

## MATERIAL SAFETY DATA SHEET (MSDS)

### 2-BUTANOL (SEC-BUTYL ALCOHOL) (FOR SYNTHESIS)

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

##### 1.1. Product identifier

Trade name : 2-BUTANOL (SEC-BUTYL ALCOHOL) (FOR SYNTHESIS)

Product code : SS0112102500

Identification of the product : BUTAN-2-OL 99%  
CAS No :78-92-2

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

Use : Industrial. For professional use only.

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

Company identification SUVCHEM  
Chaitanya Tower, 2nd Floor, Office # 206,  
Siddharth Nagar, S.V. Road,  
Goregaon (West), Mumbai - 400062,  
Maharashtra, India.  
Contact: +91 22 28725393 / 94 / 95  
Email ID: info@suvchem.com/care@suvchem.com

##### 1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [ Office hours ]

#### 2. Hazards identification -DSD

##### 2.1. Classification of the substance or mixture

###### Classification EC 67/548 or EC 1999/45

Classification : R10  
R67  
Xi; R36

###### Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Specific Target Organ Toxicity - Single exposure - Respiratory tract irritation - Category 3 - Warning (CLP : STOT SE 3) H335  
Specific Target Organ Toxicity - Single exposure - Narcotic effects - Category 3 - Warning (CLP : STOT SE 3) H336  
Eye irritation - Category 2A - Warning (CLP : Eye Irrit. 2) H319

Physical hazards : Flammable liquids - Category 3 - Warning (CLP : Flam. Liq. 3) H226

##### 2.2. Label elements

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**2-BUTANOL (SEC-BUTYL ALCOHOL) (FOR SYNTHESIS)**
**2. Hazards identification -DSD (continued)**
Labelling EC 67/548 or EC 1999/45
**Symbol(s)**

**Symbol(s)**

: Xi : Irritant

**R Phrase(s)**

: R10 : Flammable.

R36 : Irritating to eyes.

R37 : Irritating to respiratory system.

R67 : Vapours may cause drowsiness and dizziness.

**S Phrase(s)**

: S13 : Keep away from food, drink and animal feedingstuffs.

S24 : Avoid contact with skin.

S25 : Avoid contact with eyes.

S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S46 : If swallowed seek medical advice immediately and show this container or label.

S7 : Keep container tightly closed.

S9 : Keep container in a well-ventilated place.

Labelling Regulation EC 1272/2008 (CLP)
**Hazard pictograms**

**Signal words**

: 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**
**• Prevention**

: P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical, ventilating, lighting, ..., equipment.

P210: Keep away from heat, sparks, open flames or hot surfaces. - No smoking.

P280: Wear protective gloves, protective clothing, eye protection, face protection.

P271: Use only outdoors or in a well-ventilated area.

P261: Avoid breathing dust, fume, gas, mist, vapours, spray.

P233: Keep container tightly closed.

P264: Wash thoroughly after handling.

**• Response**

: P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.

P303+P361+P353: IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower.

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#### 2. Hazards identification -DSD (continued)

- P337+P313: If eye irritation persists: Get medical advice/attention.  
P370+P378: In case of fire: Use for extinction.
- **Storage** : P403+P233: Store in well-ventilated place. Keep container tightly closed.  
P403+P235: Store in well-ventilated place. Keep cool.  
P405: Store locked up.
  - **Disposal considerations** : P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 2.3. Other hazards

- Other hazards** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

#### 3. Composition/information on ingredients

- Substance / Preparation** : BUTAN-2-OL 99%  
CAS No :78-92-2  
Substance.

Contains no other components or impurities which will influence the classification of the product.

#### 4. First aid measures

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

- Inhalation** : Call a POISON CENTER or doctor if you feel unwell. Remove to fresh air and keep at rest in a position comfortable for breathing.
- Skin contact** : Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing.
- Eye contact** : Rinse cautiously with water for several minutes. If eye irritation persists : Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice.
- Ingestion** : Obtain emergency medical attention. Do NOT induce vomiting. Rinse mouth.

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

- Symptoms relating to use** : Causes serious eye irritation. May cause respiratory irritation.  
May cause drowsiness or dizziness.

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

- General information** : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

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**5. Fire-fighting measures**
**5.1. Extinguishing media**

- Suitable extinguishing media** : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media** : Do not use a heavy water stream.
- Surrounding fires** : Use water spray or fog for cooling exposed containers.

**5.2. Special hazards arising from the substance or mixture**

- Hazardous combustion products** : Under fire conditions, hazardous fumes will be present.

**5.3. Advice for fire-fighters**

- Protection against fire** : Do not enter fire area without proper protective equipment, including respiratory protection.
- Special procedures** : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

**6. Accidental release measures**
**6.1. Personal precautions, protective equipment and emergency procedures**

- For emergency responders** : Equip cleanup crew with proper protection.  
Ventilate area.  
Avoid breathing dust, fume, gas, mist, vapours, spray.
- Technical measures** : Use special care to avoid static electric charges.
- Special precautions** : Remove ignition sources. No naked lights. No smoking.
- For non-emergency personnel** : Evacuate unnecessary personnel.

**6.2. Environmental precautions**

- Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

**6.3. Methods and material for containment and cleaning up**

- Clean up methods** : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Store away from other materials. Collect spillage.

**6.4. Reference to other sections**

See section 8. Exposure controls/personal protection

## MATERIAL SAFETY DATA SHEET (MSDS)

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#### 7. Handling and storage

##### 7.1. Precautions for safe handling

<b>Handling</b>	: Handle empty containers with care because residual vapours are flammable. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Take precautionary measures against static discharge.
<b>Technical protective measures</b>	: Provide good ventilation in process area to prevent formation of vapour. Proper grounding procedures to avoid static electricity should be followed. Use only non-sparking tools. Use explosion-proof electrical, ventilating, lighting, ..., equipment.
<b>Special precautions</b>	: No naked lights. No smoking. Avoid breathing dust, fume, gas, mist, vapours, spray.

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

<b>Storage</b>	: Keep only in the original container in a cool, well ventilated place. Keep in fireproof place. Keep container tightly closed. Ground/bond container and receiving equipment.
<b>Storage - away from</b>	: Strong bases. Strong acids. Sources of ignition. Direct sunlight. Heat sources.

##### 7.3. Specific end use(s)

<b>Specific end use(s)</b>	: None.
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#### 8. Exposure controls/personal protection

##### 8.1. Exposure controls

<b>Personal protection</b>	: Avoid all unnecessary exposure.
• <b>Respiratory protection</b>	: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
• <b>Hand protection</b>	: Wear protective gloves.
• <b>Eye protection</b>	: Chemical goggles or safety glasses.
• <b>Others</b>	: When using, do not eat, drink or smoke.

##### 8.2. Control parameters

<b>Occupational Exposure Limits</b>	: No data available.
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#### 9. Physical and chemical properties

##### 9.1. Information on basic physical and chemical properties

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**9. Physical and chemical properties (continued)**

Physical state at 20 °C	: Liquid.
Colour	: Clear Colorless
Odour	: sweet, fruity odor
Odour threshold	: 3.2 ppm
pH value	: No data available.
Melting point [°C]	: -115 °C
Decomposition point [°C]	: N/A
Critical temperature [°C]	: N/A
Auto-ignition temperature [°C]	: 405 0C
Flammability (solid, gas)	: Flammable. Flammable liquid and vapour.
Flash point [°C]	: 24 °C
Boiling point [°C]	: 99.5°C
Initial boiling point [°C]	: N/A
Final boiling point [°C]	: N/A
Evaporation rate	: N/A
Vapour pressure [20°C]	: N/A
Vapour pressure mm/Hg	: 12 mm Hg @ 20C
Vapour density	: 2,6
Density [g/cm3]	: 0,808
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: 12.5 g/100 ml @ 20°C
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: 7
Viscosity at 40°C [mm2/s]	: 3.5 cps @ 20 deg C

**9.2. Other information**

Explosive properties	: N/A
Explosion limits - upper [%]	: 9,80%
Explosion limits - lower [%]	: 1,70%
Oxidising properties	: No data available.

**10. Stability and reactivity**
**10.1. Reactivity**

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**10. Stability and reactivity (continued)**

**Reactivity** : Not established.

**10.2. Chemical stability**

**Chemical stability** : Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

**Hazardous reactions** : Not established.

**10.4. Conditions to avoid**

**Conditions to avoid** : Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

**10.5. Incompatible materials**

**Materials to avoid** : Strong acids. Strong bases.

**10.6. Hazardous decomposition products**

**Hazardous decomposition products** : Fumes. Carbon monoxide. Carbon dioxide. May release flammable gases.

**11. Toxicological information**
**11.1. Information on toxicological effects**
**Acute toxicity**

- **Inhalation** : Based on available data, the classification criteria are not met.
- **Dermal** : Based on available data, the classification criteria are not met.
- **Ingestion** : Based on available data, the classification criteria are not met.

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

**Irritation** : Causes serious eye irritation.  
May cause respiratory irritation.

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

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

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

**Toxic for reproduction** : Based on available data, the classification criteria are not met.

**STOT-single exposure** : May cause drowsiness or dizziness.

**STOT-repeated exposure** : Based on available data, the classification criteria are not met.

**Aspiration hazard** : Based on available data, the classification criteria are not met.



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**12. Ecological information**
**12.1. Toxicity**

Toxicity information : Not established.

**12.2. Persistence - degradability**

Persistence - degradability : Biodegradable.

**12.3. Bioaccumulative potential**

Bioaccumulative potential : Not established.

**12.4. Mobility in soil**

Mobility in soil : Not established.

**12.5. Results of PBT and vPvB assessment**

Results of PBT and vPvB assessment : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

**12.6. Other adverse effects**

Environmental precautions : Avoid release to the environment.

**13. Disposal considerations**
**13.1. Waste treatment methods**

**General** : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.  
 Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

**Special precautions** : Handle empty containers with care because residual vapours are flammable.

**14. Transport information**
**14.1. Land transport (ADR-RID)**

Proper shipping name : BUTANOLS

UN N° : 1120

H.I. nr : 30



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## 2-BUTANOL (SEC-BUTYL ALCOHOL) (FOR SYNTHESIS)

#### 14. Transport information (continued)

ADR - Class : 3  
Labelling - Transport : 3 : Flammable liquid.



ADR - Classification code : F1  
ADR - Group : III  
ADR - Packing instructions : P001 R001 LP001  
ADR - Limited Quantity : 5 L  
ADR - Tunnel code



: D/E : Bulk or tank carriage: Passage forbidden through tunnels of category D and E. Other carriage: Passage forbidden through tunnels of category E.

#### 14.2. Sea transport (IMDG) [English only]

Proper shipping name : BUTANOLS  
UN N° : 1120  
IMO-IMDG - Class or division : 3 : Flammable liquid.  
IMO-IMDG - Packing group : III  
IMO-IMDG - Packing instructions : P001 LP01  
IMO-IMDG - Limited quantities : 5 L  
IMO-IMDG - Marine pollution : No  
EMS-Nr : F-E S-D

#### 14.3. Air transport (ICAO-IATA) [English only]

Proper shipping name : BUTANOLS  
UN N° : 1120  
IATA - Class or division : 3 : Flammable liquid.  
IATA - Packing group : III  
IATA - Passenger and Cargo Aircraft : ALLOWED  
- Passenger and Cargo - Packing instruction : 355  
- Passenger and Cargo - Maximum Quantity/Packing : 60 L  
IATA - Cargo only : ALLOWED  
- Cargo only - Packing instruction : 366

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**MATERIAL SAFETY DATA SHEET (MSDS)**

**2-BUTANOL (SEC-BUTYL ALCOHOL) (FOR SYNTHESIS)**

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

**DISCLAIMER:**

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
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**End of document**