

#### n-Butanol

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

**Product identifier** 

Trade name n-Butanol

**Synonyms** 1-Hydroxybutane, Methylolpropane, n-Butan-1-ol,

Propylcarbinol, 1-Butanol; Butyl alcohol.

Product code 3100

**CAS-No**. 71-36-3

Relevant identified uses of the substance or mixture and uses advised against

**Use** Solvent. Industrial use.

**Uses advised against** Prohibited for use in production of hand sanitizer.

Manufacturer or supplier's details

Company Sasol Chemicals, a division of Sasol South Africa Ltd

Address Sasol Place, 50 Katherine Street

Sandton 2090 South Africa

Telephone +27103445000

E-mail address sasolchem.info.sa@sasol.com

Emergency telephone number +44 (0)1235 239 670 (Europe, Israel, Africa, Americas)

+44(0)1235 239 671 (Middle East, Arabic African countries)

+65 3158 1074 (Asia Pacific)

+86 400 120 6011 (China)

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+27 (0)17 610 4444 (South Africa)

0800 112 890 RSA-Local only

+61 (2) 8014 4558 (Australia)

## SECTION 2. Hazards identification

#### Classification of the substance or mixture

### **GHS Classification**

Notification of the ministry of industry on the system of classification and hazard communication of hazardous substances B.E. 2555 (GHS 2009)

Flammable liquids Category 3

Classification Acute toxicity (Oral) Category 4

Serious eye damage/eye irritation Category 1

Skin corrosion/irritation Category 2

Specific target organ toxicity - single exposure Category 3

Specific target organ toxicity - single exposure Category 3

## **GHS** label elements

Hazard pictograms







Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

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H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

### Precautionary statements

#### Prevention:

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

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P242 Use only non-sparking tools.

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ eye protection/ face protection.

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

P241 Use explosion-proof electrical/ ventilating/ lighting equipment.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

#### Response:

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

P332 + P317 If skin irritation occurs: Get medical advice/ attention.

P337 + P317 If eye irritation persists: Get medical advice/ attention.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P305 + P354 + P338 + P317 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if



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present and easy to do. Continue rinsing. Get medical help. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

### Storage:

P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

## Disposal:

P501 Dispose of contents/ container to an approved facility in accordance with local, regional, national and international regulations.

### Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.



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# SECTION 3. Composition/information on ingredients

### **HAZARDOUS INGREDIENTS**

n-Butanol

Contents: 100.00 %W/W

**CAS-No**. 71-36-3 **Index-No**. 603-004-00-6 **EC-No**. 200-751-6

Hazard statements H226 H302 H335 H315 H318 H336

For the full text of the H-Statements mentioned in this Section, see Section 16.

## **SECTION 4. First aid measures**

## Description of necessary first-aid measures

**Inhalation** Move to fresh air in case of accidental inhalation of vapours. In

case of shortness of breath, give oxygen. If breathing is irregular or stopped, administer artificial respiration. Call a

physician immediately.

**Skin contact** Wash off immediately with plenty of water for at least 15

minutes. Call a physician immediately.

**Eye contact** Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes. Remove contact lenses. Call a

physician immediately.

**Ingestion** If swallowed, seek medical advice immediately and show this

container or label. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious

person.



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### Most important symptoms/effects, acute and delayed

Refer to SECTION 11

# **SECTION 5. Firefighting measures**

Suitable extinguishing

media

Water spray. Dry powder. Alcohol-resistant foam.

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Special hazards arising

from the substance or

mixture

Flash back possible over considerable distance. Do not allow

run-off from fire fighting to enter drains or water courses.

Special protective

equipment for firefighters

Wear self-contained breathing apparatus and protective suit.

## SECTION 6. Accidental release measures

spray mist. Ensure adequate ventilation. Keep away from

sources of ignition - No smoking. Use non-sparking tools. Shut

off all sources of ignition.

Environmental precautions Avoid subsoil penetration. Do not flush into surface water or

sanitary sewer system.

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid

binder, universal binder, sawdust). The material taken up must

be disposed of in accordance with regulations.



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Reference to other sections

Refer to Section 8 and 13

# SECTION 7. Handling and storage

Safe handling advice Wear personal protective equipment. Avoid contact with skin

and eyes. Keep away from sources of ignition - No smoking. Provide sufficient air exchange and/or exhaust in work rooms.

Take precautionary measures against static discharges.

Ensure all equipment is electrically grounded before beginning

transfer operations.

Advice on protection

Use explosion-proof equipment.Provide sufficient air exchange

against fire and explosion

and/or exhaust in work rooms. Keep away from sources of

ignition - No smoking.

Requirements for storage

areas and containers

Keep containers tightly closed in a cool, well-ventilated

place. Keep away from sources of ignition - No smoking.

Advice on common storage No data available.

## SECTION 8. Exposure controls/personal protection

Components with workplace control parameters

NATIONAL OCCUPATIONAL EXPOSURE LIMITS

Contains no substances with occupational exposure limit values.

**Exposure controls** 



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## **Engineering measures**

Provide sufficient air exchange and/or exhaust in work rooms.

### Personal protective equipment

**Hand protection** Gloves suitable for permanent contact:

Material: butyl-rubber Break through time: 4 h

Material thickness: 0.5 mm

**Eye protection** Safety glasses with side-shields.

**Skin and body protection** Protective suit. Safety shoes.

Hygiene measures Wash hands before breaks and immediately after handling the

product.

# SECTION 9. Physical and chemical properties

## Information on basic physical and chemical properties

Form Liquid

State of matter Liquid; at 20 ° C; 1,013 hPa

Colour Clear, colourless

Odour Alcohol-like

Odour Threshold No data available.

**pH** Not applicable.

Melting point/range -89.5 ° C



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Boiling point/boiling range 118 ° C; ASTM D86

Flash point 35 ° C; ASTM D 93 - 85; closed cup;

**Evaporation rate** No data available.

Flammability (solid, gas) No data available.

Auto-ignition temperature No data available.

**Decomposition** No data available.

**Temperature** 

Lower explosion limit 1.4 %(V)

Upper explosion limit 11.3 %(V)

Vapour pressure 6.67 hPa; 20 ° C

Relative vapour density 2.55(Air = 1.0)

**Density** 0.808 g/cm3; 20 ° C; ASTM D4052

Water solubility Partly soluble

Viscosity, kinematic 3.582 m2/s; 20 ° C; ASTM D 445

## SECTION 10. Stability and reactivity

**Reactivity** Stable under recommended storage conditions.

**Chemical stability** Stable under normal conditions.

Possibility of hazardous

Vapours may form explosive mixture with air.

reactions

**Conditions to avoid** Heat, flames and sparks.

Materials to avoid Oxidizing agents. Reducing agents. Acids and bases

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Hazardous decomposition

Stable under recommended storage conditions.

products

# **SECTION 11. Toxicological information**

Acute oral toxicity n-Butanol:

LD50 Mouse: 2,680 mg/kg; OECD Test Guideline 401; GLP:

no (literature value)

Acute inhalation toxicity n-Butanol:

LC0 Rat: male and female; 7 h; vapour; 21.48 mg/l; (literature

value)

**Acute dermal toxicity** n-Butanol:

LD50 Rabbit: male; 3,430 mg/kg; GLP: no; (literature value)

**Skin irritation** n-Butanol:

Rabbit: Irritating; OECD Test Guideline 404 GLP: no; (literature

value)

**Eye irritation** n-Butanol:

Rabbit: Irritating GLP: no; (literature value)

Mutagenicity Ames test: Salmonella typhimurium; with and without; Not

mutagenic; OECD Test Guideline 471; GLP: no; (literature

value)

**Further Information** No data available.

# SECTION 12. Ecological information



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**Toxicity to fish** n-Butanol:

flow-through test; Pimephales promelas; 96 h; LC50; 1,730

mg/l; GLP: no; (literature value)

**Toxicity to daphnia and other** n-Butanol:

aquatic invertebrates static test; Daphnia magna; 48 h; EC50; 1,983 mg/IGLP: no;

(literature value)

**Biodegradability** n-Butanol:

aerobic; activated sludge of a predominantly domestic sewage; 3 mg/l; 92 %; 20 d; Readily biodegradable.; GLP: no; (literature

value)

# SECTION 13. Disposal considerations

Product Disposal should be in accordance with local, regional and

national legislations.

Packaging Dispose of spent product packaging responsibly and lawfully

with due consideration for health, safety and the

environment.

# **SECTION 14. Transport information**

**DG Pictogram** 



**ADR** 



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UN number: 1120

Class: 3

Packaging group: III; F1;

Proper shipping name: BUTANOLS

RID

UN number: 1120

Class: 3

Packaging group: III; F1

Proper shipping name: BUTANOLS

**ADNR** 

UN number: 1120

Class: 3

Packaging group: III; F1

Proper shipping name: BUTANOLS

**IMDG** 

UN number: 1120

Class: 3

EmS: F-E, S-D

Packaging group: III; Not a Marine Pollutant



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Proper shipping name: BUTANOLS

Marine pollutant Not a Marine Pollutant

ICAO/IATA

UN number: 1120

Class: 3

Packaging group:

Proper shipping name: BUTANOLS

Transport in bulk according Not relevant

to Annex II of MARPOL

Pollution Category: Z

73/78 and the IBC Code

# SECTION 15. Regulatory information

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

USA TSCA Inventory

All chemical constituents are listed in: USA TSCA Inventory

(See chapter 3)

Canadian Domestic Substances List (DSL) All chemical constituents are listed in: Canadian Domestic

Substances List (DSL) (See chapter 3)

Australian Inv. of Chem. Substances (AICS) All chemical constituents are listed in: Australian Inv. of Chem.

Substances (AICS) (See chapter 3)

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New Zealand Inventory of Chemicals	All chemical constituents are listed in: New Zealand Inventory of
(NZIoC)	Chemicals (NZIoC) (See chapter 3)
Jap. Inv. of Exist. & New Chemicals (ENCS)	All chemical constituents are listed in: Jap. Inv. of Exist. & New
	Chemicals (ENCS) (See chapter 3)
Japan. Industrial Safety & Health Law (ISHL)	All chemical constituents are listed in: Japan. Industrial Safety &
	Health Law (ISHL) (See chapter 3)
Korea. Existing Chemicals Inventory (KECI)	All chemical constituents are listed in: Korea. Existing
	Chemicals Inventory (KECI) (See chapter 3)
Philippines Inventory of Chemicals and	All chemical constituents are listed in: Philippines Inventory of
Chemical Substances (PICCS)	Chemicals and Chemical Substances (PICCS) (See chapter 3)
China Inv. Existing Chemical Substances	All chemical constituents are listed in: China Inv. Existing
(IECSC)	Chemical Substances (IECSC) (See chapter 3)

# SECTION 16. Other information

### Full text of H-Statements

H226 Flam	mable	liquid	and	vapour.
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H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

H336 May cause drowsiness or dizziness.

All reasonable efforts were exercised to compile this SDS in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The SDS only provides information regarding the health, safety and environmental hazards at the date of issue, to facilitate the safe receipt, use and handling of this product in



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the workplace and does not replace any product information or product specifications. Since Sasol and its subsidiaries cannot anticipate or control all conditions under which this product may be handled, used and received in the workplace, it remains the obligation of each user, receiver or handler to, prior to usage, review this SDS in the context within which this product will be received, handled or used in the workplace. The user, handler or receiver must ensure that the necessary mitigating measures are in place with respect to health and safety. This does not substitute the need or requirement for any relevant risk assessments to be conducted. It further remains the responsibility of the receiver, handler or user to communicate such information to all relevant parties that may be involved in the receipt, use or handling of this product.

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