

MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

| | |
|--------------|-------------|
| Product form | : Substance |
| | : |
| EC no | : 211-653-8 |
| CAS No | : 680-31-9 |
| Product code | : 4048D |
| Formula | : C6H18N3OP |
| Synonyms | : HMPA |

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Industrial. For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Germ cell mutagenicity, H340
Category 1B
Carcinogenicity, Category H350
1A

Full text of classification categories and H statements : see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.1; R45
Muta.Cat.1; R46

Full text of R-phrases: see section 16

HEXAMETHYLPHOSPHORIC ACID TRIAMIDE

Safety Data Sheet

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H340 - May cause genetic defects
H350 - May cause cancer

Precautionary statements (CLP) :

P201 - Obtain special instructions before use
P308+P313 - IF exposed or concerned: Get medical advice/attention

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : HEXAMETHYLPHOSPHORIC ACID TRIAMIDE
CAS No : 680-31-9
EC no : 211-653-8

Full text of R- and H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Get medical advice/attention. Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash with plenty of soap and water.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion : Rinse mouth. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : May cause genetic defects. May cause cancer.

HEXAMETHYLPHOSPHORIC ACID TRIAMIDE

Safety Data Sheet

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Dry powder. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. On land, sweep or shovel into suitable containers. Collect spillage.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe vapours.
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep container tightly closed.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

HEXAMETHYLPHOSPHORIC ACID TRIAMIDE

Safety Data Sheet

8.2. Exposure controls

| | |
|--------------------------|--------------------------------------|
| Hand protection | : protective gloves |
| Eye protection | : Chemical goggles or safety glasses |
| Skin and body protection | : Wear suitable protective clothing |
| Respiratory protection | : Wear respiratory protection |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|------------------------------|
| Physical state | : Liquid |
| Colour | : colorless to light yellow. |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : No data available |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

HEXAMETHYLPHOSPHORIC ACID TRIAMIDE

Safety Data Sheet

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|--|------------------------------|
| Acute toxicity | : Not classified |
| Skin corrosion/irritation | : Not classified |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : May cause genetic defects. |
| Carcinogenicity | : May cause cancer. |
| Reproductive toxicity | : Not classified |
| Specific target organ toxicity (single exposure) | : Not classified |
| Specific target organ toxicity (repeated exposure) | : Not classified |
| Aspiration hazard | : Not classified |

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

HEXAMETHYLPHOSPHORIC ACID TRIAMIDE

Safety Data Sheet

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

No additional information available

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

| | |
|---------------|-----------------|
| UN-No. (ADR) | : 3082 |
| UN-No. (IMDG) | : 3082 |
| UN-No.(IATA) | : 3082 |
| UN-No.(ADN) | : Not regulated |
| UN-No. (RID) | : Not regulated |

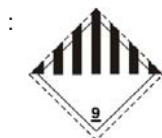
14.2. UN proper shipping name

| | |
|---------------------------------------|--|
| Proper Shipping Name (ADR) | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| Proper Shipping Name (IMDG) | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| Proper Shipping Name (IATA) | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. |
| Proper Shipping Name (ADN) | : Not regulated |
| Proper Shipping Name (RID) | : Not regulated |
| Transport document description (ADR) | : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, (E) |
| Transport document description (IMDG) | : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III |
| Transport document description (IATA) | : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III |

14.3. Transport hazard class(es)

ADR

| | |
|----------------------------------|-----|
| Transport hazard class(es) (ADR) | : 9 |
| Danger labels (ADR) | : 9 |



IMDG

| | |
|-----------------------------------|-----|
| Transport hazard class(es) (IMDG) | : 9 |
| Danger labels (IMDG) | : 9 |

HEXAMETHYLPHOSPHORIC ACID TRIAMIDE

Safety Data Sheet



IATA

Transport hazard class(es) (IATA) : 9

Hazard labels (IATA) : 9



ADN

Transport hazard class(es) (ADN) : Not regulated

RID

Transport hazard class(es) (RID) : Not regulated

14.4. Packing group

Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : Not regulated
Packing group (RID) : Not regulated

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

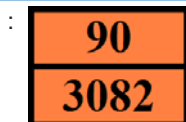
- Overland transport

Classification code (ADR) : M6
Special provision (ADR) : 274, 335, 601, 375
Limited quantities (ADR) : 5L
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Special packing provisions (ADR) : PP1
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP29
Tank code (ADR) : LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
Hazard identification number (Kemler No.) : 90

HEXAMETHYLPHOSPHORIC ACID TRIAMIDE

Safety Data Sheet

Orange plates



Tunnel restriction code (ADR)

: E

EAC code

: •3Z

- Transport by sea

Special provision (IMDG)

: 274, 335, 969

Limited quantities (IMDG)

: 5 L

Excepted quantities (IMDG)

: E1

Packing instructions (IMDG)

: P001, LP01

Packing provisions (IMDG)

: PP1

IBC packing instructions (IMDG)

: IBC03

Tank instructions (IMDG)

: T4

Tank special provisions (IMDG)

: TP2, TP29

EmS-No. (Fire)

: F-A

EmS-No. (Spillage)

: S-F

Stowage category (IMDG)

: A

- Air transport

PCA Excepted quantities (IATA)

: E1

PCA Limited quantities (IATA)

: Y964

PCA limited quantity max net quantity (IATA)

: 30kgG

PCA packing instructions (IATA)

: 964

PCA max net quantity (IATA)

: 450L

CAO packing instructions (IATA)

: 964

CAO max net quantity (IATA)

: 450L

Special provision (IATA)

: A97, A158, A197

ERG code (IATA)

: 9L

- Inland waterway transport

Not regulated

- Rail transport

Not regulated

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

HEXAMETHYLPHOSPHORIC ACID TRIAMIDE is not on the REACH Candidate List

HEXAMETHYLPHOSPHORIC ACID TRIAMIDE is not on the REACH Annex XIV List

15.1.2. National regulations

HEXAMETHYLPHOSPHORIC ACID TRIAMIDE

Safety Data Sheet

Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of R-, H- and EUH-phrases:

| | |
|----------|-------------------------------------|
| Carc. 1A | Carcinogenicity, Category 1A |
| Muta. 1B | Germ cell mutagenicity, Category 1B |
| H340 | May cause genetic defects |
| H350 | May cause cancer |
| R45 | May cause cancer |
| R46 | May cause heritable genetic damage |

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product