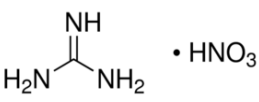


CAS-No.: 506-93-4 MSDS

MATERIAL SAFETY DATA SHEET (MSDS)

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

1.1. Product identifier

| | |
|--------------------|---|
| Product form | : Substance |
| | : |
| CAS-No. | : 506-93-4 |
| Product code | : 3994D |
| Formula | : CH ₅ N ₃ .HNO ₃ |
| Chemical structure | :  |
| Synonyms | : Guanidinium nitrate |

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

1.2.1. Relevant identified uses

| | |
|----------------------------------|---|
| Industrial/Professional use spec | : 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]

| | |
|--|------|
| Oxidising Solids, Category 3 | H272 |
| Acute toxicity (oral), Category 4 | H302 |
| Skin corrosion/irritation, Category 2 | H315 |
| Serious eye damage/eye irritation, Category 2 | H319 |
| Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation | H335 |

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Full text of H statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

O; R8
Xn; R22
Xi; R36/37/38

Full text of R-phrases: see section 16

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) :



GHS03

GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H272 - May intensify fire; oxidiser.
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) :

P220 - Keep/Store away from clothing and other combustible materials.
P261 - Avoid breathing vapours, fume, gas, spray, dust.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : GUANIDINE NITRATE EXTRA PURE
CAS-No. : 506-93-4

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

3.2. Mixtures

Not applicable

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SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. Get medical advice/attention.
- First-aid measures after skin contact : Gently wash with plenty of soap and water. Wash contaminated clothing before reuse. Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.

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

- Symptoms/effects after inhalation : May cause respiratory irritation.
- Symptoms/effects after skin contact : Causes skin irritation.
- Symptoms/effects after eye contact : Causes serious eye damage.
- Symptoms/effects after ingestion : Harmful if swallowed.

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

Treat symptomatically.

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

- Fire hazard : May intensify fire; oxidiser.

5.3. Advice for firefighters

- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

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

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. Provide good ventilation in process area to prevent formation of vapour.

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Hygiene measures : Do not eat, drink or smoke when using this product. 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

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 : [In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Molecular mass : 122.08 g/mol
Colour : White crystalline.
Odour : No data available
Odour threshold : No data available
pH : 7
Relative evaporation rate (butylacetate=1) : No data available
Melting point : 213 - 215 °C
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

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| | |
|----------------------|---------------------------|
| Relative density | : No data available |
| Solubility | : Water: Soluble in water |
| 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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Overheating. Air contact. Direct sunlight. Moisture.

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 | : Oral: Harmful if swallowed. |
| Skin corrosion/irritation | : Causes skin irritation. pH: 7 |
| Serious eye damage/irritation | : Causes serious eye irritation. pH: 7 |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : May cause respiratory irritation. |
| STOT-repeated exposure | : Not classified |

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Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Harmful if swallowed.

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

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

Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR) : 1467
UN-No. (IMDG) : 1467
UN-No. (IATA) : 1467
UN-No. (ADN) : 1467
UN-No. (RID) : 1467

14.2. UN proper shipping name

Proper Shipping Name (ADR) : GUANIDINE NITRATE
Proper Shipping Name (IMDG) : GUANIDINE NITRATE
Proper Shipping Name (IATA) : Guanidine nitrate
Proper Shipping Name (ADN) : GUANIDINE NITRATE

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| | |
|---------------------------------------|--|
| Proper Shipping Name (RID) | : GUANIDINE NITRATE |
| Transport document description (ADR) | : UN 1467 GUANIDINE NITRATE, 5.1, III, (E) |
| Transport document description (IMDG) | : UN 1467 GUANIDINE NITRATE, 5.1, III |
| Transport document description (IATA) | : UN 1467 Guanidine nitrate, 5.1, III |
| Transport document description (ADN) | : UN 1467 GUANIDINE NITRATE, 5.1, III |
| Transport document description (RID) | : UN 1467 GUANIDINE NITRATE, 5.1, III |

14.3. Transport hazard class(es)

ADR

| | |
|----------------------------------|-------|
| Transport hazard class(es) (ADR) | : 5.1 |
| Danger labels (ADR) | : 5.1 |



IMDG

| | |
|-----------------------------------|-------|
| Transport hazard class(es) (IMDG) | : 5.1 |
| Danger labels (IMDG) | : 5.1 |



IATA

| | |
|-----------------------------------|-------|
| Transport hazard class(es) (IATA) | : 5.1 |
| Hazard labels (IATA) | : 5.1 |



ADN

| | |
|----------------------------------|-------|
| Transport hazard class(es) (ADN) | : 5.1 |
| Danger labels (ADN) | : 5.1 |



RID

| | |
|----------------------------------|-------|
| Transport hazard class(es) (RID) | : 5.1 |
| Danger labels (RID) | : 5.1 |



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14.4. Packing group



| | |
|----------------------|-------|
| Packing group (ADR) | : III |
| Packing group (IMDG) | : III |
| Packing group (IATA) | : III |
| Packing group (ADN) | : III |
| Packing group (RID) | : III |

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) | : O2 |
| Limited quantities (ADR) | : 5kg |
| Excepted quantities (ADR) | : E1 |
| Packing instructions (ADR) | : P002, IBC08, LP02, R001 |
| Special packing provisions (ADR) | : B3 |
| Mixed packing provisions (ADR) | : MP10 |
| Portable tank and bulk container instructions (ADR) | : T1 |
| Portable tank and bulk container special provisions (ADR) | : TP33 |
| Tank code (ADR) | : SGAV |
| Tank special provisions (ADR) | : TU3 |
| Vehicle for tank carriage | : AT |
| Transport category (ADR) | : 3 |
| Special provisions for carriage - Bulk (ADR) | : VC1, VC2, AP6, AP7 |
| Special provisions for carriage - Loading, unloading and handling (ADR) | : CV24 |
| Hazard identification number (Kemler No.) | : 50 |
| Orange plates | :  |
| | :  |
| Tunnel restriction code (ADR) | : E |
| EAC code | : 1Z |

- Transport by sea

| | |
|------------------------------------|---|
| Limited quantities (IMDG) | : 5 kg |
| Excepted quantities (IMDG) | : E1 |
| Packing instructions (IMDG) | : P002, LP02 |
| IBC packing instructions (IMDG) | : IBC08 |
| IBC special provisions (IMDG) | : B3 |
| Tank instructions (IMDG) | : T1 |
| Tank special provisions (IMDG) | : TP33 |
| EmS-No. (Fire) | : F-A |
| EmS-No. (Spillage) | : S-Q |
| Stowage category (IMDG) | : A |
| Segregation (IMDG) | : SG45 |
| Properties and observations (IMDG) | : White granules. Soluble in water. Mixtures with combustible material are sensitive to friction and are liable to ignite. NITROGUANIDINE is a different substance. |

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MFAG-No : 143

- Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y546
PCA limited quantity max net quantity (IATA) : 10kg
PCA packing instructions (IATA) : 559
PCA max net quantity (IATA) : 25kg
CAO packing instructions (IATA) : 563
CAO max net quantity (IATA) : 100kg
Special provisions (IATA) : A803
ERG code (IATA) : 5L

- Inland waterway transport

Classification code (ADN) : O2
Limited quantities (ADN) : 5 kg
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : B
Equipment required (ADN) : PP
Provisions prior to loading (ADN) : LO04
Provisions for carriage in bulk (ADN) : CO02
Number of blue cones/lights (ADN) : 0
Additional requirements/Remarks (ADN) : CO02 and LO04 apply only when this substance is carried in bulk or without packaging

- Rail transport

Classification code (RID) : O2
Excepted quantities (RID) : E1
Packing instructions (RID) : P002, IBC08, LP02, R001
Special packing provisions (RID) : B3
Mixed packing provisions (RID) : MP10
Portable tank and bulk container instructions (RID) : T1
Portable tank and bulk container special provisions (RID) : TP33
Tank codes for RID tanks (RID) : SGAV
Special provisions for RID tanks (RID) : TU3
Transport category (RID) : 3
Special provisions for carriage – Bulk (RID) : VC1, VC2, AP6, AP7
Special provisions for carriage - Loading, unloading and handling (RID) : CW24
Colis express (express parcels) (RID) : CE11
Hazard identification number (RID) : 50

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

GUANIDINE NITRATE EXTRA PURE is not on the REACH Candidate List

GUANIDINE NITRATE EXTRA PURE is not on the REACH Annex XIV List

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15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 1, low hazard to water (Classification according to AwSV; ID No. 787)

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

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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

| | |
|---------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Ox. Sol. 3 | Oxidising Solids, Category 3 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H272 | May intensify fire; oxidiser. |
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| R22 | Harmful if swallowed |
| R36/37/38 | Irritating to eyes, respiratory system and skin |
| R8 | Contact with combustible material may cause fire |

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| | |
|----|-----------|
| O | Oxidising |
| Xi | Irritant |
| Xn | Harmful |

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