

## 1. Product and Company Identification

www.rxmarine.com

Product Name RXSOL-60-6605-047  
Product Type n-BUTANOL 99% for synthesis ((Butan-1-ol,)  
Revised date

### Company Details:

RX MARINE INTERNATIONAL  
105, A wing , BSEL , TECH PARK.  
VASHI ,NEW BOMBAY 400703 INDIA

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## 2. Composition / Information on ingredients

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Substance / Preparation : 1-Butanol

CAS No :71-36-3

Substance.

Substance name Contents CAS No

1-Butanol : 100 % 71-36-3

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

## 3. Hazards Identification

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### 3.1. Classification of the substance or mixture

Classification EC 67/548 or EC 1999/45

Classification : R10

Xn; R22 R67

Xi; R37/38-41

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 -

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Warning (CLP : STOT SE 3) H336

Skin irritation - Category 2 - Warning (CLP : Skin Corr. 2) H315

Serious eye damage - Category 1 - Danger (CLP : Eye Dam. 1) H318

Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302

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

### 3.2. Label elements

Labelling EC 67/548 or EC 1999/45

Symbol(s) : Xn : Harmful

R Phrase(s) : R10 : Flammable.

R22 : Harmful if swallowed.

R37/38 : Irritating to respiratory system and skin.

R41 : Risk of serious damage to eyes.

R67 : Vapours may cause drowsiness and dizziness.

S Phrase(s) : S2 : Keep out of the reach of children.

S7/9 : Keep container tightly closed and in well-ventilated place.

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

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

S37/39 : Wear suitable gloves and eye/face protection.

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

Labelling Regulation EC 1272/2008 (CLP)

Hazard pictograms

Signal words : Danger

Hazard statements : H226 : Flammable liquid and vapour.

H318 : Causes serious eye damage. H302 : Harmful if swallowed.

H315 : Causes skin irritation. H335 : May cause respiratory irritation.

H336 : May cause drowsiness or dizziness. Precautionary statements

☒ General : P102: Keep out of reach of children. P103: Read label before use.

P101: If medical advice is needed, have product container or label at hand.

☒ 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.

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

P233: Keep container tightly closed. P264: Wash thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

☒ Response : P302+P352: IF ON SKIN : Wash with plenty of soap and water.

P301+P312: IF SWALLOWED : Call a POISON CENTER or doctor if you feel unwell.

P332+P313: If skin irritation occurs : Get medical advice.

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.

P363: Wash contaminated clothing before reuse.

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.

### 3.3. 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.

## 4. First Aid Measures

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### 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.

Specific treatment (see on this label). Get medical advice.

Remove/Take off immediately all contaminated clothing.

If skin irritation occurs : Wash contaminated clothing before reuse.

Eye contact : Rinse cautiously with water for several minutes.

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

Immediately call a POISON CENTER or doctor. Ingestion : Obtain emergency medical attention.

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Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell.

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

Symptoms relating to use : Causes serious eye damage. Causes skin irritation.

May cause respiratory irritation. May cause drowsiness or dizziness. Swallowing a small quantity of this material will result in serious health hazard.

#### 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).

## 5. Fire-fighting Measures

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### 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

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### 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

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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

## 7. Handling and Storage

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### 7.1. Precautions for safe handling

Handling : Handle empty containers with care because residual vapours are flammable. Wash thoroughly after handling.

Take precautionary measures against static discharge. Wash thoroughly after handling.

Use only outdoors or in a wellventilated area. Do not eat, drink or smoke when using this product.

Technical protective measures : 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. Special precautions : No naked lights.

No smoking. Avoid breathing dust, fume, gas, mist, vapours, spray.

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

Storage : Keep only in the original container in a cool, well ventilated place.

Keep in fireproof place. Ground/bond container and receiving equipment.

Keep container tightly closed. Storage - away from : Strong bases.

Strong acids. Sources of ignition. Direct sunlight. Heat sources.

### 7.3. Specific end use(s)

Specific end use(s) : None.

## 8. Exposure controls and personal protection

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## 8.1. Exposure controls

Personal protection : Avoid all unnecessary exposure.

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

☒ Hand protection : Wear protective gloves.

☒ Skin protection : Wear suitable protective clothing.

☒ Eye protection : Chemical goggles or safety glasses.

☒ Others : When using, do not eat, drink or smoke.

## 8.2. Control parameters

Occupational Exposure Limits : No data available.

# 9. Physical and chemical properties

[www.rxmarine.com](http://www.rxmarine.com)

## 9.1. Information on basic physical and chemical properties

Physical state at 20 °C : Liquid.

Odour threshold : No data available.

pH value : No data available.

Melting point [°C] : -90 °C

Decomposition point [°C] : N/A

Critical temperature [°C] : N/A

Auto-ignition temperature [°C] : 3430C

Flammability (solid, gas) : Flammable.

Flammable liquid and vapour.

Flash point [°C] : 35 °C

Boiling point [°C] : 116 - 118 °C

Initial boiling point [°C] : 116 °C

Final boiling point [°C] : 118 °C

Evaporation rate : 0,46

Vapour pressure [20°C] : 5 hPa at 20 °C

Vapour pressure mm/Hg : N/A

Vapour density : 2,56

Density [g/cm<sup>3</sup>] : 0,81

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Relative density, gas (air=1) : 0,81

Relative density, liquid (water=1) : N/A

Solubility in water [% weight] : In water,

material soluble. Solubility in water : N/A

Log Pow octanol / water at 20°C : No data available.

Solubility : N/A

Viscosity at 40°C [mm<sup>2</sup>/s] : N/A

## 9.2. Other information

Explosive properties : N/A

Explosion limits - upper [%] : 11,20%

Explosion limits - lower [%] : 1,40%

Oxidising properties : No data available.

## 10. Stability and reactivity

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### 10.1. Reactivity

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

[www.rxmarine.com](http://www.rxmarine.com)

### 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 : Harmful if swallowed. Corrosion : Causes serious eye damage.

Irritation : Causes skin 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.

## 12. Ecological information

[www.rxmarine.com](http://www.rxmarine.com)

### 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

www.rxmarine.com

### 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

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### 14.1. Land transport (ADR-RID)

Proper shipping name : BUTANOLS

UN N° : 1120

H.I. nr : 30

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

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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 : 355

instruction - Passenger and Cargo - Maximum : 60 L

Quantity/Packing

IATA - Cargo only : ALLOWED -

Cargo only - Packing instruction : 366 -

Cargo only - Maximum Quantity/ : 220 L

Packing IATA - Limited Quantities : 10 L

ERG-Nr : 3L

## 15. Regulatory information

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

Safety, health and environmental : Ensure all national/local regulations are observed.

regulations/legislation specific for the substance or mixture

REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.

REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

15.2. Chemical Safety Assessment

Chemical Safety Assessment : It has not been carried out.

## 16. Other information

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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

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