

Safety Data Sheet

According to Regulation (EC) 1907/2006



3851 2-Butanol

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Name:

2-Butanol

Synonym:

2-Hydroxybutane, Methyl Ethyl Carbinol, sec-Butyl Alcohol

REACH Registration Number: 01-2119475146-36-XXXX

1.2 Relevant identified uses of the substance or mixture:

For laboratory utilisation, analysis, research and fine chemistry.

1.3 Identification of the company or firm:

PANREAC QUIMICA S.L.U.

C/Garraf 2

Polígono Pla de la Bruguera

E-08211 Castellar del Vallès

(Barcelona) Spain

Tel. (+34) 937 489 400

e-mail: product.safety@panreac.com

1.4 Emergency telephone:

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

2. Identification of dangers

Classification of the substance or the mixture.

Classification Regulation (CE) nº 1272/2008.

Flam. Liq. 3

Eye Irrit. 2

STOT SE 3

STOT SE 3

Hazard Pictograms



Signal word

Warning

Hazard statements

H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.

Classification (67/548/CEE or 1999/45/CE).

Xi Irritant

R67
R36/37
R10

For the full text of the R-phrases mentioned in this section, see section 16.

3. Composition/information on ingredients

Name: 2-Butanol

Formula: C₄H₁₀O M.= 74,12 CAS [78-92-2]

EC number (EINECS): 201-158-5

EC index number: 603-127-00-5

REACH Registration Number: 01-2119475146-36-XXXX

4. First aid measures**4.1 General indications:**

Never provide drink or induce vomiting in the event of loss of consciousness.

4.2 Inhaling:

Take the person out into the fresh air. In the event of suffocation, proceed to provide artificial respiration.

4.3 Contact with the skin:

Wash with plenty of water. Remove contaminated clothing.

4.4 Eyes:

Wash with plenty of water, keeping eyelids open. Seek medical assistance.

4.5 Swallowing:

Drink large amounts of water. Avoid vomiting. Seek medical assistance. Stomach lavage.

5. Firefighting measures

5.1 Suitable extinguishing media:

Water. Carbon dioxide (CO₂). Foam. Dry powder.

5.2 Unsuitable extinguishing media:

No specific data.

5.3 Special hazards arising from the substance or mixture:

Flammable. Keep away from sources of ignition. The fumes are heavier than air, so they may spread at floor level. May form explosive mixtures with the air. In the event of fire, toxic fumes may form.

5.4 Advice for firefighters:

Suitable clothing and footwear.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Do not inhale the fumes. Ensure adequate ventilation.

6.2 Environmental precautions:

Avoid pollution of the soil, water supplies and drains.

6.3 Methods and material for containment and cleaning up:

Collect up with absorbent materials (Panreac General Absorbent, Kieselguhr, etc.) or, if none available, dry sand or earth, and deposit in waste containers for subsequent elimination in accordance with current legislation. Clean any remains with plenty of water.

7. Handling and storage

7.1 Precautions for safe handling:

No special indications.

7.2 Conditions for safe storage, including any incompatibilities:

Well sealed containers. In well ventilated premises. Away from sources of ignition and heat. Room temperature.

8. Exposure controls/personal protection

8.1 Exposure controls:

Ensure good ventilation and renewal of the air in the premises.

8.2 Control parameters:

VLA-ED: 100 ppm - 308 mg/m³ ,

8.3 Respiratory protection:

In the event of fumes forming/aerosols, use suitable respiratory protection. Filter A. Filter P.

8.4 Hand protection:

Use suitable gloves

8.5 Eye/face protection:

Use suitable goggles.

8.6 Individual hygiene measures:

Remove contaminated clothing. Use suitable work clothing. Wash hands and face before breaks and when the job is done.

8.7 Environmental exposure controls:

Fulfill the commitments under local environmental protection legislation.

9. Physical and chemical properties

Appearance: liquid

Colour: Colourless

Granulometry: N/A

Odour: Characteristic.

pH:

N/A

Melting point/freezing point: -114,3 °C

Initial boiling point and boiling range: 99,5 °C

Flash point: 31 °C

Flammability (solid, gas):

N/A

Upper/lower flammability or explosive limits: 9,8 %(V) / 1,7 %(V)

Vapour pressure: 17,3 hPa (20 °C)

Vapour density: N/A

Relative density: (20/4) 0,808

Solubility: 200 g/l in water ()

Partition coefficient: n-octanol/water:

N/A

Auto-ignition temperature: 390 °C

Decomposition temperature: N/A

Kinematic viscosity:N/A

Dynamic viscosity:4,21 mPa.s(20 °C)

10. Stability and reactivity

10.1 Conditions to avoid:

The product is chemically stable under standar ambient conditions (room temperature).

10.2 Incompatible materials:

Alkaline metals. Alkali-earth metals. Strong oxidant agents.

10.3 Hazardous decomposition products:

Peroxides.

10.4 Chemical stability:

The gases/fumes can form explosive mixtures with the air.

11. Toxicological information

11.1 Acute toxicity:

LD50 oral rat : 6.480 mg/kg

LC L0 inh rat : 16000 ppm 4h

LD L0 inh rat : 16000 ppm 4h

LD50 ipr mus : 771 mg/kg

11.2 Dangerous effects for health:

If fumes inhaled: Irritations to the respiratory tracts. Upon contact with the skin: irritations Through contact with the eyes: Irritations to the mucosae sight disorders Due to absorption: Can cause intoxication narcosis

12. Environmental information

12.1 Toxicity:

- EC50 test (mg/l):

Micro-organisms EC0 800 mg/l

Classification: Toxic

Fish 1200 mg/l

Classification:

Toxic

- Receptor medium:

Risk for the water environment

Medium

Risk for the land environment

Low

- Observations:

12.2 Persistence and Degradability :

- Test:

- Biotic degradation classification:

BOD5/COD

Biodegradability

High, over 1/3

- Abiotic degradation depending on pH:

- Observations:

Easily biodegradable product.

12.3 Bioaccumulative potential:

- Test:

- Bioaccumulation:

Risk

- Observations:

Non-bioaccumulable product.

12.4 Mobility in soil :

Data not available.

12.5 Assessment PBT and MPMB :

Data not available.

12.6 Other adverse effects:

Product hardly pollutant for water.

Do not allow it to enter soils or water channels.

No interferences are to be anticipated in treatment plants if use correctly.

13. Disposal considerations

13.1 Waste treatment methods:

In the European Union, there are no homogeneous standards established for elimination of chemical waste, which is waste of a special nature, and treatment and elimination of same is subject to the domestic legislation in each country.

In view of this, in each case, you should contact the competent authority or those companies legally authorized for elimination of waste.

2001/573/EC: Council Decision of 23 July 2001 amending Commission Decision 2000/532/EC as regards the list of wastes. Council Directive 91/156/EEC of 18 March 1991 amending Directive 75/442/EEC on waste.

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13.2 Contaminated containers:

Contaminated containers and packaging of dangerous substances or preparations must be treated in the same manner as the actual products contained in them.

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.

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14. Transport information

Overland (ADR):

Technical name: BUTANOLS

UN 1120 Class: 3 Packaging group: III (D/E)

By sea (IMDG):

Technical name: BUTANOLS

UN 1120 Class: 3 Packaging group: III

By air (ICAI-IATA):

Technical name: Butanols

UN 1120 Class: 3 Packaging group: III

Packaging instructions: CAO 366 PAX 355

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. Other information

Other precautionary statements

P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust, fume, gas, mist, vapours or spray.
P264 Wash...thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves, protective clothing, eye protection or face protection.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Labelling (65/548/CEE or 1999/45/CE)

R-phrases(s):	R67 Vapours may cause drowsiness and dizziness. R36/37 Irritating to eyes and respiratory system. R10 Flammable.
S-phrases(s):	S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S24/25 Avoid contact with skin and eyes. S13 Keep away from food, drink and animal feedingstuffs. S7/9 Keep container tightly closed and in a well-ventilated place. S46 If swallowed, seek medical advice immediately and show this container or label.

Version and revision date : 4 17.04.13

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In respect of the previous review, changes have been made to the following sections: 3

The information included in this Safety Data Sheet is based on our most up-to-date knowledge, and is solely intended to inform regarding aspects of safety; the properties and characteristics indicated herein are not guaranteed.