



MATERIAL SAFETY DATA SHEET SDS/MSDS

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

1.1 Product identifiers

Product name : Lead (ii) Nitrate 0.5M (1N) Standardized Solution

Product Code : B-01532

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet

Company : Bio-Chem Chemicals
5455 Nicholson Road, Science Market
Ambala Cantt, 133001 - Haryana
+91 82952 41953
info@biofinechemical.com - www.biofinechemical.com

1.4 Emergency telephone number

Emergency Phone # : +91 99921 51495 (10.00am - 06.30pm) (Office Hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Repr.Cat.2; R61 Repr.Cat.3;

R62

Xn; R20/22

N; R51/53

R33

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 Directive 67/548/EEC or 1999/45/EC

Hazard symbols



2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Directive 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Water	(CAS-No.) 7732-18-5 (EC-No.) 231-791-2	75 - 99	Not classified	Not classified
Lead (II) nitrate substance listed as REACH Candidate (Lead dinitrate)	(CAS-No.) 10099-74-8 (EC-No.) 233-245-9 (EC Index-No.) 082001-00-6	15 - 25	Repr.Cat.1; R61 Repr.Cat.3; R62 Xn; R20/22 N; R50/53 R33	Repr. 1A, H360D Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Oral), H302 Repr. 2, H361f Aquatic Acute 1, H400 Aquatic Chronic 1, H410 STOT RE 2, H373

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

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.
- First-aid measures after skin contact : Wash skin with plenty of water. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth out with water. If you feel unwell, seek medical advice.

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

- Symptoms/effects : May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
- Symptoms/effects after inhalation : Harmful if inhaled.
- 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 : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO₂).

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.

Explosion hazard : Heating may cause a fire or explosion.

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 : Avoid contact with skin, eyes and clothing.

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Clean contaminated surfaces with an excess of water.

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.

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

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	: Clear Colorless.
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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Heat. Overheating.

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

Irritation : Not classified

Corrosivity : Not classified

Sensitisation : Not classified

Repeated dose toxicity : Not classified

Carcinogenicity : Not classified

Mutagenicity : Not classified

Toxicity for reproduction : 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

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
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Lead (II) nitrate (10099-74-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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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)	: 3122
UN-No. (IMDG)	: 3122
UN-No. (IATA)	: 3122
UN-No. (ADN)	: 3122
UN-No. (RID)	: 3122

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: TOXIC LIQUID, OXIDIZING, N.O.S.
Proper Shipping Name (IMDG)	: TOXIC LIQUID, OXIDIZING, N.O.S.
Proper Shipping Name (IATA)	: Toxic liquid, oxidizing, n.o.s.
Proper Shipping Name (ADN)	: TOXIC LIQUID, OXIDIZING, N.O.S.
Proper Shipping Name (RID)	: TOXIC LIQUID, OXIDIZING, N.O.S.
Transport document description (ADR)	: UN 3122 TOXIC LIQUID, OXIDIZING, N.O.S., 6.1 (5.1), II, (D/E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 3122 TOXIC LIQUID, OXIDIZING, N.O.S., 6.1 (5.1), II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 3122 Toxic liquid, oxidizing, n.o.s., 6.1, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 3122 TOXIC LIQUID, OXIDIZING, N.O.S., 6.1 (5.1), II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 3122 TOXIC LIQUID, OXIDIZING, N.O.S., 6.1 (5.1), II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 6.1 (5.1)
Danger labels (ADR)	: 6.1, 5.1



IMDG

Transport hazard class(es) (IMDG)	: 6.1 (5.1)
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Danger labels (IMDG)

6.1, 5.1

IATA

Transport hazard class(es) (IATA)

: 6.1 (5.1)

Hazard labels (IATA)

: 6.1, 5.1



:

ADN

Transport hazard class(es) (ADN)

: 6.1 (5.1)

Danger labels (ADN)

: 6.1, 5.1



:

RID

Transport hazard class(es) (RID)

: 6.1 (5.1)

Danger labels (RID)

: 6.1, 5.1



Packing instructions (ADR)
Mixed packing provisions (ADR)
Tank code (ADR)
Tank special provisions (ADR)
Vehicle for tank carriage

P001, IBC02
: MP15
: L4BH
: TU15, TE19
: AT

14.4. Packing group

Packing group (ADR) : II
Packing group (IMDG) : II
Packing group (IATA) : II
Packing group (ADN) : II
Packing group (RID) : II

14.5. Environmental hazards

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

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : TO1

Special provisions (ADR) : 274
 Limited quantities (ADR) : 100ml
 Excepted quantities (ADR) : E4
 Transport category (ADR) : 2
 Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28
 Special provisions for carriage - Operation (ADR) : S9, S19
 Hazard identification number (Kemler No.) : 65



Orange plates :
 Tunnel restriction code (ADR) : D/E
 EAC code : 2WE
 APP code : B

- Transport by sea

Special provisions (IMDG) : 274
 Packing instructions (IMDG) : P001
 IBC packing instructions (IMDG) : IBC02
 EmS-No. (Fire) : F-A
 EmS-No. (Spillage) : S-Q
 Stowage category (IMDG) : C
 Properties and observations (IMDG) : Toxic if swallowed, by skin contact or by inhalation.
 MFAG-No : 142

- Air transport

PCA Excepted quantities (IATA) : E4
 PCA Limited quantities (IATA) : Y641
 PCA limited quantity max net quantity (IATA) : 1L
 PCA packing instructions (IATA) : 653
 PCA max net quantity (IATA) : 1L
 CAO packing instructions (IATA) : 659
 CAO max net quantity (IATA) : 5L
 Special provisions (IATA) : A4, A137
 ERG code (IATA) : 6X

- Inland waterway transport

Classification code (ADN) : TO1
 Special provisions (ADN) : 274, 802
 Limited quantities (ADN) : 100 ml
 Excepted quantities (ADN) : E4
 Equipment required (ADN) : PP, EP, TOX, A
 Ventilation (ADN) : VE02
 Number of blue cones/lights (ADN) : 2

- Rail transport

Classification code (RID) : TO1
 Special provisions (RID) : 274
 Excepted quantities (RID) : E4
 Packing instructions (RID) : P001, IBC02
 Mixed packing provisions (RID) : MP15
 Tank codes for RID tanks (RID) : L4BH
 Special provisions for RID tanks (RID) : TU15
 Transport category (RID) : 2

Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW28, CW31

Colis express (express parcels) (RID) : CE5

Hazard identification number (RID) : 65

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

Contains no REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: Lead dinitrate (EC 233-245-9, CAS 10099-74-8)

Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

Reference to AwSV : Water hazard class (WGK) 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

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 : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

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-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Repr. 1A	Reproductive toxicity, Category 1A
Repr. 2	Reproductive toxicity, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H360D	May damage the unborn child.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
R20/22	Harmful by inhalation and if swallowed
R33	Danger of cumulative effects
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R61	May cause harm to the unborn child
R62	Possible risk of impaired fertility
N	Dangerous for the environment
Xn	Harmful