

BUTANE

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

1.1. Product identifier

Product form	: Substance
Trade name/designation	: BUTANE
EC Index	: 649-113-00-2
EC-No.	: 289-339-5
CAS-No.	: 87741-01-03
REACH registration No.	: 01-2119480480-41-0022
Product group	: Trade product

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

1.2.1. Relevant identified uses

Intended for general public	
Main use category	: Industrial use,Professional use,Consumer use
Use of the substance/mixture	: Fuels Propellant Blowing agent Intermediate, functional monomer Formulation Distribution

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

NIS a.d. Novi Sad
Narodnog Fronta 12
21000 Novi Sad
Serbia
T + 381 (0) 21 481 1111
REACHNIS@nis.rs


Only Representative

BENS Consulting d.o.o.
Špruha 19
1236 Trzin
Slovenija
T +386 41 979 800
info@bens-consulting.eu

1.4. Emergency telephone number

Emergency number : + 381 (0) 21 481 1111
Only available during office hours.

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable gases, Category 1A H220

Gases under pressure : Liquefied gas H280

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word

: Danger

Hazard statements (CLP)

: H220 - Extremely flammable gas.

H280 - Contains gas under pressure; may explode if heated.

Precautionary statements (CLP)

: P101 - If medical advice is needed, have product container or label at hand.

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 action to prevent static discharges.

P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

P381 - Eliminate all ignition sources if safe to do so.

P410+P403 - Protect from sunlight. Store in a well-ventilated place.

Listed on CLP Annex VI

: EC Index-No.: 649-113-00-2

Child-resistant fastening

: Not applicable

Tactile warning

: Applicable

2.3. Other hazards

Other hazards

: Results of PBT and vPvB assessment : This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients


3.1. Substances

Substance name : Hydrocarbons, C4; Petroleum gas

CAS-No. : 87741-01-03

EC-No. : 289-339-5

EC Index : 649-113-00-2

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Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hydrocarbons, C4; Petroleum gas	CAS-No.: 87741-01-3 EC-No.: 289-339-5 EC Index: 649-113-00-2 REACH-no: 01-2119480480-41-0022	≤ 100	Flam. Gas 1A, H220 Press. Gas (Liq.), H280
1,3-Butadiene (Constituent)	CAS-No.: 106-99-0 EC-No.: 203-450-8 EC Index: 601-013-00-X	< 0,1	Flam. Gas 1A, H220 Muta. 1B, H340 Carc. 1A, H350

Full text of H- and EUH-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

Additional advice	: First aider: Pay attention to self-protection!. Concerning personal protective equipment to use, see section 8. Never give anything by mouth to an unconscious person. In case of doubt or persistent symptoms, consult always a physician. Show this safety data sheet to the doctor in attendance.
Inhalation	: Remove casualty to fresh air and keep warm and at rest. Give oxygen or artificial respiration if necessary. In case of doubt or persistent symptoms, consult always a physician.
Skin contact	: Remove contaminated clothing and shoes. Gently wash with plenty of soap and water. Wash contaminated clothing before reuse. In case of frostbite, wash with plenty of water; do not remove clothing. In case of doubt or persistent symptoms, consult always a physician.
Eyes contact	: Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of doubt or persistent symptoms, consult always a physician.
Ingestion	: Rinse mouth immediately and drink plenty of water. Get medical advice/attention.

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

Inhalation	: May be irritating.
Skin contact	: May be irritating. Can cause frostbite.
Eyes contact	: May be irritating. Causes frostbite burns to eyes.
Ingestion	: Ingestion unlikely.


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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : carbon dioxide (CO₂), powder, alcohol-resistant foam, water spray.

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Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards : Extremely flammable gas. Contains gas under pressure; may explode if heated. Vapours may form explosive mixture with air. Vapours are heavier than air and may spread along floors. Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours.

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO₂).

5.3. Advice for firefighters

Firefighting instructions : Evacuate area. Use water spray or fog for cooling exposed containers. Contain the extinguishing fluids by bunding. Prevent fire fighting water from entering the environment. Leaking gas fire: Do not extinguish, unless leak can be stopped safely.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus.

Other information : Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

For non-emergency personnel : Evacuate unnecessary personnel. Keep upwind. Provide adequate ventilation. Wear recommended personal protective equipment. Concerning personal protective equipment to use, see section 8. Do not breathe gas. Avoid contact with skin, eyes and clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ensure equipment is adequately earthed. Use explosion-proof equipment. Use only non-sparking tools. Keep away from heat and direct sunlight.

6.1.2. For emergency responders

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place. Concerning personal protective equipment to use, see section 8.

6.2. Environmental precautions


Do not allow to enter into surface water or drains. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if safe to do so. Leave evaporate and disperse. Hose down gases, fumes and/or dust with water. All processes must be supervised by specialists or authorised personnel. This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: Extremely cold liquid and gas under pressure. Causes severe frostbite. Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Do not breathe gas. Avoid contact with skin, eyes and clothing. Take any precaution to avoid mixing with Incompatible materials, Refer to Section 10 on Incompatible Materials. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time). Avoid release to the environment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Protect against direct sunlight.

Hygiene measures

: Keep good industrial hygiene. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feedingstuffs. Remove contaminated clothes. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures

: Keep out of reach of children.

Storage conditions

: Gases under pressure. Liquefied gas. Keep container tightly closed. Store in a dry, cool and well-ventilated place. Do not store near or with any of the incompatible materials listed in section 10. Take precautionary measures against static discharge.

Incompatible materials

: Strong oxidizing agents. oxygen. Chlorine (Cl₂).

Heat and ignition sources

: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight.

Special rules on packaging

: Tactile warning (EN/ISO 11683). Containers which are opened should be properly resealed and kept upright to prevent leakage. Keep in properly labelled containers.

Packaging materials

: Keep only in the original container. Suitable material: Mild steel.

Germany

German storage class (LGK)

: LGK 2A - Gases (except aerosol dispensers and lighters)


Switzerland

Storage class (LK)

: LK 2 - Liquefied or pressurized gases

7.3. Specific end use(s)

For further information see section 1.


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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

1,3-Butadiene (106-99-0)	
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	1,3-Butadiene
BOEL TWA	2,2 mg/m ³
	1 ppm
Regulatory reference	DIRECTIVE (EU) 2019/130 (amending Directive 2004/37/EC)
Belgium - Occupational Exposure Limits	
Local name	1,3-Butadiène # 1,3-Butadien
OEL TWA	2,2 mg/m ³
	1 ppm
Remark	C: la mention "C" signifie que l'agent en question relève du champ d'application du titre 2 relatif aux agents cancérogènes, mutagènes et reprotoïques du livre VI du code de bien-être au travail. # C: de vermelding "C" betekent dat het betrokken agens valt onder het toepassingsgebied van titel 2 betreffende kankerverwekkende, mutagene en reprotoxische agentia van boek VI van de codex over het welzijn op het werk.
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023
Bulgaria - Occupational Exposure Limits	
OEL TWA	1 ppm
Cyprus - Occupational Exposure Limits	
OEL TWA	2,2 mg/m ³
	1 ppm
Czech Republic - Occupational Exposure Limits	
OEL chemical category	Potential for cutaneous absorption
Denmark - Occupational Exposure Limits	
OEL STEL	4,4 mg/m ³
	2 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	2,2 mg/m ³ (restrictive limit)
	1 ppm (restrictive limit)
OEL chemical category	Carcinogen category 1A, Mutagen category 1B
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	2,2 mg/m ³
Italy - Occupational Exposure Limits	
OEL TWA	2,2 mg/m ³

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1,3-Butadiene (106-99-0)	
	1 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	1 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	0,89 ppm
Portugal - Occupational Exposure Limits	
OEL TWA	2,2 mg/m ³
Spain - Biological limit values	
BLV	2,5 mg/l Parameter: 1,2-Dihydroxy-4-(N-acetylcysteinyl)-butane - Medium: urine - Sampling time: end of shift 2,5 pmol/g hemoglobin Parameter: Mixture of N-1 and N-2-(hydroxybutenyl)valine - Medium: blood - Sampling time: not critical
USA - ACGIH - Occupational Exposure Limits	
ACGIH chemical category	Suspected Human Carcinogen

8.1.2. Recommended monitoring procedures

Monitoring methods	
Monitoring methods	Personal air monitoring. Concentration measurement in air. Personal air monitoring. Room air monitoring.

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Additional information : Recommended monitoring procedures :. Personal air monitoring. Room air monitoring


8.1.5. Control banding

No additional information available

8.2. Exposure controls

Engineering measure(s) : Closed system. Provide adequate ventilation. Use only in area provided with appropriate exhaust ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Take precautionary measures against static discharge. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Use only explosion-proof equipment. Organisational measures to prevent/limit releases, dispersion and exposure. See Section 7 for information on safe handling.

Personal protective equipment : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.


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Hand protection	: Wear chemically resistant gloves (tested to EN374) . Suitable material: NBR (Nitrile rubber). Breakthrough time : refer to the recommendations of the supplier. Thickness of the glove material: Not determined. The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves. (EN511)
Eye protection	: Use suitable eye protection (EN166): During splash contact: face shield. tightly fitting safety goggles
Body protection	: Wear suitable protective clothing. Overalls, apron and boots recommended.
Respiratory protection	: If there is a risk of oxygen deficiency, use appropriate pressurised breathing protection. Use self-contained respiratory apparatus for rescue and maintenance work in storage vessels. In case of insufficient ventilation, wear suitable respiratory equipment. full face mask (DIN EN 136). Filter type: AX. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. (EN 137)
Thermal hazard protection	: Use dedicated equipment. Protective gloves against thermal risks (EN511).
Environmental exposure controls	: Avoid release to the environment. Comply with applicable Community environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas
Colour	: Colourless.
Appearance	: Press. Gas (Liq.). liquefied gas.
Odour	: Characteristic.
Odour threshold	: No data available
Melting / freezing point	: -135,4 °C
Freezing point	: -135,4 °C
Initial boiling point and boiling range	: -162 (-162 – -0,5) °C
Flammability	: Extremely flammable gas.
Explosive properties	: Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.
Oxidising properties	: Not applicable. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.
Lower explosion limit	: 1,9 – 5,3 vol %
Upper explosion limit	: 8,5 – 15 vol %
Flash point	: < -60 °C
Auto-ignition temperature	: 460 – 580 °C
Decomposition temperature	: No additional information available
pH	: Not applicable
Kinematic viscosity	: Not applicable
Dynamic viscosity	: Not applicable

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Solubility : Water: 0,024 – 0,061 g/l
 Partition coefficient n-octanol/water (Log Kow) : ≤ 2,306
 Vapour pressure : < 650 kPa (40°C) EN ISO 8973
 Vapour pressure at 50°C : Not available
 Density : Not applicable
 Relative density : 0,575 – 2 g/cm³ (15°C) SRPS EN ISO 8973
 Vapour density : No data available
 Particle characteristics : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Gas group : Press. Gas (Ref. Liq.)

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable gas. Reference to other sections: 10.4 & 10.5.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Reacts vigorously with strong oxidizers and acids.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight. See Section 7 for information on safe handling.

10.5. Incompatible materials

Strong oxidizing agents. Oxygen. Chlorine (Cl₂). See Section 7 for information on safe handling.


10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂). Reference to other sections 5.2.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
 Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
 Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

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Hydrocarbons, C4; Petroleum gas (87741-01-3)

LC50/inhalation/4h/rat	658 mg/l/4h
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Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
	pH: Not applicable
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met)
	pH: Not applicable
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)

1,3-Butadiene (106-99-0)

IARC group	1 - Carcinogenic to humans
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Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not applicable

BUTANE (87741-01-03)

Kinematic viscosity	Not applicable
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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties	: The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
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11.2.2. Other information

Other information	: Symptoms related to the physical, chemical and toxicological characteristics, For further information see section 4
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SECTION 12: Ecological information

12.1. Toxicity

Environmental properties	: According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment".
Hazardous to the aquatic environment, short-term (acute)	: Not classified

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Hazardous to the aquatic environment, long-term (chronic) : Not classified

12.2. Persistence and degradability

BUTANE (87741-01-03)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

BUTANE (87741-01-03)	
Partition coefficient n-octanol/water (Log Kow)	≤ 2,306
Bioaccumulative potential	No additional information available.

1,3-Butadiene (106-99-0)	
BCF - Fish [1]	13 – 19,1
Partition coefficient n-octanol/water	1,99 (at 25 °C (at pH 7)

12.4. Mobility in soil

BUTANE (87741-01-03)	
Mobility in soil	No data available
Ecology - soil	Not applicable.

12.5. Results of PBT and vPvB assessment


BUTANE (87741-01-03)	
Results of PBT assessment	This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

Other adverse effects : No data available.

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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations






: Avoid release to the environment. Dispose of empty containers and wastes safely. See Section 7 for information on safe handling. Refer to manufacturer/supplier for information on recovery/recycling. Recycling is preferred to disposal or incineration. If recycling is not possible, eliminate in accordance with local valid waste disposal regulations. Handle contaminated packages in the same way as the substance itself. Dispose of contaminated materials in accordance with current regulations. Packaging contaminated by the product : Do not pierce or burn, even after use. Never use pressure to empty container.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC)

: This material and its container must be disposed of as hazardous waste
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN


ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
1011	1011	1011	1011	1011
14.2. UN proper shipping name				
BUTANE	BUTANE	Butane	BUTANE	BUTANE
Transport document description				
UN 1011 BUTANE, 2.1, (B/D)	UN 1011 BUTANE, 2.1	UN 1011 Butane, 2.1	UN 1011 BUTANE, 2.1	UN 1011 BUTANE, 2.1
14.3. Transport hazard class(es)				
2.1	2.1	2.1	2.1	2.1
				
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

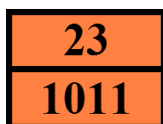
Special precautions for user : No data available

- Overland transport

Classification code (ADR) : 2F
Special provisions : 392, 652, 657, 662, 674
Limited quantities (ADR) : 0
Excepted quantities (ADR) : E0
Packing instructions (ADR) : P200
Mixed packing provisions (ADR) : MP9

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Portable tank and bulk container instructions (ADR) : (M), T50
 Tank code (ADR) : PxBN(M)
 Tank special provisions (ADR) : TA4, TT9
 Vehicle for tank carriage : FL
 Transport category (ADR) : 2
 Special provisions for carriage - Loading, unloading and handling (ADR) : CV9, CV10, CV36
 Special provisions for carriage - Operation (ADR) : S2, S20
 Hazard identification number (Kemler No.) : 23
 Orange plates :



Tunnel restriction code : B/D
 EAC code : 2YE

- Transport by sea


Special provisions (IMDG) : 392
 Limited quantities (IMDG) : 0
 Excepted quantities (IMDG) : E0
 Packing instructions (IMDG) : P200
 Tank instructions (IMDG) : T50
 EmS-No. (Fire) : F-D
 EmS-No. (Spillage) : S-U
 Stowage category (IMDG) : E
 Stowage and handling (IMDG) : SW2
 Properties and observations (IMDG) : Flammable hydrocarbon gas. Explosive limits: 1.8% to 8.4%. Heavier than air (2.11).
 MFAG-No : 115

- Air transport

PCA Excepted quantities (IATA) : E0
 PCA Limited quantities (IATA) : Forbidden
 PCA limited quantity max net quantity (IATA) : Forbidden
 PCA packing instructions (IATA) : Forbidden
 PCA max net quantity (IATA) : Forbidden
 CAO packing instructions (IATA) : 200
 CAO max net quantity (IATA) : 150kg
 Special provisions (IATA) : A1
 ERG code (IATA) : 10L

- Inland waterway transport

Classification code (ADN) : 2F
 Special provisions (ADN) : 392, 657, 662, 674

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Limited quantities (ADN) : 0
 Excepted quantities (ADN) : E0
 Carriage permitted (ADN) : T
 Equipment required (ADN) : PP, EX, A
 Ventilation (ADN) : VE01
 Number of blue cones/lights (ADN) : 1

- Rail transport

Classification code (RID) : 2F
 Special provisions (RID) : 392, 652, 657, 662, 674
 Limited quantities (RID) : 0
 Excepted quantities (RID) : E0
 Packing instructions (RID) : P200
 Mixed packing provisions (RID) : MP9
 Portable tank and bulk container instructions (RID) : T50(M)
 Tank codes for RID tanks (RID) : PxBN(M)
 Special provisions for RID tanks (RID) : TU38, TE22, TA4, TT9, TM6
 Transport category (RID) : 2
 Special provisions for carriage - Loading, unloading and handling (RID) : CW9, CW10, CW36
 Colis express (express parcels) (RID) : CE3
 Hazard identification number (RID) : 23

14.7. Maritime transport in bulk according to IMO instruments

Code: IBC : No data available.


SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
28.	1,3-Butadiene	Substances which are classified as carcinogen category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 1 or Appendix 2, respectively.
29.	1,3-Butadiene	Substances which are classified as germ cell mutagen category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 3 or Appendix 4, respectively.
40.	BUTANE ; 1,3-Butadiene	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

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REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)


Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

Detergent Regulation (648/2004/EC): Labelling of contents

Labelling for contents according to : Not applicable
regulation (EC) No. 648/2004

15.1.2. National regulations

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France

Occupational diseases			
Code	Description		
RG 99	Hemic diseases caused by 1,3-butadiene and all products containing it		
Installations classées			
No ICPE	Désignation de la rubrique	Code Régime	Rayon
4718.text	Gaz inflammables liquéfiés de catégorie 1 et 2 (y compris GPL) et gaz naturel (y compris biogaz affiné, lorsqu'il a été traité conformément aux normes applicables en matière de biogaz purifié et affiné, en assurant une qualité équivalente à celle du gaz naturel, y compris pour ce qui est de la teneur en méthane, et qu'il a une teneur maximale de 1 % en oxygène). La quantité totale susceptible d'être présente dans les installations y compris dans les cavités souterraines (strates naturelles, aquifères, cavités salines et mines désaffectées) étant :		
4718.1	1. Supérieure ou égale à 50 t Quantité seuil bas au sens de l'article R. 511-10 : 50 t. Quantité seuil haut au sens de l'article R. 511-10 : 200 t.	A	1
4718.2	2. Supérieure ou égale à 6 t mais inférieure à 50 t Quantité seuil bas au sens de l'article R. 511-10 : 50 t. Quantité seuil haut au sens de l'article R. 511-10 : 200 t.	DC	1

Germany

Water hazard class (WGK)	: WGK 3, Highly hazardous to water (Classification according to AwSV; ID No. 8458).
Major Accidents Ordinance (12. BImSchV)	: Listed in the 12. BImSchV (Annex I) under: 2.1 - Quantity threshold for operational area under § 1 para. 1 - Sentence 1 :50000 kg - Sentence 2 :200000 kg

Netherlands


Waterbezwaarlijkheid	: B (5) - Weinig schadelijk voor in het water levende organismen
SZW-lijst van kankerverwekkende stoffen	: Hydrocarbons, C4; Petroleum gas is listed
SZW-lijst van mutagene stoffen	: Hydrocarbons, C4; Petroleum gas is listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: The substance is not listed

Denmark

Class for fire hazard	: Class I-1
Store unit	: 1 liter
Classification remarks	: F+ <Flam. Gas 1A; Press. Gas (Liq.)>; Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out

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SECTION 16: Other information

Indication of changes:

1.1	Product identifier	Modified	
1.3	Details of the supplier of the safety data sheet	Modified	
2.2	Precautionary statements (CLP)	Update	
3	Composition/information on ingredients	Modified	
7.2	Technical measures	Update	
15.1	Water hazard class (WGK)	Modified	
16	Other information	Added	

Abbreviations and acronyms:

	ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
	CSR = CSR = Chemical Safety Report
	DNEL = DNEL = Derived No Effect Level
	LD50 = Median lethal dose
	N.O.S. = Not Otherwise Specified
	PNEC = Predicted No Effect Concentration
	STEL = Short term exposure limit
	TLV = Threshold limits
	TWA = time weighted average
	persistent, bioaccumulating and toxic (PBT).
	vPvB = very persistent and very bioaccumulating
	WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)
	NA= Not applicable
	ABM = Algemene beoordelingsmethodiek
	BTT = Breakthrough time (maximum wearing time)
	DMEL = Derived Minimal Effect level
	EC50 = Median Effective Concentration
	EL50 = Median effective level
	ErC50 = EC50 in terms of reduction of growth rate
	ErL50 = EL50 in terms of reduction of growth rate
	EWC = European waste catalogue
	LC50 = Median lethal concentration
	LL50 = Median lethal level
	NOEC = No observed effect concentration
	NOEL: no-observed-effect level
	NOELR = No observed effect loading rate
	NOAEC = No observed adverse effect concentration
	NOAEL = No observed adverse effect level
	OEL = Occupational Exposure Limits - Short Term Exposure Limits (STELs)
	Quantitative structure-activity relationship (QSAR)
	STOT = Specific Target Organ Toxicity

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	VOC = Volatile organic compounds
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Sources of key data used to compile the datasheet : ECHA (European Chemicals Agency). CSR = Chemical Safety Report. Supplier information.

Training advice : Training staff on good practice. Manipulations are to be done only by qualified and authorised persons.

Other information : Hazard classification and labeling of petroleum substances in the European Economic Area, Concawe – 2025 (<http://www.concawe.eu>).

Full text of H- and EUH-statements:

Carc. 1A	Carcinogenicity, Category 1A
Flam. Gas 1A	Flammable gases, Category 1A
Muta. 1B	Germ cell mutagenicity, Category 1B
Press. Gas (Liq.)	Gases under pressure : Liquefied gas
H220	Extremely flammable gas.
H280	Contains gas under pressure; may explode if heated.
H340	May cause genetic defects.
H350	May cause cancer.

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Labelling according to Regulation (EC) No. 1272/2008 [CLP]

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