



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 : **Tributylphosphine**

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

Self-heating substances and mixtures Skin corrosion

Serious eye damage Reproductive toxicity

Specific target organ toxicity - single exposure , Respiratory system, Long-term (chronic) aquatic hazard

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)	
H251	Self-heating; may catch fire.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H360FD	May damage fertility. May damage the unborn child.
H412	Harmful to aquatic life with long lasting effects.
Precautionary statement(s)	
P235	Keep cool.
P273	Avoid release to the environment.
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.
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

Restricted to professional users.

Reduced Labeling (<= 125 ml)

Pictogram



Signal word	Danger
Hazard statement(s)	
H251	Self-heating; may catch fire.
H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.
H360FD	May damage fertility. May damage the unborn child.
Precautionary statement(s)	
P235	Keep cool.
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.
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

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**3.2 Mixtures**

Synonyms : TBP
Formula : C₁₂H₂₇P
Molecular weight : 202.32 g/mol

Component	Classification	Concentration
N-methyl-2-pyrrolidone Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation		
CAS-No. 872-50-4	Skin Irrit. 2; Eye Irrit. 2; Repr. 1B; STOT SE 3; H315, H319, H360FD, H335 Concentration limits: >= 10 %: STOT SE 3, H335;	>= 90 - <= 100 %
tributylphosphine		
CAS-No. 998-40-3	Self-heat. 1; Acute Tox. 4; Skin Corr. 1B; Aquatic Chronic 2; H251, H302, H314, H411	>= 5 - < 10 %

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. Call in physician.

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

Foam Carbon dioxide (CO₂) 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)

Oxides of phosphorus

Combustible.

Mixture with combustible ingredients.

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 away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Storage stability

Recommended storage temperature

2 - 8 °C

Handle and store under inert gas. Air and moisture sensitive.

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

required

Body Protection

protective clothing

Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type ABEK

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 | unpleasant |
| c) Odor Threshold | No data available |
| d) pH | No data available |
| e) Melting point/freezing point | No data available |
| f) Initial boiling point and boiling range | No data available |
| g) Flash point | 86 °C - closed cup |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | No data available |
| k) Vapor pressure | No data available |
| l) Vapor density | No data available |
| m) Density | No data available |
| Relative density | No data available |
| n) Water solubility | No data available |
| o) Partition coefficient:n-octanol/water | No data available |
| p) Autoignition temperature | The substance or mixture is not classified as pyrophoric.No data available |
| q) Decomposition temperature | available |
| r) Viscosity | Viscosity, kinematic: No data available
Viscosity, dynamic: No data available |
| s) Explosive properties | No data available |

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Forms explosive mixtures with air on intense heating.

Self-heating; may catch fire.

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

No data available

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Oxygen

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity

Oral: No data available

Acute toxicity estimate Oral - > 2.000 mg/kg

(Calculation method)

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Dermal: No data available

Skin corrosion/irritation

Mixture causes burns.

Serious eye damage/eye irritation

Mixture causes serious eye damage. Risk of blindness!

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

May harm the unborn child.

May impair fertility.

Specific target organ toxicity - single exposure

Mixture may cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Abdominal pain, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Other dangerous properties cannot be excluded.

This substance should be handled with particular care.

Handle in accordance with good industrial hygiene and safety practice.

Components**N-methyl-2-pyrrolidone****Acute toxicity**

LD50 Oral - Rat - male and female - 4.150 mg/kg
(OECD Test Guideline 401)

LC50 Inhalation - Rat - male and female - 4 h - > 5,1 mg/l
(OECD Test Guideline 403)

LD50 Dermal - Rat - male and female - > 5.000 mg/kg
(OECD Test Guideline 402)

No data available

Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin. - 24 h
(OECD Test Guideline 404)

Classified according to Regulation

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation
(OECD Test Guideline 405)

Classified according to Regulation

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative
(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Result: negative

Test Type: unscheduled DNA synthesis assay

Test system: rat hepatocytes

Result: negative

Method: OECD Test Guideline 474

Species: Mouse - male and female - Bone marrow

Result: negative
Method: OECD Test Guideline 475
Species: Chinese hamster - male and female - Bone marrow
Result: negative

Carcinogenicity

No data available

Reproductive toxicity

May damage the unborn child.

May damage fertility.

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation. - Respiratory system

Specific target organ toxicity - repeated exposure

Aspiration hazard

No data available

tributylphosphine

Acute toxicity

LD50 Oral - Rat - 750 mg/kg

Symptoms: We have no description of any toxic symptoms.

Remarks: (External MSDS)

Inhalation: No data available

LD50 Dermal - Rabbit - > 2.000 mg/kg

Remarks: (External MSDS)

Skin corrosion/irritation

(External MSDS)

Serious eye damage/eye irritation

Causes serious eye damage.

(External MSDS)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Result: negative

Remarks: (External MSDS)

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Acute oral toxicity - We have no description of any toxic symptoms.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

SECTION 12: Ecological information

12.1 Toxicity

Mixture

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

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

No data available

Components

N-methyl-2-pyrrolidone

Toxicity to fish static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 500 mg/l - 96 h
Remarks: (ECHA)

Toxicity to daphnia EC50 - Daphnia magna (Water flea) - ca. 4.897 mg/l - 48 h
and other aquatic Remarks: (IUCLID)
invertebrates

Toxicity to algae static test EC50 - Desmodesmus subspicatus (green algae) -
672,8 mg/l - 72 h
(DIN 38412)

tributylphosphine

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 55 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia EC50 - Daphnia magna (Water flea) - 9,2 mg/l - 48 h
and other aquatic (OECD Test Guideline 202)
invertebrates

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: 3265

IMDG: 3265

IATA: 3265

14.2 UN proper shipping name

ADR/RID: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (tributylphosphine)

IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (tributylphosphine)

IATA: Corrosive liquid, acidic, organic, n.o.s. (tributylphosphine)

14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

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

Authorisations and/or restrictions on use

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : N-methyl-2-pyrrolidone

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : N-methyl-2-pyrrolidone

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.**

H251	Self-heating; may catch fire.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

H335	May cause respiratory irritation.
H360FD	May damage fertility. May damage the unborn child.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

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.

See chemicalbull.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale. The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact info@chemicalbull.com