



Website:- chemicalbull.com

MATERIAL SAFETY DATA SHEET

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

1.1 Product identifiers

Product name : **Dibutylamine**

CAS-No. : 111-92-2

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : **ChemicalBull Pvt Ltd**
123/124, Panchratna, G.I.D.C
Char Rasta, Vapi-396195
Dist, Valsad, Gujarat, INDIA
Website:- chemicalbull.com
Email:- info@chemicalbull.com

1.4 Emergency telephone

Emergency Phone : **+91 9696960250**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation

Flammable liquids Acute toxicity, Oral
Acute toxicity, Inhalation Acute toxicity,
Dermal Skin corrosion Serious eye damage

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

2.2 Label elements

Labelling according Regulation

Pictogram



Signal word

Danger

Hazard statement(s)

H226

Flammable liquid and vapor.

H302

Harmful if swallowed.

H311

Toxic in contact with skin.

H314

Causes severe skin burns and eye damage.

H330

Fatal if inhaled.

Precautionary statement(s)

P210

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P280

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

P301 + P312

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.

P303 + P361 + P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P304 + P340 + P310

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements

none

Reduced Labeling (<= 125 ml)

Pictogram



Signal word

Danger

Hazard statement(s)

H330

Fatal if inhaled.

H311

Toxic in contact with skin.

H314

Causes severe skin burns and eye damage.

Precautionary statement(s)

P280

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

P303 + P361 + P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

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IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard Statements

none

2.3 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.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula : C₈H₁₉N
Molecular weight : 129.24 g/mol
CAS-No. : 111-92-2

Component	Classification	Concentration
di-n-butylamine		
CAS-No. 111-92-2	Flam. Liq. 3; Acute Tox. 4; Acute Tox. 2; Acute Tox. 3; Skin Corr. 1A; Eye Dam. 1; H226, H302, H330, H311, H314, H318	<= 100 %

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

SECTION 4: First aid measures

4.1 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.

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.

4.2 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

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 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.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NO_x)

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air at elevated temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 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.

5.4 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.

SECTION 6: Accidental release measures

6.1 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.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 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.

Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 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.

7.2 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.

7.3 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

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as Tightly fitting safetygoggles

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 please contact the supplier of approved gloves

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm

Break through time: 480 min

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 please contact the supplier of approved gloves

Splash contact

Material: Chloroprene

Minimum layer thickness: 0,65 mm

Break through time: 30 min

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

Recommended Filter type for vapours of organic compounds

The entrepreneur 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|---|---|
| a) Appearance | Form: clear, liquid
Color: colorless |
| b) Odor | ammoniacal |
| c) Odor Threshold | 1,59 ppm |
| d) pH | 11,1 at 1 g/l at 20 °C |
| e) Melting point/freezing point | Melting point/range: -62 °C - lit. |
| f) Initial boiling point and boiling range | 159 °C - lit. |
| g) Flash point | 40,5 °C - closed cup |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | Upper explosion limit: 6,8 %(V)
Lower explosion limit: 0,6 %(V) |
| k) Vapor pressure | 2,26 hPa at 20,3 °C |
| l) Vapor density | 4,46 - (Air = 1.0) |
| m) Relative density | No data available |
| n) Water solubility | 3,8 g/l at 20 °C - OECD Test Guideline 105- miscible |
| o) Partition coefficient: n-octanol/water | log Pow: 2,1 at 23 °C - Bioaccumulation is not expected. |
| p) Autoignition temperature | 255 °C
at 1.013,25 hPa |
| q) Decomposition temperature | No data available |
| r) Viscosity | Viscosity, kinematic: No data available
Viscosity, dynamic: 0,64 mPa.s at 40 °C, 0,85 mPa.s at 20 °C |
| s) Explosive properties | No data available |

9.2 Other safety information

Surface tension	50,6 mN/m at 1,005g/l at 20 °C - OECD Test Guideline 115
Dissociation constant	11 at 20 °C - OECD Test Guideline 112
Relative vapor density	4,46 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapor/air-mixtures are explosive at intense warming.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

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

Exothermic reaction with:

acids

anhydrides

Strong oxidizing agents

Violent reactions possible with:

Alcohols

glycol ether

Ketones

Aldehydes

Esters

Nitriles

phenols

10.4 Conditions to avoid

Heating.

10.5 Incompatible materials

nonferrous metals, Light metals, Copper, Copper alloys, Tin

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male - 550 mg/kg

Remarks: (ECHA)

LC50 Inhalation - Rat - male and female - 4 h - 1,15 mg/l
(OECD Test Guideline 403)

LD50 Dermal - Rabbit - male - 768 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: Causes severe burns. - 3 min - 1 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Corrosive
(OECD Test Guideline 405)
Causes serious eye damage.

Respiratory or skin sensitization

Buehler Test - Guinea pig

Result: Does not cause skin sensitization.
(US-EPA)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test

Test system: Mouse lymphoma test

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)

Species: Mouse

Cell type: Bone marrow

Application Route: Oral

Method: OECD Test Guideline 475

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure**Specific target organ toxicity - repeated exposure****Aspiration hazard****11.2 Additional Information**

RTECS: HR7780000

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	static test LC50 - Oncorhynchus mykiss (rainbow trout) - 5,5 mg/l - 96 h Remarks: (in soft water) (ECHA)
	static test LC50 - Oncorhynchus mykiss (rainbow trout) - 37 mg/l - 96 h Remarks: (in hard water) (ECHA)
Toxicity to daphnia and other aquatic invertebrates	semi-static test LC50 - Ceriodaphnia dubia (water flea) - 8,4 mg/l - 48 h (US-EPA)
Toxicity to algae	static test EC50 - Desmodesmus subspicatus (green algae) - 16,91 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	EC50 - Pseudomonas putida - 196 mg/l - 17 h Remarks: (IUCLID)

12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28 d Result: 95 % - Readily biodegradable. (OECD Test Guideline 301C)
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12.3 Bioaccumulative potential

12.4 Mobility in soil

12.5 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.

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

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

SECTION 14: Transport information

14.1 UN number

ADR/RID: 2248

IMDG: 2248

IATA: 2248

14.2 UN proper shipping name

ADR/RID: DI-n-BUTYLAMINE

IMDG: DI-n-BUTYLAMINE

IATA: Di-n-butylamine

14.3 Transport hazard class(es)

ADR/RID: 8 (3)

IMDG: 8 (3)

IATA: 8 (3)

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This material safety data sheet complies with the requirements of Regulation

National legislation

Seveso of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

: ACUTE TOXIC

: FLAMMABLE LIQUIDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir national regulations where applicable.

Take note on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information**Full text of H-Statements referred to under sections 2 and 3.**

H226 Flammable liquid and vapor.

H302 Harmful if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H330 Fatal if inhaled.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. **ChemicalBull Pvt Ltd** and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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