

**sasol**

Safety Data Sheet

n-Butanol

Version 1.02

Revision Date 09.09.2022

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) +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

REGULATION (EC) No 1272/2008

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Classification	Flammable liquids	Category 3
	Acute oral toxicity	Category 4
	Skin irritation	Category 2
	Serious eye damage	Category 1
	Specific target organ toxicity - single exposure (Central nervous system)	Category 3
	Specific target organ toxicity - single exposure (Respiratory system)	Category 3

Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms



Signal word

: Danger

Hazard statements

- : H226 Flammable liquid and vapour.
 H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H335 May cause respiratory irritation.
 H336 May cause drowsiness or dizziness.

Precautionary statements

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Prevention

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P233 Keep container tightly closed.
- P243 Take precautionary measures against static discharge.
- P240 Ground and bond container and receiving equipment.
- P270 Do not eat, drink or smoke when using this product.
- P242 Use non-sparking tools.
- P264 Wash the contact area thoroughly after handling.

Response

- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- 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 victim to fresh air and keep at rest in a position comfortable for breathing.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
- P332 + P317 If skin irritation occurs: Get medical advice/ attention.

Storage

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

Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

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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*

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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.

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.
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

Personal precautions	Use personal protective equipment. Do not breathe vapours or
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	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.
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 against fire and explosion	Use explosion-proof equipment. Provide sufficient air exchange 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

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Components	Type	Control parameters	Update	Basis
BUTAN-1-OL	STEL	150 mg/m ³	1995	South Africa RELs
N-BUTYL ALCOHOL	STEL	50 ppm	1995	South Africa RELs
BUTAN-1-OL				

Exposure controls

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
Boiling point/boiling range	118 ° C; ASTM D86
Flash point	35 ° C; ASTM D 93 - 85; closed cup;
Evaporation rate	No data available.

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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/cm ³ ; 20 ° C; ASTM D4052
Water solubility	Partly soluble
Viscosity, kinematic	3.582 m ² /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 reactions	Vapours may form explosive mixture with air.
Conditions to avoid	Heat, flames and sparks.
Materials to avoid	Oxidizing agents. Reducing agents. Acids and bases
Hazardous decomposition products	Stable under recommended storage conditions.

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)



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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

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 aquatic invertebrates	n-Butanol: static test; Daphnia magna; 48 h; EC50; 1,983 mg/l; GLP: 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



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ADR

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
 Proper shipping name: BUTANOLS

Marine pollutant

ICAO/IATA

UN number : 1120
 Class: 3
 Packaging group: III
 Proper shipping name: BUTANOLS
 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not relevant
 Pollution Category: Z

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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)
New Zealand Inventory of Chemicals (NZIoC)	All chemical constituents are listed in: New Zealand Inventory of 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 Chemical Substances (PICCS)	All chemical constituents are listed in: Philippines Inventory of Chemicals and Chemical Substances (PICCS) (See chapter 3)
China Inv. Existing Chemical Substances (IECSC)	All chemical constituents are listed in: China Inv. Existing Chemical Substances (IECSC) (See chapter 3)

SECTION 16. Other information

Full text of H-Statements

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.



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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 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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