

# Material Safety Data Sheet



BUTAN -2- OL 99%

VERSION : 02

DATE OF ISSUE : 26-08-2019

SUPERSEDES : 01

Product Code : 13070

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

### **1.1. Product identifier**

Trade name : BUTAN -2- OL

Product code :13070

Identification of the product : BUTAN -2- OL

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 : MOLYCHEM

Office: 78/80 Babu Genu Road, Souri Bldg., 2nd Floor, Mumbai – 400 002 (INDIA) Tel: +91 22 4066 8111, 2205 7772 . Fax: + 91 22 2203 4442.

Email : [info@molychem.net](mailto:info@molychem.net)

Works: Plot No. B/9, Badlapur M.I.D.C.,OPP.Shobhavat Textile Co.,  
Kulgaon, Badlapur (E), Dist.-Thane-421 503.

### **1.4. Emergency telephone number**

Emergency number : +91 22 4066 8111 (10:00am - 6:00 pm)

## **2. Hazards identification**

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

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, H226

Category 3

Serious eye damage/eye H319

irritation, Category 2

Specific target organ

toxicity — Single H335

exposure, Category 3,

Respiratory tract irritation

Specific target organ

toxicity — Single H336

exposure, Category 3, Narcosis

Classification according to Directive 67/548/EEC or 1999/45/EC

Adverse physicochemical, human health and environmental effects

No additional information available

### **2.2. Label elements**

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to display  
Extra classification(s) to display

Symbol(s) : Highly flammable

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Xi : Irritation.



**R Phrase(s):**R10 : Flammable.

R36/37 Irritating to eyes and respiratory system

R67: Vapours may cause drowsiness and dizziness.

**S Phrase(s) :**S7/9 : Keep container tightly closed and in a well ventilated place.

S13: Keep away from food., drink and animal feeding stuffs.

S24/25 : Avoid contact with skin and eyes.

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

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

**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 :** P261 - Avoid breathing dust/fume/gas/mist/vapours/spray

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing

## 2.3. Other hazards

No additional information available

## 3. Composition/information on ingredients

### 3.1. Substance : Butan-2-OL

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

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First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

First-aid measures after eye contact : Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth out with water. If you feel unwell, seek medical advice.

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

Symptoms/injuries after inhalation : May cause respiratory irritation. May cause drowsiness or dizziness.

Symptoms/injuries after eye contact : Causes serious eye irritation.

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

Treat symptomatically.

## **5. Firefighting measures**

### **5.1. Extinguishing media**

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).

Unsuitable extinguishing media : Do not use a heavy water stream.

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

Fire hazard : Flammable liquid and vapour.

Explosion hazard : May form flammable/explosive vapour-air mixture.

### **5.3. Advice for firefighters**

Protection during firefighting : Do not attempt to take action without suitable protective equipment.

## **6. Accidental release measures**

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

General measures : Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

#### **6.1.1. For non-emergency personnel**

Emergency procedures : Evacuate unnecessary personnel.

#### **6.1.2. For emergency responders**

Protective equipment : Avoid breathing dust/fume/gas/mist/vapours/spray.

Emergency procedures : Stop release.

### **6.2. Environmental precautions**

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Avoid release to the environment.

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

Methods for cleaning up : Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible.

## **6.4. Reference to other sections**

No additional information available

## **7. Handling and storage**

### **7.1. Precautions for safe handling**

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.

Precautions for safe handling : No naked lights. No smoking. Take precautionary measures against static discharge.

Use only non-sparking tools. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash ... thoroughly after handling.

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

Technical measures : Proper grounding procedures to avoid static electricity should be followed.

Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/... equipment.

Storage conditions : Keep container tightly closed. Store in original container. Store in a dry place.

Incompatible materials : Heat sources.

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

No additional information available

## **8. Exposure controls/personal protection**

### **8.1. Control parameters**

No additional information available

### **8.2. Exposure controls**

Hand protection : protective gloves

Eye protection : Chemical goggles or safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

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## **9. Physical and chemical properties**

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

**Odour threshold** : 3.2 ppm

**pH** : 7

**Relative evaporation rate (butylacetate=1)** : No data available

**Melting point** : -115 °C

**Freezing point** : No data available

**Boiling point** : 99.5 °C

**Flash point** : 24 °C

**Auto-ignition temperature** : 4050 °C

**Decomposition temperature** : No data available

**Flammability (solid, gas)** : Flammable

Flammable liquid and vapour

**Vapour pressure** : 12 mm Hg at 20C

**Relative vapour density at 20 °C** : 2.6

**Relative density** : No data available

**Density** : 0.808 g/cm<sup>3</sup>

**Solubility** : Water: 12.5 g/100ml @ 20°C

**Log Pow** : No data available

**Viscosity, kinematic** : No data available

**Viscosity, dynamic** : 3.5 cP @ 20 deg C

**Explosive properties** : No data available

**Oxidising properties** : No data available

**Explosive limits** : 0.017 - 0.098 vol %

### **9.2. Other information**

No additional information available

## **10. Stability and reactivity**

### **10.1. Reactivity**

No additional information available

### **10.2. Chemical stability**

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

### **10.3. Possibility of hazardous reactions**

No additional information available

### **10.4. Conditions to avoid**

Open flame. Overheating. Direct sunlight. Heat. Sparks.

### **10.5. Incompatible materials**

No additional information available

### **10.6. Hazardous decomposition products**

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May release flammable gases.

## **11. Toxicological information**

### **11.1. Information on toxicological effects**

Acute toxicity : Not classified

Skin corrosion/irritation : Not classified

pH: 7

Serious eye damage/irritation : Causes serious eye irritation.

pH: 7

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause respiratory irritation. May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic 4.33168317 mm<sup>2</sup>/s

## **12. Ecological information**

### **12.1. Toxicity**

No additional information available

### **12.2. Persistence and degradability**

No additional information available

### **12.3. Bioaccumulative potential**

No additional information available

### **12.4. Mobility in soil**

No additional information available

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

No additional information available

### **12.6. Other adverse effects**

No additional information available

## **13. Disposal considerations**

### **13.1. Waste treatment methods**

Product/Packaging disposal recommendations : Dispose of contents/container to ...

Additional information : Handle empty containers with care because residual vapours are flammable.

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## **14. Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

### **14.1. UN number**

UN-No. (ADR) : 1120

UN-No. (IMDG) : 1120

UN-No.(IATA) : 1120

UN-No.(ADN) : 1120

UN-No. (RID) : 1120

### **14.2. UN proper shipping name**

Proper Shipping Name (ADR) : BUTANOLS

Proper Shipping Name (IMDG) : BUTANOLS

Proper Shipping Name (IATA) : BUTANOLS

Proper Shipping Name (ADN) : BUTANOLS

Proper Shipping Name (RID) : BUTANOLS

Transport document description (ADR) : UN 1120 BUTANOLS, 3, III, (D/E)

Transport document description (IMDG) : UN 1120 BUTANOLS, 3, III

Transport document description (IATA) : UN 1120 BUTANOLS, 3, III

Transport document description (ADN) : UN 1120 BUTANOLS, 3, III

Transport document description (RID) : UN 1120 BUTANOLS, 3, III

### **14.3. Transport hazard class(es)**

**ADR** : Transport hazard class(es) (ADR) : 3

Danger labels (ADR) : 3

**IMDG** : Transport hazard class(es) (IMDG) : 3

Danger labels (IMDG) : 3

**IATA** : Transport hazard class(es) (IATA) : 3

Hazard labels (IATA) : 3

**AND** : Transport hazard class(es) (ADN) : 3

Danger labels (ADN) : 3

**RID** : Transport hazard class(es) (RID) : 3

Danger labels (RID) : 3

### **14.4. Packing group**

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

### **14.5. Environmental hazards**

Dangerous for the environment : No

Marine pollutant : No

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Other information : No supplementary information available

## **14.6. Special precautions for user**

### **- Overland transport**

Classification code (ADR) : F1

Limited quantities (ADR) : 5L

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P001, IBC03, LP01, R001

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T2

Portable tank and bulk container special provisions (ADR) : TP1

Tank code (ADR) : LGBF

Vehicle for tank carriage : FL

Transport category (ADR) : 3

Special provisions for carriage – Packages (ADR) : V12

Special provisions for carriage – Operation (ADR) : S2

Hazard identification number (Kemler No.) : 30

Orange plates : Tunnel restriction code (ADR) : D/E

EAC code : •2YE

### **- Transport by sea**

Special provision (IMDG) : 223

Limited quantities (IMDG) : 5 L

Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : P001, LP01

IBC packing instructions (IMDG) : IBC03

Tank instructions (IMDG) : T2

Tank special provisions (IMDG) : TP1

EmS-No. (Fire) : F-E

EmS-No. (Spillage) : S-D

Stowage category (IMDG) : A

MFAG-No : 129

### **- Air transport**

PCA Excepted quantities (IATA) : E1

PCA Limited quantities (IATA) : Y344

PCA limited quantity max net quantity (IATA) : 10L

PCA packing instructions (IATA) : 355

PCA max net quantity (IATA) : 60L

CAO packing instructions (IATA) : 366

CAO max net quantity (IATA) : 220L

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Special provision (IATA) : A3

ERG code (IATA) : 3L

**- Inland waterway transport**

Classification code (ADN) : F1

Limited quantities (ADN) : 5 L

Excepted quantities (ADN) : E1

Carriage permitted (ADN) : T

Equipment required (ADN) : PP, EX, A

Ventilation (ADN) : VE01

Number of blue cones/lights (ADN) : 0

**- Rail transport**

Classification code (RID) : F1

Limited quantities (RID) : 5L

Excepted quantities (RID) : E1

Packing instructions (RID) : P001, IBC03, LP01, R001

Mixed packing provisions (RID) : MP19

Portable tank and bulk container  
instructions (RID) : T2

Portable tank and bulk container special  
provisions (RID) : TP1

Tank codes for RID tanks (RID) : LGBF

Transport category (RID) : 3

Special provisions for carriage – Packages (RID) : W12

Colis express (express parcels) (RID) : CE4

Hazard identification number (RID) : 30

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
Not applicable

**15. Regulatory information**

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

**15.1.1. EU-Regulations**

No REACH Annex XVII restrictions

BUTAN-2-OL is not on the REACH Candidate List

BUTAN-2-OL is not on the REACH Annex XIV List

**15.1.2. National regulations**

**Germany**

AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water (Classification according to VwVwS, Annex 2; WGK No 40)

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12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

## **Denmark**

Class for fire hazard : Class II-1

Store unit : 5 liter

Classification remarks : R10 <H226;H319;H335;H336>; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

## **15.2. Chemical safety assessment**

No additional information available

## **16. Other information**

**Abbreviations and acronyms** : PBT: persistent, bioaccumulative and toxic.

vPvB: very persistent and very bioaccumulative

**Sources of key data used** : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

**Further information** : None.

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008 **DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness.

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## **End of document**

**Prepared by: MOLYCHEM (INDIA)**

**For questions contact: MOLYCHEM**

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