

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : 1,3-Butadiene-d6

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

According to Regulation (EC) No1272/2008

Flammable gases (Category 1)

Gases under pressure (Liquefied gas)

Carcinogenicity (Category 1A)

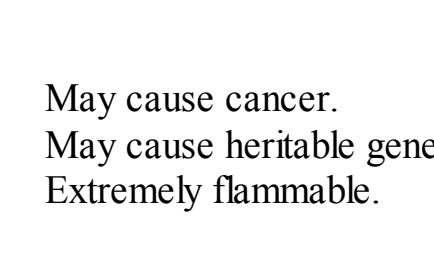
Germ cell mutagenicity (Category 1B)

According to European Directive 67/548/EEC as amended.

Extremely flammable. May cause cancer. May cause heritable genetic damage.

Label elements

Pictogram



Signal word Danger

Hazard statement(s)

H220 Extremely flammable gas.

H280 Contains gas under pressure; may explode if heated.

H340 May cause genetic defects.

H350 May cause cancer.

Precautionary statement(s)

P201 Obtain special instructions before use.

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

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

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

Hazard symbol(s)

F+ Extremely flammable

T Toxic

R-phrase(s)

R45 May cause cancer.

R46 May cause heritable genetic damage.

R12 Extremely flammable.

S-phrase(s)

S53 Avoid exposure - obtain special instructions before use.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Restricted to professional users.

Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C4 D6 C4D6

Molecular Weight : 60,13 g/mol 60,13 g/mol

CAS-No.	EC-No.	Classification	Concentration
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1,3-Butadiene-d₆

1441-56-1	-	Flam. Gas 1; Press. Gas ; Carc. 1A; Muta. 1B; H220, H280, H340, H350 F+, T, Carc.Cat.1, Mut.Cat.2, R45 - R46 - R12	-
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For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Clean up promptly by sweeping or vacuum.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid exposure - obtain special instructions before use. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Store under inert gas. hygroscopic

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form Liquefied gas

Safety data

pH	no data available
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Melting point	-109 °C - lit.
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Boiling point	-4,5 °C - lit.
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Flash point	no data available
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Ignition temperature	no data available
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Lower explosion limit	1,4 %(V) at 1013 hPa
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Upper explosion limit	16,3 %(V) at 1013 hPa
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Vapour pressure	2.430,00 hPa at 20 °C
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Water solubility	no data available
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10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

In vivo tests showed mutagenic effects

Carcinogenicity

Human carcinogen.

IARC: 1 - Group 1: Carcinogenic to humans (1,3-Butadiene-d6)

Reproductive toxicity

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation through skin. May cause skin irritation.

Symptoms of Exposure Nausea, Dizziness, Headache, narcosis, Dermatitis

12. ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

UN-Number: 1010 Class: 2.1

Proper shipping name: BUTADIENES, STABILIZED

EMS-No: F-D, S-U

IMDG

UN-Number: 1010 Class: 2.1

Proper shipping name: BUTADIENES, STABILIZED