



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 : **Tributylamine**

CAS-No. : 102-82-9

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

Acute toxicity, Oral Acute toxicity, Inhalation
Acute toxicity, Dermal Skin irritation
Specific target organ toxicity - repeated exposure


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)	
H302	Harmful if swallowed.
H310 + H330	Fatal in contact with skin or if inhaled.
H315	Causes skin irritation.
Precautionary statement(s)	
P262	Do not get in eyes, on skin, or on clothing.
P280	Wear protective gloves/ protective clothing.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
P302 + P352 + P310	IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/ doctor.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P314	Get medical advice/ attention if you feel unwell.
Supplemental Hazard Statements	none

Reduced Labeling (<= 125 ml)

Pictogram	
Signal word	Danger
Hazard statement(s)	
H372	Causes damage to organs through prolonged or repeated exposure.
H310 + H330	Fatal in contact with skin or if inhaled.
Precautionary statement(s)	
P262	Do not get in eyes, on skin, or on clothing.
P280	Wear protective gloves/ protective clothing.
P302 + P352 + P310	IF ON SKIN: Wash with plenty of water. Immediately call a POISON CENTER/ doctor.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P314	Get medical advice/ attention if you feel unwell.
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 : C₁₂H₂₇N

Molecular weight : 185.35 g/mol
CAS-No. : 102-82-9

Component	Classification	Concentration
Tris-n-butylamine		
CAS-No. 102-82-9	Acute Tox. 4; Acute Tox. 1; Acute Tox. 2; Skin Irrit. 2; STOT RE 1; H302, H330, H310, H315, H372	<= 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. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

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 on intense heating.
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.

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

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Store under inert gas. Hygroscopic.

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 Safety glasses

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: butyl-rubber

Minimum layer thickness: 0,7 mm

Break through time: 30 min

Body Protection

protective clothing

Respiratory protection

Recommended Filter type: Filter 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.

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	No data available
d) pH	10,2 at 0,1 g/l at 25 °C - DIN 19268
e) Melting point/freezing point	Melting point/range: -70 °C - lit.216
f) Initial boiling point and boiling range	°C - lit.
g) Flash point	63 °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 %(V) Lower explosion limit: 1,4 %(V)
k) Vapor pressure	3,2 hPa at 55 °C
l) Vapor density	6,4 - (Air = 1.0)
m) Relative density	No data available
n) Water solubility	0,08 g/l at 20 °C - OECD Test Guideline 105- slightly soluble
o) Partition coefficient:n-octanol/water	log Pow: 3,338 at 25 °C - Bioaccumulation is not expected.
p) Autoignition temperature	210 °C at 1.015 hPa - DIN 51794
q) Decomposition temperature	No data available
r) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 1,4 mPa.s at 20 °C - ASTM D 445
s) Explosive properties	No data available

9.2 Other safety information

Surface tension	55 mN/m at 0,07g/l at 20 °C - OECD Test Guideline 115
Dissociation constant	10,89 at 25 °C - OECD Test Guideline 112
Relative vapor density	6,4 - (Air = 1.0)

SECTION 10: Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

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!
Violent reactions possible with:

Oxidizing agents
peroxi compounds
acids

Risk of explosion with:
Mercury

10.4 Conditions to avoid

Avoid moisture.
Strong heating.

10.5 Incompatible materials

Aluminum, bronze, Copper, brass, Zinc

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 - 420 mg/kg

Remarks: (ECHA)

Symptoms: After swallowing: irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Risk of perforation!, Risk of aspiration upon vomiting., Pulmonary failure possible after aspiration of vomit.

LC50 Inhalation - Rat - male and female - 4 h - 0,5 mg/l
(OECD Test Guideline 403)

Symptoms: Irritation symptoms in the respiratory tract., Possible damages:, Lung edema, Symptoms may be delayed.

LD50 Dermal - Rabbit - male - 195 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin. - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitization

Buehler Test - Guinea pig

Result: negative
(US-EPA)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
Test Type: Micronucleus test
Species: Mouse
Cell type: Red blood cells (erythrocytes)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available

11.2 Additional Information

RTECS: YA0350000

CNS stimulation.

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity

No data available

Toxicity to daphnia and other aquatic invertebrates semi-static test EC50 - Daphnia magna (Water flea) - 8 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata - 10,1 mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria static test NOEC - Bacteria - 100 mg/l - 2 h
Remarks: (ECHA)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d
Result: 88 % - Readily biodegradable.
(OECD Test Guideline 301B)

12.3 Bioaccumulative potential

Bioaccumulation Cyprinus carpio (Carp) - 28 d
- 0,1 mg/l(Tris-n-butylamine)

Bioconcentration factor (BCF): 7,3
(OECD Test Guideline 305)

12.4 Mobility in soil

No data available

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

Biological effects:

Harmful effect due to pH shift. Forms corrosive mixtures with water even if diluted. Discharge into the environment must be avoided.

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: 2542

IMDG: 2542

IATA: 2542

14.2 UN proper shipping name

ADR/RID: TRIBUTYLAMINE

IMDG: TRIBUTYLAMINE

IATA: Tributylamine

14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA: 6.1

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

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.

H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H310 + H330	Fatal in contact with skin or if inhaled.
H315	Causes skin irritation.
H330	Fatal if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.

Relevant changes since previous version

2. Hazards identification

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.

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