Briti Scientific®
An ISO 9001:2015 and ISO/IEC 17025:2017 Certified Company.

MATERIAL SAFETY DATA SHEET

www.britiscientific.com **Issue Date:**

1- Chemical Product Information and Company Identification.

Product Name: n-Butanol/ 1-Butanol, AnStan ® GC Reference standard .
Synonym: Butyl alcohol.
Product code: BS10105.
CAS Number: 71-36-3.
Company Name: Briti Scientific.
Company Address: Plot No: 78/B/13, SY-79, Phase-VI, Jeedimetla,Hyderabad- 500 055. Telangana, India.

Section 2- Composition / Information on Ingredients.

CAS No.	Chemical Name	Mol. Formula
71-36-3.	Butyl alcohol.	$C_4H_{10}O$.

Section 3- Hazards Identification.

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 3), H226
Acute toxicity, Oral (Category 4), H302
Skin irritation (Category 2), H315
Serious eye damage (Category 1), H318
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

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

Label elements

Labelling according Regulation (EC) No 1272/2008

Signal word Danger

Hazard statement(s)
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 statement(s)
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280 Wear eye protection/ face protection.
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell
P305 + P351 + P338 + P310 IF IN EYES: 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/ physician.
P403 + P235 Store in a well-ventilated place. Keep cool.
Other hazards
This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or high

Section 4- First Aid Measures.

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5- Fire Fighting Measures.

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides

Advice for fire fighters

Wear self-contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers

Section 6- Accidental Release Measures.

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

Reference to other sections

For disposal see section 13.

Section 7- Handling and Storage.

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Flammable liquids

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8- Exposure Control/Personal Protection.

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains

Section 9- Physical and Chemical Properties.

Information on basic physical and chemical properties

a) Appearance Form: liquid, clear Colour: colourless
b) Odour No data available
c) Odour Threshold No data available
d) Ph No data available
e) Melting point/freezing Melting point/range: -90 °C - lit. Point
f) Initial boiling point 116 - 118 °C - lit.
g) Flash point 35 °C - closed cup
h) Evaporation rate No data available
i) Flammability (solid, gas) No data available
j) Upper/lower Upper explosion limit: 11.2 %(V) flammability or Lower explosion limit: 1.4 %(V) explosive limits
k) Vapour pressure 5 hPa at 20 °C
l) Vapour density 2.56 - (Air = 1.0)
m) Relative density 0.81 g/cm3 at 25 °C
n) Water solubility soluble
p) Auto-ignition No data available temperature
q) Decomposition No data available temperature
r) Viscosity No data available
s) Explosive properties No data available
t) Oxidizing properties No data available

Section 10- Stability and Reactivity.

Reactivity No data available
Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions No data available
Conditions to avoid Heat, Flames and sparks.
Incompatible materials oxidizing agents, Alkali metals, Bases, Strong acids, Halogens
Hazardous decomposition products
Other decomposition products - No data available In the event of fire: see section 5

Section 11- Toxicological Information.

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 790 mg/kg

Remarks: Liver: Fatty liver degeneration. Kidney, Ureter, Bladder: Other changes. Blood: Other changes

LC50 Inhalation - Rat - 4 h - 8000 ppm

LD50 Dermal - Rabbit - 3.400 mg/kg

Skin corrosion/irritation

Skin - Rabbit Result: Skin irritation - 24 h

Serious eye damage/eye irritation Eyes - Rabbit Result: Blindness (OECD Test Guideline 405)

Respiratory or skin sensitisation No data available

Germ cell mutagenicity No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation.

May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information RTECS: EO1400000 drying, cracking of the skin, Skin irritation To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12- Ecological Information.

Toxicity

Toxicity to fish LC50 – Pimephales promelas (fathead minnow) - 1.840 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 1.983 mg/l - 48 h

Bio accumulative potential

Bio accumulation Oncorhynchus my kiss (rainbow trout) - 24 h - 921 mg/l Bio concentration factor (BCF): 0,38

Results of PBT and vPvB assessment

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

Section 13- Disposal Considerations.

Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product

Section 14- Transport Information.

UN number

ADR/RID: 1120 IMDG: 1120 IATA: 1120

UN proper shipping name

ADR/RID: BUTANOLS

IMDG: BUTANOLS

IATA: Butanols

Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3

Packaging group

ADR/RID: III IMDG: III IATA: III

Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

15-Other Regulatory Information.

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

Section 16- Other Information.

Briti Scientific provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.