MATERIAL SAFETY DATA SHEET

LEAD NITRATE

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

1.1. Product identifier

Product Name:	Lead Nitrate
Product Form:	Substance
CAS Number:	10099-74-8
EC Number:	233-245-9

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

Product use:	Industrial use, professional use
Uses advised against:	No additional information available

1.3 Details of the supplier of the safety data sheet

Company name:

East Harbour Group Ltd
20 Clough Road, Severalls Industrial Park
Colchester, Essex, CO4 9QS
United Kingdom

Telephone: +44 (0) 333 242 0100
Email: info@eastharbourgroup.com

1.4 Emergency telephone number

Emergency telephone: 0800 246 1274

Section 2: Hazardous identification

2.1 Classification of the substance or mixture

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

Acute toxicity (oral), Category 4	H302
Acute toxicity (inhalation: dust, mist) Category 4	H332
Reproductive toxicity, Category 1A	H360Df
Specific target organ toxicity – Repeated exposure, Category 2	H373
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard, Category 1	H410

Full text of H- and EUH-statements: See section 16

Adverse physicochemical, human health and environmental effects

May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Harmful if inhaled. Harmful if swallowed. Very toxic to aquatic life with long lasting effects.

2.2 Label elements

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

Hazard pictograms (CLP)

GHS07 GHS08 GHS09

LEAD NITRATE

Signal word (CLP)	Danger
Hazard statements (CLP)	H302+H332 - Harmful if swallowed or if inhaled. H360Df - May damage the unborn child. Suspected of damaging fertility. H373 - May cause damage to organs through prolonged or repeated exposure. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P301+P312 - IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308+P313 - IF exposed or concerned: Get medical advice/attention. P312 - Call a POISON CENTRE or doctor if you feel unwell. P330 - Rinse mouth. P391 - Collect spillage. P405 - Store locked up. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3 Other Hazards

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
Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Section 3: Composition/information on ingredients

3.1 Substances

Substance type	Mono-constituent
Name	Lead Nitrate
CAS Number	10099-74-8
EC Number	233-245-9
EC Index Number	082-001-006

Name	Product Identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lead compounds with the exception of those specified elsewhere in the Annex Substance listed as REACH Candidate (Trilead diarsenate)	EC Index Number 082-001-00-6	100	Repr. 1A, H360Df Acute Tox. 4 (inhalation), H332 Acute Tox. 4 (oral), H302 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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Specific concentration limits:		
Name	Product identifier	Specific concentration limits
Lead compounds with the exception of those specified elsewhere in the Annex	EC Index Number 082-001-00-6	(0.5 ≤C ≤ 100) STOT RE 2, H373 (2.5 ≤C ≤ 100) Repr. 2, H361f

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

3.2 Mixtures
Not applicable

Section 4: First aid measures

4.1 Description of first aid measures

First-aid measures general	IF exposed or concerned: Get medical advice/attention. Call a poison centre or doctor if you feel unwell.
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. Call a poison centre or a doctor is you feel unwell.
First-aid measures after skin contact	Wash skin with plenty of water.
First-aid measures after eye contact	Rinse eyes with water as a precaution.
First-aid measures after ingestion	Rinse mouth. Call a poison centre or a doctor if you feel unwell

4.2 Most important symptoms and effects, both acute and delayed
No additional information available.

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

Section 5: Fire-fighting measures

5.1 Fire Fighting Media and Instructions:
Suitable extinguishing media: Water spray. Dry powder. Foam

5.2 Special hazards arising from the substance or mixture
Hazardous decomposition products in case of fire: Toxic fumes may be released.

5.3 Advice for firefighters
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
6.1.1 For non-emergency personnel
Emergency procedures: Only qualified personnel equipped with suitable protective equipment may intervene.
Do not breathe dust/fume/gas/mist/vapours/spray.
6.1.2 For emergency responders
Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: “Exposure controls/personal protection”.

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6.2 Environmental precautions
Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
For containment: Collect spillage.
Methods for cleaning up: Mechanically recover the product. Notify authorities if product enters sewers or public waters.
Other information: Dispose of materials or solid residues at an authorized site.

6.4 Reference to other sections
For further information refer to section 13.

Section 7: Handling and storage

7.1 Precautions for safe handling
Precautions for safe
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area.
Hygiene measures
Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2 Conditions for safe storage, including any incompatibilities
Storage conditions: Store locked up. Store in a well-ventilated place. Keep cool.

7.3 Specific end use(s)
No additional information available

Section 8: Exposure controls/personal protection

8.1 Control parameters
8.1.1 National occupational exposure and biological limit values

Lead Nitrate (10099-74-8)	
United Kingdom – Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	0.15 mg/m³

8.1.2 Recommended monitoring procedures
No additional information available
8.1.3 Air contaminants formed
No additional information available
8.1.4 DNEL and PNEC
No additional information available
8.1.5 Control banding
No additional information available

8.2 Exposure controls /
8.2.1 Appropriate engineering controls
Appropriate engineering controls:
Ensure good ventilation of the work station

8.2.2. Personal protection equipment
Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection
Eye protection: Safety glasses
8.2.2.2. Skin protection
Skin and body protection: Wear suitable protective clothing
Hand protection: Protective gloves
8.2.2.3. Respiratory protection
Respiratory protection: [In case of inadequate ventilation] wear respiratory protection.
8.2.2.4. Thermal hazards
No additional information available
8.2.3. Environmental exposure controls
Environmental exposure controls: Avoid release to the environment.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Solid
Colour:	white.
Odour:	odourless.
Odour threshold:	No data available
pH:	≈ 4.3 Temp.: 20 °C
Relative evaporation rate (butylacetate=1):	No data available
Melting point:	458 – 459 °C Atm. press.: 1023 hPa Decomposition: 'no'
Freezing point:	Not applicable
Boiling point:	> 35 °C
Flash point:	> 93 °C
Auto-ignition temperature:	Not applicable
Decomposition temperature:	No data available
Flammability (solid, gas):	Non-flammable.
Vapour pressure:	No data available
Relative vapour density at 20 °C:	No data available
Relative density:	No data available
Solubility:	No data available
Partition coefficient n-octanol/water (Log Pow):	No data available
Viscosity, kinematic:	Not applicable
Viscosity, dynamic:	No data available
Explosive properties:	No data available
Oxidising properties:	No data available
Explosive limits:	Not applicable

9.2 Other information
No additional information available

Section 10: Stability and Reactivity

10.1 Reactivity: The product is non-reactive under normal conditions of use, storage and transport.

10.2 Chemical Stability: Stable under normal conditions.
10.3 Possibility of hazardous reactions: No dangerous reactions known under normal conditions of use.
10.4 Conditions to avoid: None under recommended storage and handling conditions (see section 7).
10.5 Incompatible materials: No additional information available
10.6 Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity (oral): Harmful if swallowed.
Acute toxicity (dermal): Not classified
Acute toxicity (inhalation): Harmful if inhaled.

Lead Nitrate (10099-74-8)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 5.05 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Skin corrosion/irritation: Not classified
pH: ≈ 4.3 Temp.: 20 °C
Serious eye damage/irritation: Not classified
pH: ≈ 4.3 Temp.: 20 °C
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: May damage the unborn child. Suspected of damaging fertility.
STOT-single exposure: Not classified
STOT-repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Lead compounds with the exception of those specified elsewhere in this Annex	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: Not classified

Lead Nitrate (10099-74-8)	
Viscosity, kinematic	Not applicable

Section 12: Ecological Information

12.1 Toxicity

Ecology - general: Very toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short term (acute): Very toxic to aquatic life.
Hazardous to the aquatic environment, long–term (chronic): Very toxic to aquatic life with long lasting effects.
Not rapidly degradable

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Lead Nitrate (10099-74-8)	
LC50 - Fish [1]	1170 µg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
LC50 - Fish [2]	107 µg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)

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
Lead 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
Component
lead compounds with the exception of those specified elsewhere in this Annex
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

12.6. Other adverse effects
No additional information available

Section 13: Disposal considerations

13.1 Waste treatment methods

Waste disposal of substance:
Waste treatment methods: Dispose of contents/container in accordance with licensed collector's sorting instructions.

Section 14: Transport Information

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

ADR	IMDG	IATA	ADN	RID
14.1 UN Number				
UN 1469	UN 1469	UN 1469	UN 1469	UN 1469
ADR	IMDG	IATA	ADN	RID
14.2 UN Proper shipping name				
LEAD NITRATE	LEAD NITRATE	LEAD NITRATE	LEAD NITRATE	LEAD NITRATE
Transport document description				
UN 1469 LEAD NITRATE, 5.1 (6.1), II, (E), ENVIRONMENT	UN 1469 LEAD NITRATE, 5.1 (6.1), II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1469 Lead nitrate, 5.1 (6.1), II, ENVIRONMENT	UN 1469 LEAD NITRATE, 5.1 (6.1), II, ENVIRONMENT	UN 1469 LEAD NITRATE, 5.1 (6.1), II, ENVIRONMENT

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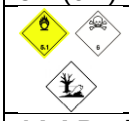
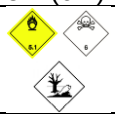
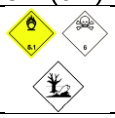
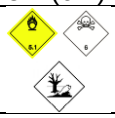
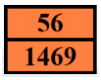
ALLY HAZARDOUS		ALLY HAZARDOUS	ALLY HAZARDOUS	ALLY HAZARDOUS
14.3 Transport hazard class(es)				
5.1 (6.1)	5.1 (6.1)	5.1 (6.1)	5.1 (6.1)	5.1 (6.1)
				
14.4 Packing group				
II	II	II	II	II
14.5 Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6 Special precautions for user

Overland transport Classification code (ADR):	OT2
Limited quantities (ADR):	1kg
Excepted quantities (ADR):	E2
Packing instructions (ADR):	P002, IBC08
Special packing provisions (ADR):	B4
Mixed packing provisions (ADR):	MP2
Portable tank and bulk container instructions (ADR):	T3
Portable tank and bulk container special provisions (ADR):	TP33
Tank code (ADR):	SGAN
Tank special provisions (ADR):	TU3
Vehicle for tank carriage:	AT
Transport category (ADR):	2
Special provisions for carriage - Packages (ADR):	V11
Special provisions for carriage - Loading, unloading and handling (ADR):	CV24, CV28
Hazard identification number (Kemler No.):	56
Orange plates:	
Tunnel restriction code (ADR):	E
EAC code:	1Y

Transport by sea

Limited quantities (IMDG):	1 kg
Excepted quantities (IMDG):	E2
Packing instructions (IMDG):	P002
IBC packing instructions (IMDG):	IBC08
IBC special provisions (IMDG):	B21, B4
Tank instructions (IMDG):	T3
Tank special provisions (IMDG):	TP33
EmS-No. (Fire):	F-A
EmS-No. (Spillage):	S-Q
Stowage category (IMDG):	A
Segregation (IMDG):	SGG7, SGG9
Properties and observations (IMDG):	White crystals. Soluble in water. Mixtures with combustible material are readily ignited and may

LEAD NITRATE

	burn fiercely. Toxic if swallowed, by skin contact or by dust inhalation.
Air transport	
PCA Excepted quantities (IATA):	E2
PCA Limited quantities (IATA):	Y543
PCA limited quantity max net quantity (IATA):	1kg
PCA packing instructions (IATA):	558
PCA max net quantity (IATA):	5kg
CAO packing instructions (IATA):	562
CAO max net quantity (IATA):	25kg
ERG code (IATA):	5P
Inland waterway transport	
Classification code (ADN):	OT2
Special provisions (ADN):	802
Limited quantities (ADN):	1 kg
Excepted quantities (ADN):	E2
Equipment required (ADN):	PP, EP
Number of blue cones/lights (ADN):	2
Rail transport	
Classification code (RID):	OT2
Limited quantities (RID):	1kg
Excepted quantities (RID):	E2
Packing instructions (RID):	P002, IBC08
Special packing provisions (RID):	B4
Mixed packing provisions (RID):	MP2
Portable tank and bulk container instructions (RID):	T3
Portable tank and bulk container special provisions (RID):	TP33
Tank codes for RID tanks (RID):	SGAN
Special provisions for RID tanks (RID):	TU3
Transport category (RID):	2
Special provisions for carriage – Packages (RID):	W11
Special provisions for carriage - Loading, unloading and handling (RID):	CW24, CW28
Colis express (express parcels) (RID):	CE10
Hazard identification number (RID):	56

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

Section 15: Regulatory Information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

No REACH Annex XVII restrictions

REACH Annex XIV (Authorisation List)

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Lead Nitrate is not on the REACH Annex XIV List

REACH Candidate List (SVHC)

Lead dinitrate is on the REACH Candidate List

Contains a substance on the REACH candidate list: Trilead diarsenate

PIC Regulation (Prior Informed Consent)

lead dinitrate is subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

POP Regulation (Persistent Organic Pollutants)

Lead Nitrate is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Lead Nitrate is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

15.1.2. National regulations

Germany

Employment restrictions:

Observe restrictions according Act on the Protection of Working Mothers (MuSchG).

Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK):

WGK 3, Highly hazardous to water (Classification according to AwSV; ID No. 313). Chemicals Prohibition Ordinance (ChemVerbotsV): This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the shipping route (according to § 10). Hazardous Incident Ordinance (12. BImSchV): Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen:	The substance is not listed
SZW-lijst van mutagene stoffen:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid:	Lead Nitrate is listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling:	Lead Nitrate is listed

Denmark

Classification remarks:	Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations:	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.
Switzerland Storage class (LK):	LK 6.1 - Toxic materials

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15.2 Chemical safety assessment

No chemical safety assessment has been carried out.

Section 16: Other Information

Full text of H- and EUH-statements	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation: dust, mist)	Acute toxicity (inhalation: dust, mist) 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
H302	Harmful if swallowed
H332	Harmful if inhaled
H360Df	May damage the unborn child. Suspected of damaging fertility
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
Repr. 1A	Reproductive toxicity, Category 1A
Repr. 2	Reproductive toxicity, Category 2
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2

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

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