

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## BUTADIENE

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	05/21/2026	BEN227	Date of first issue: 05/21/2026

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

#### 1.1 Product identifier

Trade name	:	BUTADIENE
Synonyms	:	buta-1,3-diene (Stabilized ), buta-1,3-diene, Refined Butadiene, BD, Bivinyll, Erythrene, Diolefin hydrocarbon
Substance name	:	1,3-butadiene
Substance No.	:	203-450-8

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

Identified uses	:	Manufacture of substances; Distribution of substance; Use as intermediate; Formulation of preparations; Use as a fuel; Manufacture of rubber products; Polymer production; Polymer processing; Use in laboratories
Prohibited uses	:	Cosmetics; Personal care products

#### 1.3 Details of the supplier of the safety data sheet

Company	Registration number	Telephone
Basell Polyoléfines France SAS Chemin départemental 54 B.P. 14 13131 Berre l'Etang Cedex France	01-2119471988-16- 0008	+33 (0) 4 42 74 42 74
Raffinerie de Berre		
MUO Polyolefine GmbH Berghauser Weg 50 85126 Münchsmünster Germany	01-2119471988-16	+49 (0)8402 76329
E-mail address Responsible/issuing person	:	RegulatoryComplianceROP@velogy.com

#### 1.4 Emergency telephone number

Basell Polyoléfines France SAS	+33 (0) 4 42 74 42 74
MUO Polyolefine GmbH	+49 (0) 8402 76112

#### **Poison Center:**

National Poisons Information Center (NVIC)  
NL: +31 (0)88 755 8000  
24 hours all days

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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.
Germ cell mutagenicity, Category 1B	H340: May cause genetic defects.
Carcinogenicity, Category 1A	H350: May cause cancer.

#### 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.  
H340 May cause genetic defects.  
H350 May cause cancer.

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

**Response:**  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
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.

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### 2.3 Other hazards

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.

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.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Substance name : 1,3-butadiene  
EC-No. : 203-450-8

#### Components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)	M-Factor, SCL, ATE
Substances with a workplace exposure limit :			
1,3-butadiene	106-99-0 203-450-8	>= 90 - <= 100	

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : This product is of low acute toxicity.  
May cause cancer by inhalation.  
Product is genotoxic.  
Contact with liquid may cause frostbite.  
Always observe self-protection methods  
Move out of dangerous area.  
Remove contaminated clothes except in the case of frostbite.  
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.  
Show this material safety data sheet to the doctor in attendance.

If inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Do not leave the victim unattended.  
Keep patient warm and at rest.

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Immediately seek medical attention.  
If breathing is difficult, give oxygen.  
If unconscious, place in recovery position and seek medical advice.  
In the event of unconsciousness, apnea or cardiac arrest (no pulse), apply cardiopulmonary resuscitation.

- In case of skin contact : Dermal contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.  
If frostbite has occurred, seek medical attention immediately; do not rub the affected area or flush with water. To prevent further damage, do not attempt to remove frozen clothing from affected area.
- In case of eye contact : If eye tissue is frozen, seek medical attention immediately. If tissue is not frozen, thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists seek medical attention.
- If swallowed : Ingestion is not a route of exposure for gases.

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

- Symptoms : Inhalation of very high concentrations may cause asphyxia, anesthesia, CNS depression (primarily fatigue, dizziness and loss of concentration, with collapse, coma and death in cases of severe overexposure), and possible cardiac sensitization.
- Risks : Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias (irregular beating) in persons exposed to this material.  
Skin or eye contact with rapidly evaporating liquid could result in freezing of the tissues or frostbite.
- May cause genetic defects.  
May cause cancer.

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

- Treatment : Treat symptomatically.  
Treat frost-bitten areas as needed.  
Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.
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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media : SMALL FIRE: Use dry chemical, CO<sub>2</sub>, water spray or regular foam. LARGE FIRE: Use water spray, water fog or regular foam. Do not use straight streams.
- Unsuitable extinguishing : Do not extinguish a leaking gas fire unless leak can be

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media stopped.

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

Specific hazards during fire-fighting : May polymerize explosively when involved in a fire. Vapors may travel long distances along the ground before reaching a source of ignition and flashing back. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Do not direct water at source of leak or safety devices; icing may occur. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Move containers from fire area if it can be done without risk. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Thermal decomposition may produce oxides of carbon and other toxic gases and liberate heat and pressure. Reacts with air to form peroxides.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : Wear an approved positive pressure self-contained breathing apparatus and firefighter turnout gear.

Further information : Use water spray to cool unopened containers.

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## SECTION 6: Accidental release measures

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

Personal precautions : Use personal protective equipment. Eliminate all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Spillages of liquid product will create a fire hazard and form an explosive atmosphere. Avoid direct contact with released material. Stay upwind. Keep non-involved personnel away from the area of spillage. See section 8 for additional PPE information. See section 13 for disposal information.

### 6.2 Environmental precautions

Environmental precautions : An authoritative evaluation of environmental exposure and risk indicates that no special risk management practices are needed to control environmental release.

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

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
Eliminate all sources of ignition.  
Let evaporate.  
All equipment used when handling this product must be grounded.  
Stop leak if you can do it without risk.  
Isolate area until gas has dispersed.  
Water spray may reduce vapor; but may not prevent ignition in closed spaces.  
Prevent entry into waterways, sewers, basements or confined areas.  
Caution: When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning.

### 6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : Do not handle near heat, sparks, or open flame.  
Do not enter storage areas unless adequately ventilated.  
Metal containers involved in the transfer of this material should be grounded and bonded.  
Bonding and grounding measures may not be enough if non-conductive flammables are involved.  
Check atmosphere for explosiveness and oxygen deficiencies.  
Wear recommended personal protective equipment.  
Handle empty containers with care; vapor residue may be flammable/explosive.  
Isolate, vent, drain, wash and purge systems or equipment before maintenance or repair.  
All equipment must conform to applicable electrical code.  
Use only non-sparking tools.  
Do not pressurize, cut, weld, braze solder, drill, or grind on containers.  
While moving cylinder, always keep in place removable valve cover.  
Securely chain cylinders when in use and protect against physical damage.  
Do not pressurize or expose empty containers to open flame, sparks, or heat.  
Do not enter areas where used or stored until adequately ventilated.  
Ice formation in freezing conditions during transport and/or unloading may restrict the operation of the RTC bottom valve

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and shall be considered in operating procedures / risk analysis at unloading site by the customer.

Advice on protection against fire and explosion : Take precautionary measures against static discharge.

Hygiene measures : Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Consult the appropriate European norm (EN) standard before deciding on the type of personal protective equipment that is appropriate for a particular set of circumstances.  
Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Take off contaminated clothing and wash before reuse.

Fire-fighting class : Extremely flammable gas.

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

Requirements for storage areas and containers : Keep storage containers clean, dry and free of oxygen. Store in accordance with the particular national regulations. Oxygen intrusion into the vessel headspace may support the formation of peroxides and promote popcorn polymer growth. Popcorn polymer may plug safety-venting devices, plug lines and foul equipment. Polymer formation may build sufficient mechanical force to rupture equipment. Store in tightly closed containers segregated from oxidizers and other combustible material. Provide electrical equipment with spark resistant construction.

### 7.3 Specific end use(s)

Specific use(s) : (Refer to exposure scenario section for specific information).

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
1,3-butadiene	106-99-0	TWA	1 ppm 2.2 mg/m <sup>3</sup>	2004/37/EC
		Further information: Carcinogens or mutagens		
		TLV-8hr	0.89 ppm 2 mg/m <sup>3</sup>	NL WG
		Further information: Carcinogenic substances		

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### 8.2 Exposure controls

#### Engineering measures

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

#### Personal protective equipment

Eye/face protection : Safety glasses are the minimum requirements.  
Use chemical type goggles and face shield when handling liquefied gases.  
The selected goggles or glasses must satisfy the European norm standard EN 166.

#### Hand protection

Remarks : Wear insulated gloves if contact with liquid is possible. The selected gloves must satisfy the European norm standard EN 511 for protection against the cold.

Skin and body protection : Clothing such as insulated impervious gloves to protect against exposure to cold liquid or gas should be worn. Choose body protection according to the amount and concentration of the dangerous substance at the work place. Use PPE that is chemical resistant to the product and prevents skin contact. Fire retardant clothing is appropriate for routine occupational use. The selected clothing must satisfy the European norm standard EN 533.

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Use only approved supplied air or self-contained breathing apparatus operated in positive pressure mode. If needed, wear a supplied air respirator conforming to a European norm standard such as EN 139 or equivalent. Wear a respirator conforming to EN 371 with Type AX filter designed for low boiling compounds.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state : gaseous (20 °C, 1,013 hPa)

Form : compressed liquefied gas

Colour : colorless

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Odour : hydrocarbon-like

Odour Threshold : Not applicable

Melting point/range : -108.9 °C

Freezing point : no data available

Boiling point/boiling range : -4.41 °C

Upper explosion limit / Upper flammability limit : 12 vol%

Lower explosion limit / Lower flammability limit : 2 vol%

Flash point : Not applicable (gas).

Decomposition temperature : Carbon dioxide, carbon monoxide, smoke, fumes and unburned hydrocarbons.

pH : Not applicable.

Solubility(ies)  
Water solubility : 0.735 g/l (20 °C)

Partition coefficient: n-octanol/water : log Pow: 1.99

Vapour pressure : 2,170 hPa (16.85 °C)  
2,550 hPa (21.85 °C)

Density : Not applicable (gas).

### 9.2 Other information

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Explosives : Not applicable.

(No chemical groups associated with explosive properties.)

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Self-ignition : 420 °C

Molecular weight : 54.09 g/mol

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### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

The product is normally supplied in a stabilized form. If the permissible storage period and/or storage temperature is noticeably exceeded, the product may polymerize with heat evolution. 1,3-butadiene may react with oxygen to form unstable butadiene peroxides. Butadiene peroxides are thermally unstable, shock sensitive and may lead to the formation of popcorn polymer.

#### 10.2 Chemical stability

This product is stable with an appropriate level of TBC inhibitor (minimum 10 ppm), but reactive (unstable) without.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions : Polymerization may take place at elevated temperatures or in the presence of oxidizers. The formation of popcorn polymer can build sufficient mechanical force to rupture process equipment. Polymer may also plug safety venting devices.  
Not Available.

#### 10.4 Conditions to avoid

Conditions to avoid : All sources of ignition, high temperature and oxygen intrusion into storage and transportation vessels. Elevated temperature or catalysis can cause violent rupture of containers.

#### 10.5 Incompatible materials

Materials to avoid : Phenol, ethanol, chlorine dioxide, crotonaldehyde, nitric acid, oxygen and other strong oxidizers, and acetylide forming materials such as copper, magnesium, mercury, silver and monel. Contact may form violently explosive peroxides.

#### 10.6 Hazardous decomposition products

Explosive peroxides.  
4-Vinylcyclohexene-1

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### SECTION 11: Toxicological information

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

##### Acute toxicity

Based on available data, the classification criteria are not met.

##### Components:

##### 1,3-butadiene:

- Acute oral toxicity : Assessment: The substance or mixture has no acute oral toxicity
- Acute inhalation toxicity : LC50 (Rat): 285 mg/l  
Exposure time: 4 HOURS  
Test atmosphere: gas
- Acute dermal toxicity : Assessment: The substance or mixture has no acute dermal toxicity

##### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

##### Components:

##### 1,3-butadiene:

- Assessment : No skin irritation

##### Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

##### Components:

##### 1,3-butadiene:

- Assessment : No eye irritation

##### Respiratory or skin sensitisation

##### Skin sensitisation

Based on available data, the classification criteria are not met.

##### Respiratory sensitisation

Based on available data, the classification criteria are not met.

##### Components:

##### 1,3-butadiene:

- Assessment : Did not cause sensitization on laboratory animals.

##### Germ cell mutagenicity

May cause genetic defects.

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### Components:

#### **1,3-butadiene:**

Germ cell mutagenicity- Assessment : Presumed to induce heritable mutations in the germ cells of humans.

#### **Carcinogenicity**

May cause cancer.

### Components:

#### **1,3-butadiene:**

Carcinogenicity - Assessment : Positive evidence from human epidemiological studies

#### **Reproductive toxicity**

Based on available data, the classification criteria are not met.

### Components:

#### **1,3-butadiene:**

Reproductive toxicity - Assessment : Based on available data, the classification criteria are not met.

#### **STOT - single exposure**

Based on available data, the classification criteria are not met.

### Components:

#### **1,3-butadiene:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

#### **STOT - repeated exposure**

Based on available data, the classification criteria are not met.

### Components:

#### **1,3-butadiene:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

#### **Aspiration toxicity**

Based on available data, the classification criteria are not met.

### Components:

#### **1,3-butadiene:**

Not applicable

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### 11.2 Information on other hazards

#### Endocrine disrupting properties

Based on available data, the classification criteria are not met.

#### 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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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Components:

##### 1,3-butadiene:

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 43 mg/l  
Exposure time: 96 HOURS  
Remarks: 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 : LC50 (Daphnia magna (Water flea)): 24 mg/l  
Exposure time: 48 HOURS  
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.
- Toxicity to algae/aquatic plants : EC50 (green algae): 11 mg/l  
Exposure time: 96 HOURS  
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.
- Toxicity to fish (Chronic toxicity) : NOELR: 4.4 mg/l  
Exposure time: 21 d  
Species: Oncorhynchus mykiss (rainbow trout)  
Remarks: 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) : EC50: 2.2 mg/l  
Exposure time: 16 d  
Species: Daphnia (water flea)  
Remarks: The value is given based on a SAR/AAR approach using OECD Toolbox, DEREK, VEGA QSAR models (CAESAR models), etc.

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### Ecotoxicology Assessment

Acute aquatic toxicity : Harmful to aquatic life.  
Chronic aquatic toxicity : Not classified

### 12.2 Persistence and degradability

#### Components:

##### 1,3-butadiene:

Biodegradability : Result: Readily biodegradable.  
Stability in water : Remarks: no data available  
Photodegradation : Remarks: no data available

### 12.3 Bioaccumulative potential

#### Components:

##### 1,3-butadiene:

Bioaccumulation : Bioconcentration factor (BCF): 9.55  
Method: Calculation method  
Remarks: Bioaccumulation is unlikely.  
Partition coefficient: n-octanol/water : log Pow: 1.99

### 12.4 Mobility in soil

#### Components:

##### 1,3-butadiene:

Stability in soil : Remarks: no data available

### 12.5 Results of PBT and vPvB assessment

#### Product:

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.

### 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

#### Components:

##### 1,3-butadiene:

Additional ecological information : no data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Preferred disposal for this volatile, flammable product is through combustion.  
Use flare if pressure warrants.  
Assure emissions comply with applicable regulations.  
Contaminated product, soil, water, and empty containers may be hazardous wastes due to possible presence of flammable gases.  
Dispose of in accordance with local regulations.  
Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes.  
Proper grounding procedures to avoid static electricity should be followed.  
The product should not be allowed to enter drains, water courses or the soil.

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## SECTION 14: Transport information

### 14.1 UN number or ID number

ADN : UN 1010  
ADR : UN 1010  
RID : UN 1010  
IMDG : UN 1010

### 14.2 UN proper shipping name

ADN : BUTADIENES (1,3-BUTADIENE), STABILIZED  
ADR : BUTADIENES, STABILIZED  
RID : BUTADIENES, STABILIZED  
IMDG : BUTADIENES, STABILIZED

### 14.3 Transport hazard class(es)

Class	Subsidiary risks
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<b>ADN</b>	: 2	2.1, Unst., CMR
<b>ADR</b>	: 2	2.1
<b>RID</b>	: 2	2.1, 13
<b>IMDG</b>	: 2.1	

### 14.4 Packing group

**ADN**  
Packing group : Not assigned by regulation  
Classification Code : 2F  
Labels : 2.1 (Unst., CMR)

**ADR**  
Packing group : Not assigned by regulation  
Classification Code : 2F  
Hazard Identification Number : 239  
Labels : 2.1  
Tunnel restriction code : B/D

**RID**  
Packing group : Not assigned by regulation  
Classification Code : 2F  
Hazard Identification Number : 239  
Labels : 2.1 (13)

**IMDG**  
Packing group : Not assigned by regulation  
Labels : 2.1  
EmS Code : F-D, S-U

### 14.5 Environmental hazards

**ADN**  
Environmentally hazardous : no

**ADR**  
Environmentally hazardous : no

**RID**  
Environmentally hazardous : no

**IMDG**  
Marine pollutant : no

### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 14.7 Maritime transport in bulk according to IMO instruments

Regulatory basis : IGC Code  
Product name : BUTADIENE (ALL ISOMERS)  
Ship type : 2G/2PG  
Pollution category : N.A.

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according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



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### SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:  
Number on list 28: 1,3-butadiene

Number on list 29: 1,3-butadiene

Number on list 40

Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorization (Article 59). : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Netherlands. Substances of very high concern (ZZS-list) : 1,3-butadiene

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)  
Volatile organic compounds (VOC) content: 99.71 %

#### Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

Contains a substance which is subject to the SZW-list of mutagenic substances (Ministry of Social Affairs and Employment). 1,3-butadiene

Contains a substance which is subject to the SZW-list of carcinogenic substances (Ministry of Social Affairs and Employment). 1,3-butadiene

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

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory
AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
ENCS	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
REACH	:	If the product has been purchased from Rotterdam Olefins & Polyolefins B.V., we confirm that the chemical substances in this product have been registered under REACH, in accordance with the deadlines set forth in REACH. (Regulation (EU) No. 1907/2006).
NZIoC	:	On the inventory, or in compliance with the inventory
TECI	:	On the inventory, or in compliance with the inventory
CH BAGREG	:	On the inventory, or in compliance with the inventory
MXINSQ	:	On the inventory, or in compliance with the inventory
NCI	:	On the inventory, or in compliance with the inventory
UKREACH	:	If the product has been purchased from Rotterdam Olefins & Polyolefins B.V., we confirm that the chemical substances in this product have been notified with a DUIN or, where required under UK-REACH, registered, and that we have the intention to proceed with any required registration in accordance with the deadlines set forth in the regulation REACH etc. (Amendment etc.) (EU Exit) Regulations 2019.
KKDIK	:	If the product has been purchased from Rotterdam Olefins & Polyolefins B.V., we confirm that the chemical substances in this product have been pre-registered or, where required under KKDIK, registered, and that we have the intention to proceed with any required registration in accordance with the deadlines set forth in the regulation.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

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### SECTION 16: Other information

#### Full text of other abbreviations

2004/37/EC	:	Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work
NL WG	:	Netherlands. Law on Labour conditions - Occupational Exposure Limits
2004/37/EC / TWA	:	Long term exposure limit
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 Harmonised 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; 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 - Organisation 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; TECI - 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

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

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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.

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