) which provides technical aspects at controlling pollutions from ships.</p>
Contaminated packaging	:	<p>Drain container thoroughly.</p> <p>After draining, vent in a safe place away from sparks and fire.</p> <p>Residues may cause an explosion hazard.</p>

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Do not pollute the soil, water or environment with the waste container.  
Return part-used or empty cylinders to the supplier.  
For tanks seek specialist advice from suppliers.  
Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.

Local legislation

Waste catalogue

:

EU Waste Disposal Code (EWC):

Waste Code

:

16 05 04

Remarks

: Disposal should be in accordance with applicable regional, national, and local laws and regulations.  
Local regulations may be more stringent than regional or national requirements and must be complied with.

The number given to waste is associated with the appropriate usage. The user must decide if their particular use results in another waste code being assigned.

## SECTION 14: Transport information

### 14.1 UN number or ID number

ADN	:	1965
ADR	:	1965
RID	:	1965
IMDG	:	1965
IATA	:	1965

### 14.2 UN proper shipping name

ADN	:	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (Mixture A)
ADR	:	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (Mixture A)
RID	:	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (Mixture A)
IMDG	:	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. (Butane)
IATA	:	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S.



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(Butane)

### 14.3 Transport hazard class(es)

<b>ADN</b>	: 2
<b>ADR</b>	: 2
<b>RID</b>	: 2
<b>IMDG</b>	: 2.1
<b>IATA</b>	: 2.1

### 14.4 Packing group

<b>ADN</b>	
Packing group	: Not Assigned
Classification Code	: 2F
Hazard Identification Number	: 23
Labels	: 2.1
CDNI Inland Water Waste Agreement	: NST 3303 hydrocarbon mixture

<b>ADR</b>	
Packing group	: Not assigned by regulation
Classification Code	: 2F
Hazard Identification Number	: 23
Labels	: 2.1

<b>RID</b>	
Packing group	: Not assigned by regulation
Classification Code	: 2F
Hazard Identification Number	: 23
Labels	: 2.1

<b>IMDG</b>	
Packing group	: Not assigned by regulation
Labels	: 2.1

<b>IATA</b>	
Packing group	: Not Assigned
Labels	: 2.1

### 14.5 Environmental hazards

<b>ADN</b>	
Environmentally hazardous	: no

<b>ADR</b>	
Environmentally hazardous	: no

<b>RID</b>	
Environmentally hazardous	: no

<b>IMDG</b>	
Marine pollutant	: no

### 14.6 Special precautions for user

Remarks	: Special Precautions: Refer to Section 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.
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### 14.7 Maritime transport in bulk according to IMO instruments

Pollution category	: Not applicable
Ship type	: Not applicable
Product name	: Not applicable

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## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

REACH - List of substances subject to authorisation (Annex XIV)	:	Product is not subject to Authorisation under REACH.
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	18	Liquefied flammable gases (including LPG) and natural gas

#### Other regulations:

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Product is subject to Major accident risk decision 2015 (BRZO+) based on Seveso III directive (2012/18/EU).

#### The components of this product are reported in the following inventories:

PICCS	: All components listed.
EINECS	: All components listed.
DSL	: All components listed.
AIIC	: All components listed.
TSCA	: All components listed.

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### 15.2 Chemical safety assessment

#### SECTION 16: Other information

##### Full text of other abbreviations

NL WG : Netherlands. Law on Labour conditions - Occupational Exposure Limits  
NL WG / TLV-8hr : Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

##### Further information

##### Classification of the mixture:

Flam. Gas 1A	H220
Press. Gas Liquefied gas	H280

##### Classification procedure:

On basis of test data.  
On basis of test data.

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