# 1,3-butadiene

Safety Data Sheet

according to US HazCom 2024

Issue date: 26 May 2015 Revision date: 21 November 2025 Supersedes: 17 June 2025 Version: 7.1

## SECTION 1 Identification

### 1.1. Product identifier

| | | |
|---|---|---|
| Product form | : | Substance |
| Trade name | : | 1,3-butadiene |
| Chemical name | : | 1,3-butadiene |
| CAS-No. | : | 106-99-0 |
| Product code | : | P056 |
| Formula | : | C4H6 |

### 1.2. Other means of identification

| | | |
|---|---|---|
| EC Index No. (Report) | : | 601-013-00-X |
| EC-No. | : | 203-450-8 |

### 1.3. Recommended use of the chemical and restrictions on use

| | | |
|---|---|---|
| Recommended use | : | Manufacture of rubber products |
| Restrictions on use | : | No additional information available |

### 1.4. Supplier's details

Braskem America, Inc.
1735 Market Street
Philadelphia, PA 19103-7583
Tel: (800) 396 - 5251
productsafety@braskem.com

### 1.5. Emergency phone number

| | | |
|---|---|---|
| Emergency number | : | CHEMTREC: +1 800 424 9300 (NORTH AMERICA)<br>CHEMTREC International: +1 1-703-527-3887 |

## SECTION 2 Hazard Identification

### 2.1. Classification of the substance or mixture

**GHS US classification**

| | |
|---|---|
| Flammable gas, Category 1A | Extremely flammable gas. |
| Gas under pressure : Liquefied gas | Contains gas under pressure; may explode if heated. |
| Germ cell mutagenicity, Category 1B | May cause genetic defects. |
| Carcinogenicity, Category 1A | May cause cancer. |
| Simple asphyxiant, Category 1 | May displace oxygen and cause rapid suffocation. |

### 2.2. Label elements

**GHS US labeling**

Hazard pictograms (GHS US) :

| | | |
|---|---|---|
| Signal word (GHS US) | : | Danger |
| Hazard statements (GHS US) | : | Extremely flammable gas<br>Contains gas under pressure; may explode if heated<br>May cause genetic defects.<br>May cause cancer.<br>May displace oxygen and cause rapid suffocation |
| Precautionary statements (GHS US) | : | Obtain special instructions before use.<br>Do not handle until all safety precautions have been read and understood. |

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wear eye protection, protective clothing, protective gloves.
If exposed or concerned: Get medical advice/attention.
Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
In case of leakage, eliminate all ignition sources.
Store in a well-ventilated place.
Store locked up.
Protect from sunlight. Store in a well-ventilated place.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

### 2.4. Hazards not otherwise classified

Other hazards which do not result in classification : May cause frostbite on contact the liquefied gas. Harmful to aquatic life.

### 2.5. Unknown acute toxicity

No additional information available

## SECTION 3 Composition/information on ingredients

### 3.1. Substances

Name : 1,3-Butadiene
CAS-No. : 106-99-0

### 3.2. Mixtures

Not applicable

## SECTION 4 First aid measures

### 4.1. Description of necessary first-aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention immediately.

First-aid measures after skin contact : Remove contaminated clothing and shoes. Contact with the liquefied gas may cause frostbite. Rinse immediately with plenty of water (for at least 15 minutes). Do not remove clothing adhering to the skin. Thaw frosted parts with lukewarm water. Do not rub affected area. Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately rinse with water for a prolonged period while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. May cause frostbite on contact the liquefied gas. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

### 4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects : May cause cancer. May cause genetic defects.

Symptoms/effects after inhalation : May cause irritation to the respiratory tract. irritation of mucous membranes. Asphyxiant in high concentrations. Excessive concentrations may cause nervous system depression, headache, and weakness leading to unconsciousness.

Symptoms/effects after skin contact : Repeated exposure may cause skin dryness or cracking. Skin rash/inflammation. Contact with the product may cause cold burns or frostbite.

Symptoms/effects after eye contact : Contact with the liquid may cause frostbite and serious damage to eyes.

Symptoms/effects after ingestion : Ingestion is not considered a potential route of exposure.

### 4.3. Indication of immediate medical attention and special treatment needed, if necessary

Note to physician : Treat symptomatically. Treat as thermal burns.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : carbon dioxide (CO2), dry chemical powder, foam. Water.

Unsuitable extinguishing media : None known.

### 5.2. Specific hazards arising from the chemical

Fire hazard : Extremely flammable gas. Heavier than air, vapors may travel long distances along ground, ignite and flash back to source. This material can accumulate static charge by flow or agitation and can be ignited by static discharge.

Explosion hazard : Explosive. Contains gas under pressure; may explode if heated. Prolonged exposure to fire may cause containers to rupture/explode.

Hazardous decomposition products in case of fire : On combustion, forms: carbon oxides (CO and CO2).

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Cool closed containers exposed to fire with water spray. Keep upwind. Prevent fire-fighting water from entering environment.

Protection during firefighting : Extra personal protection: complete protective clothing including self-contained breathing apparatus. For further information refer to section 8: "Exposure controls/personal protection".

## SECTION 6 Accidental release measures

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

General measures : Evacuate unnecessary personnel. In case of leakage, eliminate all ignition sources. Stop leak if safe to do so. Reduce vapor with fog or fine water spray. Gas or vapor heavier than air. Mechanically ventilate the spillage area. Use special care to avoid static electric charges. May cause frostbite on contact the liquefied gas. Avoid contact with skin, eyes and clothing.

**For non-emergency personnel**

Protective equipment : Wear suitable protective clothing, gloves and eye/face protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. No flames, no sparks. Eliminate all sources of ignition. Containers must be properly grounded before beginning transfer. Only qualified personnel equipped with suitable protective equipment may intervene. Use explosion-proof equipment. Do not breathe fumes from fires or vapors from decomposition.

**For emergency responders**

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Stop leak, if possible without risk. Eliminate every possible source of ignition. Ventilate area. Use ventilation/water spray/fog to disperse vapors.

Environmental precautions : Avoid discharge to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.2. Methods and materials for containment and cleaning up

For containment : Ventilate spillage area. Stop leak, if possible without risk. Collect spillage. Control the vapors with a fine water spray. Vapors are heavier than air and may spread along floors. Use non-sparking tools.

Methods for cleaning up : Ventilate spillage area. Use water spray to disperse the vapors. Store away from other materials.

Other information : Dispose in a safe manner in accordance with local/national regulations.

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13 : "Disposal considerations".

## SECTION 7 Handling and storage

### 7.1. Precautions for safe handling

| | | |
|---|---|---|
| Precautions for safe handling | : | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station. Wear personal protective equipment. Use only non-sparking tools. Use grounded electrical/mechanical equipment. Ground/bond container and receiving equipment. Do not use compressed air to transfer, discharge or transport the product. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Avoid contact with skin, eyes and clothing. Contact with the product may cause cold burns or frostbite. |
| Technical measures | : | Closed system, ventilation, explosion-proof electrical equipment and lighting. |
| Hygiene measures | : | Remove contaminated clothes. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke in areas where product is used. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. |
| Additional hazards when processed | : | Container remains hazardous when empty. Continue to observe all precautions. Handling this product may result in electrostatic accumulation. Use proper grounding procedures. Contact with the liquefied gas may cause frostbite. |

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

| | | |
|---|---|---|
| Technical measures | : | Provide adequate ventilation. Use only non-sparking tools. Use only explosion-proof equipment. Use grounded electrical/mechanical equipment. |
| Storage conditions | : | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store only in a limited quantity. Store in dry, cool, well-ventilated area. Keep the cylinders at vertical position, fixed to the wall or other solid structure. Keep container closed when not in use. Store locked up. |
| Incompatible materials | : | air or oxygen. Strong oxidizing agents. copper. Monel alloy, aluminum tetrahydroborate, vinylacetylene, chrome-aldehyde, boron trifluoride, phenol, concentrated solutions of sodium nitrite(5%), halogen. |
| Packaging materials | : | Carbon steel. Stainless steel. |

## SECTION 8 Exposure controls/personal protection

### 8.1. Control parameters

| **1,3-butadiene (106-99-0)** | |
|---|---|
| **USA - ACGIH - Occupational Exposure Limits** | |
| Local name | 1,3-Butadiene |
| ACGIH® TLV® TWA | 4.4 mg/m³ |
| | 2 ppm |
| Remark (ACGIH®) | TLV® Basis: Cancer. Notations: A2 (Suspected Human Carcinogen); BEI |
| Regulatory reference | ACGIH 2025 |
| **USA - ACGIH - Biological Exposure Indices** | |
| Local name | 1,3-Butadiene |

| 1,3-butadiene (106-99-0) | |
|---|---|
| BEI | 2.5 mg/l Parameter: 1,2 Dihydroxy-4-(N-acetylcysteinyl)-butane - Medium: urine - Sampling time: End of shift - Notations: B, Sq<br>2.5 pmol/g hemoglobin Parameter: Mixture of N-1- and N-2-(Hydroxybutenyl) valine hemoglobin (Hb) adducts - Medium: blood - Sampling time: Not critical - Notations: Sq |
| Regulatory reference | ACGIH 2025 |
| **USA - OSHA - Occupational Exposure Limits** | |
| Local name | Butadiene (1,3-Butadiene); See 29 CFR 1910.1051; 29 CFR 1910.19(1) |
| OSHA PEL TWA | 1 ppm |
| OSHA PEL STEL | 5 ppm |
| Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |
| **USA - Cal/OSHA - Occupational Exposure Limits** | |
| Local name | 1,3-Butadiene |
| Cal/OSHA PEL (OEL TWA) | 2.2 mg/m³ |
| | 1 ppm |
| Cal/OSHA STEL | 11 mg/m³ |
| | 5 ppm |
| Regulatory reference | California Division of Occupational Safety and Health (Cal/OSHA) - Permissible Exposure Limit for Chemical Contaminants (Table AC-1) |
| **USA - NIOSH - Occupational Exposure Limits** | |
| Local name | Butadiene (1,3-Butadiene) |
| Remark (NIOSH) | Ca = Potential occupational carcinogens |
| Regulatory reference (US-NIOSH) | OSHA Annotated Table Z-1 (NIOSH Pocket Guide to Chemical Hazards (NPG)) |

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation to minimize vapor concentrations. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Use only non-sparking tools. Use only explosion-proof equipment. All equipment used when handling the product must be grounded.

Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures, such as personal protective equipment

| **Hand protection:** |
|---|
| Protective gloves made of PVC. It is recommended that the glove supplier be consulted to ensure the protective gloves are resistant to chemicals in this product |

| **Eye protection:** |
|---|
| Contact lenses should not be worn. Safety glasses with side guards should be worn to prevent injury from airborne particles and/or other eye contact with this product |

| **Skin and body protection:** |
|---|
| Wear suitable protective clothing |

| **Respiratory protection:** |
|---|
| An approved organic vapor respirator/supplied air or self-contained breathing apparatus must be used when vapor concentration exceeds applicable exposure limits |

**Thermal hazard protection:**
Wear cold insulating gloves and either face shield or eye protection.

**Other information:**
Do not eat, drink or smoke during use.

## SECTION 9 Physical and chemical properties

### 9.1. Basic physical and chemical properties

| | | |
|---|---|---|
| Physical state | : | Gas |
| Appearance | : | Clear. |
| Color | : | Colorless |
| Odor | : | Faint aromatic Gasoline |
| Odor threshold | : | No data available |
| pH | : | No data available |
| Melting point | : | -108.9 °C |
| Freezing point | : | No data available |
| Boiling point | : | -4.5 °C |
| Flash point | : | -76 °C |
| Relative evaporation rate (ether=1) | : | > 25 |
| Flammability (solid, gas) | : | No data available |
| Vapor pressure | : | 273.6 kPa (21.1°C) |
| Relative vapor density at 20°C | : | 1.87 |
| Relative density | : | 0.6 |
| Density | : | 0.6149 g/cm³ (25 °C) |
| Molecular mass | : | 54.09 g/mol |
| Solubility | : | Slightly soluble in: Ethanol. Methanol.<br>Water: 735 mg/l<br>Organic solvent:Soluble |
| Partition coefficient n-octanol/water (Log Pow) | : | 1.724 – 2.132 |
| Auto-ignition temperature | : | 420 °C (788 °F) |
| Decomposition temperature | : | No data available |
| Viscosity, kinematic | : | 0.537 mm²/s |
| Viscosity, dynamic | : | 0.33 cP (-40 °C); Liquid |
| Explosion limits | : | 1.4 – 16.3 vol %<br>Lower explosion limit: 1.4 vol %<br>Upper explosion limit: 16.3 vol % |
| Particle characteristics | : | No data available |

### 9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

## SECTION 10 Stability and reactivity

### 10.1. Reactivity

Extremely flammable gas. At high temperatures : Polymerization can occur.

### 10.2. Chemical stability

Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

### 10.3. Possibility of hazardous reactions

Extreme risk of explosion by shock, friction, fire or other sources of ignition. Hazardous polymerization may occur if exposed to high temperature.

### 10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition. Avoid static electricity discharges.

### 10.5. Incompatible materials

air or oxygen. Strong oxidizing agents. Copper (Cu). Monel alloy, aluminum tetrahydroborate, vinylacetylene, chrome-aldehyde, boron trifluoride, phenol, concentrated solutions of sodium nitrite(5%), halogen.

### 10.6. Hazardous decomposition products

Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

## SECTION 11 Toxicological information

Likely routes of exposure : Skin and eye contact. Inhalation.

### 11.1. Information on toxicological effects

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)

| 1,3-butadiene (106-99-0) | |
|---|---|
| LD50 oral rat | 5480 mg/kg (Source: NLM_CIP) |

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)

Respiratory or skin sensitization : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : May cause genetic defects.

Carcinogenicity : May cause cancer.

| 1,3-butadiene (106-99-0) | |
|---|---|
| IARC group | 1 - Carcinogenic to humans |
| National Toxicity Program (NTP) Status | Known Human Carcinogens |

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

| 1,3-butadiene (106-99-0) | |
|---|---|
| Viscosity, kinematic | 0.537 mm²/s |

Symptoms/effects : May cause cancer. May cause genetic defects.
Symptoms/effects after inhalation : May cause irritation to the respiratory tract. irritation of mucous membranes. Asphyxiant in high concentrations. Excessive concentrations may cause nervous system depression, headache, and weakness leading to unconsciousness.
Symptoms/effects after skin contact : Repeated exposure may cause skin dryness or cracking. Skin rash/inflammation. Contact with the product may cause cold burns or frostbite.
Symptoms/effects after eye contact : Contact with the liquid may cause frostbite and serious damage to eyes.
Symptoms/effects after ingestion : Ingestion is not considered a potential route of exposure.
Other information : Likely routes of exposure: inhalation, skin and eye.

## SECTION 12 Ecological information

### 12.1. Ecotoxicity

Hazardous to the aquatic environment, short–term (acute) : Not a OSHA HazCom 2024 hazard endpoint

Hazardous to the aquatic environment, long–term (chronic) : Not a OSHA HazCom 2024 hazard endpoint

### 12.2. Persistence and degradability

| 1,3-butadiene (106-99-0) | |
|---|---|
| Persistence and degradability | not persistent. |

### 12.3. Bioaccumulative potential

| 1,3-butadiene (106-99-0) | |
|---|---|
| BCF - Fish [1] | 13 – 19.1 |
| Partition coefficient n-octanol/water (Log Kow) | 1.724 – 2.132 |

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Ozone : Not a OSHA HazCom 2024 hazard endpoint

Effect on global warming : No known effects from this product.

Fluorinated greenhouse gases : No

## SECTION 13 Disposal considerations

Regional legislation (waste) : Disposal must be done according to official regulations. Consult an expert on waste disposal or treatment.

Product/Packaging disposal recommendations : Dispose of this material and its container at hazardous or special waste collection point.

Additional information : Do not re-use empty containers. Container remains hazardous when empty. Continue to observe all precautions.

Ecological waste information : Avoid release to the environment.

## SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

| DOT | TDG | IMDG | IATA |
|---|---|---|---|
| **14.1. UN number** | | | |
| UN1010 | UN1010 | 1010 | 1010 |
| **14.2. Proper Shipping Name** | | | |
| Butadienes, stabilized | BUTADIENES, STABILIZED | BUTADIENES, STABILIZED | Butadienes, stabilized |
| **14.3. Transport hazard class(es)** | | | |
| 2.1 | 2.1 | 2.1 | 2.1 |
|   |   |   |   |

| DOT | TDG | IMDG | IATA |
|---|---|---|---|
| **14.4. Packing group** | | | |
| Not applicable | Not applicable | Not applicable | Not applicable |
| **14.5. Environmental hazards** | | | |
| Dangerous for the environment: No | Dangerous for the environment: No | Dangerous for the environment: No<br>Marine pollutant: No | Dangerous for the environment: No |
| No supplementary information available | | | |

### 14.6. Transport in bulk

IGC product name : Butadiene
IGC ship type : 2 G/2 PG

### 14.7. Special precautions for user

**DOT**

UN-No. (DOT) : UN1010
DOT Special Provisions (49 CFR 172.102) : 387 - When materials are stabilized by temperature control, the provisions of §173.21(f) of this subchapter apply. When chemical stabilization is employed, the person offering the material for transport shall ensure that the level of stabilization is sufficient to prevent the material as packaged from dangerous polymerization at 50 °C (122 °F). If chemical stabilization becomes ineffective at lower temperatures within the anticipated duration of transport, temperature control is required and is forbidden by aircraft. In making this determination factors to be taken into consideration include, but are not limited to, the capacity and geometry of the packaging and the effect of any insulation present, the temperature of the material when offered for transport, the duration of the journey, and the ambient temperature conditions typically encountered in the journey (considering also the season of year), the effectiveness and other properties of the stabilizer employed, applicable operational controls imposed by regulation (e.g.requirements to protect from sources of heat, including other cargo carried at a temperature above ambient) and any other relevant factors. The provisions of this special provision will be effective until January 2, 2019, unless we terminate them earlier or extend them beyond that date by notice of a final rule in the Federal Register.
T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx) : 306
DOT Packaging Non Bulk (49 CFR 173.xxx) : 304
DOT Packaging Bulk (49 CFR 173.xxx) : 314, 315
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 150 kg
DOT Vessel Stowage Location : B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other : 25 - Protected from sources of heat,40 - Stow ‘‘clear of living quarters’’

**TDG**

UN-No. (TDG) : UN1010

| | | |
|---|---|---|
| TDG Special Provisions | : | 155 - (1) If these dangerous goods are stabilized by temperature control, they must be offered for transport, handled or transported in accordance with section 7.1.5 of the UN Recommendations.<br>(2) If chemical stabilization is employed, the person offering the means of containment for transport must ensure that the level of stabilization will prevent a dangerous polymerization of the dangerous goods at a bulk mean temperature of 50°C in the case of a small means of containment or an intermediate bulk container (IBC) or, in the case of a large means of containment that is not an IBC, at a bulk mean temperature of 45°C.<br>(3) If chemical stabilization may become ineffective at lower temperatures within the anticipated duration of transport, temperature control is required. In determining whether chemical stabilization may become ineffective at lower temperatures, the person offering the means of containment for transport must take at least the following the factors into consideration:<br>(a) the capacity and geometry of the means of containment and the effect of any insulation;<br>(b) the temperature of the dangerous goods when offered for transport;<br>(c) the duration of the transport and the seasonal ambient temperature conditions typically encountered during transport; and<br>(d) the effectiveness and other physical or chemical properties of the stabilizer employed. |
| ERAP Index | : | 3000 |
| Explosive Limit and Limited Quantity Index | : | 0.125 L |
| Excepted quantities (TDG) | : | E0 |
| Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index | : | Forbidden |
| Emergency Response Guide (ERG) Number | : | 116P |

**IMDG**

| | | |
|---|---|---|
| Special provision (IMDG) | : | 386 |
| Limited quantities (IMDG) | : | 0 |
| Excepted quantities (IMDG) | : | E0 |
| Packing instructions (IMDG) | : | P200 |
| Tank instructions (IMDG) | : | T50 |
| EmS-No. (Fire) | : | F-D - FIRE SCHEDULE Delta - FLAMMABLE GASES |
| EmS-No. (Spillage) | : | S-U - SPILLAGE SCHEDULE Uniform - GASES (FLAMMABLE, TOXIC OR CORROSIVE) |
| Stowage category (IMDG) | : | B |
| Stowage and handling (IMDG) | : | SW1, SW2 |
| Properties and observations (IMDG) | : | Liquefied, flammable gas with an unpleasant odor. Explosive limits: 2% to 12%. Heavier than air (1.84). |

**IATA**

| | | |
|---|---|---|
| Special provision (IATA) | : | A1, A209 |
| 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 |
| ERG code (IATA) | : | 10L |

## SECTION 15 Regulatory information

### 15.1. Federal regulations

| **1,3-butadiene (106-99-0)** | |
|---|---|
| Subject to reporting requirements of United States SARA Section 313<br>Listed on EPA Hazardous Air Pollutant (HAPS) | |
| CERCLA RQ | 10 lb |

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

No data available

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

### 15.2. International regulations

No additional information available

### 15.3. State regulations

| 1,3-butadiene (106-99-0) | |
|---|---|
| U.S. - California - Proposition 65 - Carcinogens List | Yes |
| U.S. - California - Proposition 65 - Developmental Toxicity | Yes |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female | Yes |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male | Yes |
| No significant risk level (NSRL) | 0.4 µg/day |
| State or local regulations | U.S. - New Jersey - Right to Know Hazardous Substance List<br>U.S. - Pennsylvania - RTK (Right to Know) List<br>U.S. - Minnesota - Hazardous Substance List<br>U.S. - Massachusetts - Right To Know List<br>U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances<br>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List<br>U.S. - Maine - Chemicals of Concern |

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

## SECTION 16 Other information

according to US HazCom 2024

Revision date : 21 November 2025

Issue date : 17 June

Other information : None.

Safety Data Sheet (SDS), USA - Braskem

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. It warns that the handling of any chemical substance requires the previous knowledge of its hazards for the user. It is up to the user of the product company providing this SDS to and promote the training of its employees about possible risks come upon of the product. The information contained herein is not absolute, but only general information on the use of the chemical and indication of safety and security measures.