



Website:- [chemicalbull.com](http://chemicalbull.com)

## MATERIAL SAFETY DATA SHEET

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

#### 1.1 Product identifiers

Product name : **Trimethyl Phosphite**

CAS-No. : 121-45-9

#### 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](http://chemicalbull.com)  
**Email:-** [info@chemicalbull.com](mailto:info@chemicalbull.com)

#### 1.4 Emergency telephone

Emergency Phone : **+91 9696960250**

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation

Flammable liquids Acute toxicity, Oral

Skin irritation

Eye irritation

Specific target organ toxicity - single exposure, Respiratory system, 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

Warning

Hazard statement(s)

H226

Flammable liquid and vapor.

H302

Harmful if swallowed.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H335

May cause respiratory irritation.

Precautionary statement(s)

P210

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

P233

Keep container tightly closed.

P240

Ground and bond container and receiving equipment.

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.

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 information

Reacts violently with water.

### Reduced Labeling (<= 125 ml)

Pictogram



Signal word

Warning

Hazard statement(s)

none

Precautionary statement(s)

none

Supplemental Hazard information

Reacts violently with water.

## 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.

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Synonyms : Methyl phosphite

Formula : C<sub>3</sub>H<sub>9</sub>O<sub>3</sub>P

Molecular weight : 124.08 g/mol

CAS-No. : 121-45-9

<b>trimethyl phosphite</b>			
CAS-No.	121-45-9	Flam. Liq. 3; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3; H226, H302, H315, H319, H335	<= 100 %

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

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## **SECTION 4: First aid measures**

### **4.1 Description of first-aid measures**

#### **General advice**

Show this material safety data sheet to the doctor in attendance.

#### **If inhaled**

After inhalation: fresh air.

#### **In case of skin contact**

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

#### **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

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## **SECTION 5: Firefighting measures**

### **5.1 Extinguishing media**

#### **Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>) Dry powder

#### **Unsuitable extinguishing media**

Foam Water

### **5.2 Special hazards arising from the substance or mixture**

Carbon oxides

Oxides of phosphorus

Combustible.

Vapors are heavier than air and may spread along floors.

May not get in touch with: Water

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.

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## **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 with liquid-absorbent material. Dispose of properly. Clean up affected area.

### **6.4 Reference to other sections**

For disposal see section 13.

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## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

#### **Advice on safe handling**

Keep workplace dry. Do not allow product to come into contact with water.

#### **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.

Never allow product to get in contact with water during storage.

#### **Storage class**

Storage class Flammable liquids

### **7.3 Specific end use(s)**

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

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## **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: butyl-rubber

Minimum layer thickness: 0,7 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: 480 min

##### **Body Protection**

Flame retardant antistatic protective clothing.

##### **Respiratory protection**

Recommended Filter type: Filter type B

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.

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

a) Appearance

Form: liquid

Color: colorless

b) Odor	No data available
c) Odor Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: -78 °C - lit.111
f) Initial boiling point and boiling range	- 112 °C - lit.
g) Flash point	28 °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	23 hPa at 20 °C
l) Vapor density	4,28 - (Air = 1.0)
m) Density	1,052 g/mL at 25 °C - lit.
Relative density	No data available
n) Water solubility	No data available
o) Partition coefficient:n-octanol/water	log Pow: -0,67 - Bioaccumulation is not expected.No
p) Autoignition temperature	data available
q) Decomposition temperature	No data available
r) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available

## 9.2 Other safety information

Relative vapor density	4,28 - (Air = 1.0)
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Vapor/air-mixtures are explosive at intense warming.  
Reacts violently with water.

### 10.2 Chemical stability

sensitive to moisture

### 10.3 Possibility of hazardous reactions

can decompose violently in contact with:  
Water

perchlorates  
Violent reactions possible with:  
Bases  
sulfur  
halogens  
dimethylsulfate  
organic halides  
acids

#### **10.4 Conditions to avoid**

Thermal decomposition of this product in combination with trimethylol propane, trimethylol propane derived products or their corresponding alkane analogs may result in the production of bicyclic phosphates or phosphites. Bicyclic phosphates and phosphites are products that display acute neurotoxic properties such as characteristic convulsive seizures. Do not allow water to enter container.

Heating.  
Moisture.

#### **10.5 Incompatible materials**

No data available

#### **10.6 Hazardous decomposition products**

In the event of fire: see section 5

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### **SECTION 11: Toxicological information**

#### **11.1 Information on toxicological effects**

##### **Acute toxicity**

LD50 Oral - Rat - 1.600 mg/kg

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Nausea, Vomiting, Diarrhea

Remarks: (RTECS)

Inhalation: Irritating to respiratory system.

LD50 Dermal - Rabbit - 2.600 mg/kg

Remarks: (RTECS)

##### **Skin corrosion/irritation**

Skin - Rabbit

Result: Irritations

(Draize Test)

Remarks: (RTECS)

##### **Serious eye damage/eye irritation**

Eyes - Mammal

Result: Mild eye irritation

(Draize Test)

##### **Respiratory or skin sensitization**

No data available

##### **Germ cell mutagenicity**

No data available

##### **Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

Inhalation - May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**11.2 Additional Information**

RTECS: TH1400000

Cough, Shortness of breath, Headache, Nausea, Vomiting, Aspiration or inhalation may cause chemical pneumonitis.

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

After absorption:

Headache

Other dangerous properties cannot be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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**SECTION 12: Ecological information****12.1 Toxicity**

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**

Possible decomposition products in case of hydrolysis are:

phosphoric acid

Biological effects:

Harmful effect due to pH shift.

Discharge into the environment must be avoided.



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## 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.

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 2329

IMDG: 2329

IATA: 2329

### 14.2 UN proper shipping name

ADR/RID: TRIMETHYL PHOSPHITE

IMDG: TRIMETHYL PHOSPHITE

IATA: Trimethyl phosphite

### 14.3 Transport hazard class(es)

ADR/RID: 3

IMDG: 3

IATA: 3

### 14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

### 14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

### 14.6 Special precautions for user

No data available

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## 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. : OTHER HAZARDS

: 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

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## SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

EUH014	Reacts violently with water.
H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

### **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.

**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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