# Chemical Safety Data Sheet MSDS / SDS

# **Butylamine**

Revision Date: 2025-09-27 Revision Number: 1

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

#### **Product identifier**

Product name : Butylamine

CBnumber : CB6361286

CAS : 109-73-9

EINECS Number : 203-699-2

Synonyms : ba,Butylamine

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.

Uses advised against : none

# **Company Identification**

Company : Chemicalbook

Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing

Telephone : 010-86108875

# SECTION 2: Hazards identification

# GHS Label elements, including precautionary statements

Symbol(GHS)			
Signal word	Danger		

# Precautionary statements

P501 Dispose of contents/container to.....

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P370+P378 In case of fire: Use ... for extinction.

P320 Specific treatment is urgent (see ... on this label).

P310 Immediately call a POISON CENTER or doctor/physician.

P307+P311 IF exposed: call a POISON CENTER or doctor/physician.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

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

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment.

P271 Use only outdoors or in a well-ventilated area.

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

P264 Wash skin thouroughly after handling.

P264 Wash hands thoroughly after handling.

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

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P240 Ground/bond container and receiving equipment.

P233 Keep container tightly closed.

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

# Hazard statements

H402 Harmful to aquatic life

H372 Causes damage to organs through prolonged or repeated exposure

H370 Causes damage to organs

H330 Fatal if inhaled

H314 Causes severe skin burns and eye damage

H311 Toxic in contact with skin

H302 Harmful if swallowed

H290 May be corrosive to metals

H225 Highly Flammable liquid and vapour

# SECTION 3: Composition/information on ingredients

# **Substance**

Product name : Butylamine

Synonyms : ba,Butylamine

CAS : 109-73-9

EC number : 203-699-2

MF : C4H11N

MW : 73.14

# SECTION 4: First aid measures

# Description of first aid measures

#### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

## In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

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#### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

# Indication of any immediate medical attention and special treatment needed

No data available

# **SECTION 5: Firefighting measures**

# **Extinguishing media**

## Suitable extinguishing media

Carbon dioxide (CO2) Foam Dry powder

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

# Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NOx) Combustible.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

# Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

# **Further information**

Remove container from danger zone and cool with water. Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

# **NFPA 704**

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Short exposure could cause serious temporary or moderate residual injury (e.g. liquid hydrogen, sulfuric acid, calcium

			hypochlorite, hexafluorosilicic acid)
•	FIRE	3	Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions. Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, acetone)
	REACT	0	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, N2)
	SPEC. HAZ.		

# SECTION 6: Accidental release measures

## Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

# **Environmental precautions**

Do not let product enter drains. Risk of explosion.

## Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g.

Chemizorb?). Dispose of properly. Clean up affected area.

# Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

## Precautions for safe handling

# Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

# Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

## Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

# Conditions for safe storage, including any incompatibilities

# Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

# Specific end use(s)

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

# SECTION 8: Exposure controls/personal protection

# control parameter

#### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

#### **Exposure controls**

#### Personal protective equipment

Eye/face protection

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

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact Material: Viton?

Minimum layer thickness: 0,7 mm Break through time: 60 min Material tested: Vitoject? (KCL 890 / Aldrich Z677698, Size M)

**Body Protection** 

Flame retardant antistatic protective clothing.

Respiratory protection

Recommended Filter type: Filter type B

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

# **Exposure limits**

Ceiling 5 ppm ( $\sim$ 15 mg/m $^3$ ) (ACGIH, MSHA, and OSHA); IDLH 2000 ppm (NIOSH).

# SECTION 9: Physical and chemical properties

# Information on basic physicochemical properties

Appearance	colorless clear,	liquid

Odour No data available

Odour Threshold	0.17ppm
pH	12,6 at 100 g/l at 20 °C
Melting point/freezing point	Melting point/range: -49 °C - lit.
Initial boiling point and boiling range	78 °C - lit.
Flash point	-7 °C - closed cup
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive	Upper explosion limit: 9,8 %(V) Lower explosion limit: 1,7 %(V)
limits	
Vapour pressure	91 hPa at 20 °C
Vapour density	2,53 - (Air = 1.0)
Relative density	No data available
Water solubility	completely miscible
Partition coefficient: n-octanol/water	log Pow: 0,81
Autoignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 0,578 mPa.s at 25 °C
Explosive properties	No data available
Oxidizing properties	No data available
Henry's Law Constant	1.76 (thermodynamic method-GC/UV spectrophotometry, Altschuh et al., 1999)

# Other safety information

Surface tension 53,11 mN/m at 20 °C

Relative vapor density

2,53 - (Air = 1.0)

# SECTION 10: Stability and reactivity

# Reactivity

Vapors may form explosive mixture with air.

# **Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

# Possibility of hazardous reactions

Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitrosamines! Violent reactions possible with:

phenols

Acid anhydrides acid halides acids

Exothermic reaction with:

Oxidizing agents

# **Conditions to avoid**

Warming.

# Incompatible materials

various plastics, Copper, copper compounds, Light metals

# Hazardous decomposition products

In the event of fire: see section 5

# **SECTION 11: Toxicological information**

# Information on toxicological effects

# **Acute toxicity**

LD50 Oral - Rat - 366 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold.Behavioral:Ataxia.Respiratory disorder LC50 Inhalation - Rat - 4 h - 4,2 mg/l

LD50 Dermal - Rabbit - 626 mg/kg

#### Skin corrosion/irritation

Skin - Rabbit

Result: Open irritation test - 24 h

## Serious eye damage/eye irritation

Eyes - Rabbit

Result: Severe eye irritation - 24 h

# Respiratory or skin sensitization

No data available

# Germ cell mutagenicity

Species: Rat Application Route: Oral

Remarks: Cytogenetic analysis

# Carcinogenicity

No data available

## Reproductive toxicity

No data available

# Specific target organ toxicity - single exposure

No data available

## Specific target organ toxicity - repeated exposure

No data available

# **Aspiration hazard**

No data available

## **Toxicity**

LD50 orally in rats: 500 mg/kg (Hine)

# SECTION 12: Ecological information

# **Toxicity**

# Persistence and degradability

No data available

# Bioaccumulative potential

No data available

# Mobility in soil

No data available

# Results of PBT and vPvB assessment

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.

#### Other adverse effects

Do not empty into drains.

# **SECTION 13: Disposal considerations**

## Waste treatment methods

#### Incompatibilities

May form explosive mixture with air. n-Butylamine is a weak base; reacts with strong oxidizers and acids, causing fire and explosion hazard. Incompatible with organic anhydrides; isocyanates, vinyl acetate; acrylates, substituted allyls; alkylene oxides; epichlorohydrin, ketones, aldehydes, alcohols, glycols, phenols, cresols, caprolactum solution. Attacks some metals in presence of moisture.

#### **Product**

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

# **Waste Disposal**

Use a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. All federal, state, and local environmental regulations must be observed.

# **SECTION 14: Transport information**

# **UN** number

ADR/RID: 1125 IMDG: 1125 IATA: 1125

# **UN proper shipping name**

ADR/RID: n-BUTYLAMINE IMDG: n-BUTYLAMINE IATA: n-Butylamine

# Transport hazard class(es)

ADR/RID: 3 (8) IMDG: 3 (8) IATA: 3 (8)

## **Packaging group**

ADR/RID: II IMDG: II IATA: II

## **Environmental hazards**

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

# Special precautions for user

No data available

# **SECTION 15: Regulatory information**

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

## Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015:Listed. website: https://www.mem.gov.cn/

#### Measures for Environmental Management of New Chemical Substances

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: https://www.mee.gov.cn/

EC Inventory:Listed.

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: https://echa.europa.eu/

Korea Existing Chemicals List (KECL):Listed. website: http://ncis.nier.go.kr

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: https://emb.gov.ph/

Vietnam National Chemical Inventory:Listed. website: https://chemicaldata.gov.vn/

New Zealand Inventory of Chemicals (NZIoC):Listed. website: https://www.epa.govt.nz/

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: https://www.epa.gov/

# SECTION 16: Other information

## Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

#### References

[1] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple

[2] ChemlDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp

[3] ECHA - European Chemicals Agency, website: https://echa.europa.eu/

[4] eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:

http://www.echemportal.org/echemportal/index?pageID=0&request\_locale=en

- [5] ERG Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- [6] Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- [7] HSDB Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- [8] IARC International Agency for Research on Cancer, website: http://www.iarc.fr/
- [9] IPCS The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- 【10】 Sigma-Aldrich, website: https://www.sigmaaldrich.com/

#### Other Information

The occupational exposure limit value should not be exceeded during any part of the working exposure. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential. Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered.

#### Disclaimer:

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