

Lead nitrate 0.1M Volumetric solution European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
SDS Reference Number: VL028
Issue date: 2015/4/5 Revision date: 2025/1/5 Supersedes version of: 2022/2/1 Version: 1.5

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

1.1. Product identifier

Product form : Mixture
Product name : Lead nitrate 0.1M
Volumetric solution
European Pharmacopoeia (Ph Eur) Ref: 3003100
Product code : VL028

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

Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Laboratory chemical
Function or use category : Laboratory chemicals

1.3. Details of the supplier of the safety data sheet

Spectracer UK Ltd.

20 Seymour Mews,
London,
W1H 6BQ,
United Kingdom.

Tel: +44 (0) 207 193 9114
Fax: +44 (0) 203 432 4686
Email: contact@spectracer.com
Web: www.spectracer.com

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090 Msida	112 +356 2545 6508	
United Kingdom	National Poisons Information Service (NHS Direct)	http://www.npis.org	111 (England & Wales only) or 112 (EU) or 08454 24 24 24 (Scotland)	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Serious eye damage/eye irritation, Category 1 H318
Skin sensitisation, Category 1 H317
Carcinogenicity, Category 2 H351
Reproductive toxicity, Category 1A H360Df
Specific target organ toxicity – Repeated exposure, Category 2 H373

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Hazardous to the aquatic environment – Acute Hazard, Category 1 H400

Hazardous to the aquatic environment – Chronic Hazard, Category 2 H411

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

Adverse physicochemical, human health and environmental effects

Suspected of causing cancer. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. May cause an allergic skin reaction. Causes serious eye damage. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP)



GHS05

GHS07

GHS08

GHS09

Signal word (CLP)

: Danger

Contains

: lead nitrate

Hazard statements (CLP)

: H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H351 - Suspected of causing cancer.
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.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P314 - Get medical advice/attention if you feel unwell.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.

EUH-statements

: EUH201 - Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	lead nitrate (10099-74-8)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	lead nitrate (10099-74-8)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Component	
Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605	lead nitrate (10099-74-8)

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
lead nitrate substance listed on REACH Candidate List (Lead dinitrate) substance with national workplace exposure limit(s) (AT, BG, CZ, DE, DK, EE, ES, FI, FR, GB, GI, GR, HR, HU, IE, NL, PT, RO, SE, IS, MK, CH); substance with a Community workplace exposure limit	CAS-No.: 10099-74-8 EC-No.: 233-245-9 EC Index-No.: 082-001-00-6	1 – 5	Ox. Sol. 2, H272 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Eye Dam. 1, H318 Skin Sens. 1B, H317 Carc. 2, H351 Repr. 1A, H360Df STOT RE 2, H373 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
lead nitrate	CAS-No.: 10099-74-8 EC-No.: 233-245-9 EC Index-No.: 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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash with plenty of water/.... Wash contaminated clothing before reuse. Get medical advice/attention. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: 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. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

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

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Symptoms/effects after ingestion : None under normal conditions.
Chronic symptoms : May damage fertility or the unborn child.

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

5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
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

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.
Absorb spillage to prevent material damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.

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".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

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. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up : Take up liquid spill into absorbent material. 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.

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
- Precautions for safe handling : Ensure good ventilation of the work station. 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. Avoid contact with skin and eyes.
- Hygiene measures : Separate working clothes from town clothes. Launder separately. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Store locked up.
- Packaging materials : Store always product in container of same material as original container.

Germany

- Storage class (LGK, TRGS 510) : LGK 6.1D - Non-combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects

Joint storage table

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

- Joint storage not permitted for : LGK 1, LGK 2A, LGK 4.1A, LGK 5.1A, LGK 5.1C, LGK 5.2, LGK 6.2, LGK 7
- Joint storage with restrictions permitted for : LGK 3, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1B
- Joint storage permitted for : LGK 2B, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13

Switzerland

- Storage class (LK) : LK 6.1 - Toxic materials

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

lead nitrate (10099-74-8)	
EU - Biological Limit Value (BLV)	
Local name	Lead and its inorganic compounds

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

lead nitrate (10099-74-8)	
BLV	<p>15 µg/100ml Parameter: Pb - Medium: blood - Notations: BBLV. For workers whose blood lead level exceeds the biological limit value of 15 µg Pb/100 ml blood due to exposure which has occurred before 9 April 2026, but is below 30 µg Pb/100 ml blood, medical surveillance is carried out on a regular basis. If a declining trend towards the limit value of 15 µg Pb/100 ml blood is established in those workers, they may be allowed to continue with work involving exposure to lead.</p> <p>30 µg/100ml Until 31 December 2028 - Parameter: Pb - Medium: blood - Notations: BBLV. For workers whose blood lead level exceeds the biological limit value of 30 µg Pb/100 ml blood due to exposure which has occurred before 9 April 2026, but is below 70 µg Pb/100 ml blood, medical surveillance is carried out on a regular basis. If a declining trend towards the limit value of 30 µg Pb/100 ml blood is established in those workers, they may be allowed to continue with work involving exposure to lead.</p>
Remark	<p>Medical surveillance is carried out if exposure to a concentration of lead in air is greater than 0,015 mg/m³, calculated as a time-weighted average over 40 hours per week, or a blood lead level greater than 9 µg Pb/100 ml blood is measured in individual workers. Medical surveillance is also carried out with regard to female workers of childbearing age whose blood lead level exceeds 4,5 µg Pb/100 ml blood or the national reference value of the general population not occupationally exposed to lead, if such a value exists.</p>
Regulatory reference	DIRECTIVE (EU) 2024/869 (amending Directive 2004/37/EC)
Austria - Occupational Exposure Limits	
Local name	Blei und seine Verbindungen außer Bleiarsenat, Bleichromat, Bleichromatoxid und Alkylbleiverbindungen
MAK (OEL TWA)	0,1 mg/m ³
MAK (OEL STEL)	0,4 mg/m ³
Remark	Fortpflanzungsgefährdend: F, D, L
Regulatory reference	BGBI. II Nr. 156/2021
Austria - Biological limit values	
Local name	Blei
BLV	<p>10 g/dl Parameter: Hämoglobin - Untersuchungsmaterial: Blut - Mitarbeiter/innen: Frauen 12 g/dl Parameter: Hämoglobin - Untersuchungsmaterial: Blut - Mitarbeiter/innen: Männer 30 % Parameter: Hämatokrit - Untersuchungsmaterial: Blut - Mitarbeiter/innen: Frauen 35 % Parameter: Hämatokrit - Untersuchungsmaterial: Blut - Mitarbeiter/innen: Männer 120 µg/100ml Parameter: RCB (EPP) - Untersuchungsmaterial: Blut 30 µg/100ml Parameter: Blei - Untersuchungsmaterial: Blut 10 mg/l Parameter: ALA-U - Untersuchungsmaterial: Harn - Mitarbeiter/innen: Davis; Männer, Frauen > 50 a 6 mg/l Parameter: ALA-U - Untersuchungsmaterial: Harn - Mitarbeiter/innen: Davis; Frauen ≤ 50 a</p>
Remark	<p>Eignung: Blut: Erythrozyten: 3,2 Millionen/µl für Frauen, 3,8 Millionen/µl für Männer Eignung mit vorzeitiger Folgeuntersuchung: Bei Überschreiten bzw. Unterschreiten der Grenzwerte im Blut oder im Harn. Der Zeitabstand zwischen den Untersuchungen beträgt bei Eignung: ein Jahr; für Glas- und Akkumulatorenarbeiten drei Monate; für Rostschutzarbeiten (einschließlich Trennen und Schneiden von rostschutzbeschichteten Teilen) vier Wochen, bei Eignung mit vorzeitiger Folgeuntersuchung: drei Monate; für Glas- und Akkumulatorenarbeiten sechs Wochen; für Rostschutzarbeiten zwei Wochen</p>
Regulatory reference	Verordnung über die Gesundheitsüberwachung am Arbeitsplatz 2017 (VGÜ 2017)
Bulgaria - Biological limit values	
Local name	Олово

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

lead nitrate (10099-74-8)	
BLV	400 µg/l Биомаркер за експозиция/биомаркер за ефект: олово - Биологична среда: кръв - Време на пробовземане - Не се фиксира - Специфични ефекти: Няма 300 µg/l Биомаркер за експозиция/биомаркер за ефект: олово - Биологична среда: кръв - Време на пробовземане - Не се фиксира - Специфични ефекти: Няма - Тази стойност е определена за жени на възраст под 45 години (1/10)
Remark	Медицинско наблюдение се извършва, ако експозицията на концентрация на олово във въздуха е по-голяма от 0,05 mg/m ³ , изчислена като средно претеглена във времето стойност за 40 часа седмично, или когато при отделни работници се измерва ниво на олово в кръвта, по-високо от 40 µg Pb/100 ml кръв.
Regulatory reference	Наредба № 10 от 26.09.2003 г. за защита на работещите от рискове, свързани с експозиция на канцерогени и мутагени при работа (изм. и доп. ДВ. бр. 28 от 2 Април 2024г.)
Croatia - Occupational Exposure Limits	
Local name	Olovo i njegovi anorganski spojevi (kao Pb)*
GVI (OEL TWA)	0,15 mg/m ³
Remark	EU0 (naznaka da se radi o tvarima za koje su utvrđene obvezujuće granične vrijednosti izloženosti prema Direktivi 2003/18/ EC, Direktivi 99/38/EC i Direktivi 98/24/EC); T (otrovno); N (opasno za okoliš); Repr. kat. 1 (tvari za koje se zna da smanjuju plodnost kod ljudi i/ili – tvari za koje se zna da iskazuju razvojnu toksičnost kod ljudi); Repr. kat. 3 (tvari za koje se pretpostavlja da bi mogle smanjiti plodnost kod ljudi i/ili – tvari za koje se pretpostavlja da bi mogle iskazati razvojnu otrovnost kod ljudi)
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 148/2023)
Croatia - Biological limit values	
Local name	Olovo (elementarno i anorganski spojevi)
BLV	400 µg/l Karakteristični pokazatelj: олово - Биолошки узорак: крв - Вrijеме узорковања: nije kritično - Napomena: мушкарци 300 µg/l Karakteristični pokazatelj: олово - Биолошки узорак: крв - Вrijеме узорковања: nije kritično - Napomena: žene <45 god 15 U/LE Karakteristični pokazatelj: dehidrataza δ – aminolevulinске киселине - Биолошки узорак: крв - Вrijеме узорковања: nije kritično 2,67 µmol/LE Karakteristični pokazatelj: protoporin u eritrocitima - Биолошки узорак: крв - Вrijеме узорковања: nakon izloženosti tijekom 2-3 mjeseca (uzorak zaštititi od svjetla) - Napomena: interferencija manjka željeza (sideropenična anemija) 1,5 mg/LE Karakteristični pokazatelj: protoporin u eritrocitima - Биолошки узорак: крв - Вrijеме узорковања: nakon izloženosti tijekom 2-3 mjeseca (uzorak zaštititi od svjetla) - Napomena: interferencija manjka željeza (sideropenična anemija)
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 91/2018)
Czech Republic - Occupational Exposure Limits	
Local name	Olovo
PEL (OEL TWA)	0,05 mg/m ³
NPK-P (OEL C)	0,2 mg/m ³
Remark	B(2) - u látky je zaveden biologický expoziční test (BET) v moči nebo krvi (Pro hodnocení expozice u olova je rozhodující výsledek vyšetření plumbémie), T - toxická pro reprodukci kategorie 1A a 1B (s větou H360 včetně příslušných kódů).
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 330/2023 Sb.)

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

lead nitrate (10099-74-8)	
Czech Republic - Biological limit values	
Local name	Olovo
BLV	15 mg/g creatinine Ukazatel: 5-Aminolevulová kyselina - Biologicky vzorek: moči - Doba odběru: nerozhoduje 13 µmol/mmol Creatinine Ukazatel: 5-Aminolevulová kyselina - Biologicky vzorek: moči - Doba odběru: nerozhoduje 0,2 mg/g creatinine Ukazatel: Koproporfyryn - Biologicky vzorek: moči - Doba odběru: nerozhoduje 0,035 µmol/mmol Creatinine Ukazatel: Koproporfyryn - Biologicky vzorek: moči - Doba odběru: nerozhoduje 0,4 mg/l Ukazatel: Olovo - Biologicky vzorek: krvi - Doba odběru: nerozhoduje
Remark	Vhodné pro krátkodobé kontinuální expozice osob nepřekračující 30 kalendářních dnů.
Regulatory reference	Vyhláška č. 107/2013 Sb. (kterou se mění vyhláška č. 432/2003 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Bly, pulver, støv, røg og uorganiske forbindelser
OEL TWA	0,05 mg/m ³ beregnet som Pb
Remark	E (betyder, at stoffet har en EF-grænseværdi)
Regulatory reference	BEK nr 291 af 19/03/2024
Denmark - Biological limit values	
Local name	Bly, pulver, støv, røg og uorganiske forbindelser
BLV	20 µg Pb/100 ml blood Stof: bly - Biologisk materiale: blod
Regulatory reference	BEK nr 291 af 19/03/2024
Estonia - Occupational Exposure Limits	
Local name	Plii j aanaorganilised ühendid, (arvutatudpliile) kogutolm
OEL TWA	0,1 mg/m ³
Remark	R (Reproduktiivtoksiline aine), 7 (Pliile on kehtestatud ka bioloogiline piinorm). Pentoolm: 1 (Peentolm koosneb alla 2,5-mikromeetrise läbimõõduga osakestest, mis võivad koos sissehingatava õhuga jõuda kopsualveoolidesse)
Regulatory reference	Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 02.04.2024, 13)
Finland - Occupational Exposure Limits	
Local name	Lyijy, metalli
BOEL TWA	0,1 mg/m ³ Pb
Remark	Melu
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
Finland - Biological limit values	
Local name	Lyijy, metalli
BLV	1,4 µmol/l Parametri: Veren lyijy - Näytteenottoajankohta: Vuorokaudenajalla ei merkitystä
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
VME (OEL TWA)	0,1 mg/m ³ (Plomb métallique et composés, en Pb; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante)

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

lead nitrate (10099-74-8)	
Germany - Biological limit values (TRGS 903)	
Local name	Blei
Biological limit value	150 µg/l Parameter: Blei - Untersuchungsmaterial: B = Vollblut - Probenahmezeitpunkt: a) keine Beschränkung - Festlegung/Begründung: 05/2017 AGS
Regulatory reference	TRGS 903
Gibraltar - Occupational Exposure Limits	
Local name	Inorganic lead and its compounds
OEL TWA	0,15 mg/m ³
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Ανόργανος μόλυβδος και ενώσεις του
OEL TWA	0,15 mg/m ³
Regulatory reference	Π.Δ. 339/2001 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	ÓLOM és SZERVETLEN VEGYÜLETEI (Pb-ra számítva)
AK (OEL TWA)	0,15 mg/m ³
Remark	i (ingerlő anyag, amely izgatja a bőrt, nyálkahártyát, szemet vagy mindhármát), BEM (biológiai expozíciós mutató), BHM (biológiai hatásmutató); T (Azok az anyagok, amelyek egészségkárosító hatása TARTÓS expozíciót követően jelentkezik)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Hungary - Biological Exposure Indices	
Local name	Ólom (szervetlen)
BEI	300 µg/l Biológiai expozíciós mutató: Ólom - Biológiai minta: vérben - Mintavétel ideje: n.k. (nem kritikus) - Érintettek köre: férfiak és 45 évnél idősebb nők 1,5 µmol/l Biológiai expozíciós mutató: Ólom - Biológiai minta: vérben - Mintavétel ideje: n.k. (nem kritikus) - Érintettek köre: férfiak és 45 évnél idősebb nők 200 µg/l Biológiai expozíciós mutató: Ólom - Biológiai minta: vérben - Mintavétel ideje: n.k. (nem kritikus) - Érintettek köre: 45 évnél fiatalabb nők 1 µmol/l Biológiai expozíciós mutató: Ólom - Biológiai minta: vérben - Mintavétel ideje: n.k. (nem kritikus) - Érintettek köre: 45 évnél fiatalabb nők 100 Biológiai hatás mutató: Cink-protoporfirin előszűrésre - Biológiai minta: vérben - Mintavétel ideje: három hónapnál hosszabb expozíció esetén alkalmazható - Érintettek köre: férfiak és 45 évnél idősebb nők - Megjegyzés: határérték túllépése esetén a vérólom koncentráció meghatározása kötelező 80 Biológiai hatás mutató: Cink-protoporfirin előszűrésre - Biológiai minta: vérben - Mintavétel ideje: három hónapnál hosszabb expozíció esetén alkalmazható - Érintettek köre: 45 évnél fiatalabb nők - Megjegyzés: határérték túllépése esetén a vérólom koncentráció meghatározása kötelező
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Biological limit values	
Local name	Lead and its ionic compounds

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

lead nitrate (10099-74-8)	
BLV	70 µg/100ml Parameter: lead - Medium: blood - Notations: Absorption spectrometry or a method giving equivalent results
Remark	Binding biological limit value. Health surveillance is carried out if: a. exposure to a concentration of lead in air is greater than 0.075mg/m ³ , calculated as a time-weighted average over 40 hours per week, or b. a blood-lead level greater than 40µg Pb/100 ml blood is measured in individual employees.
Regulatory reference	Chemical Agents Code of Practice 2024
Netherlands - Occupational Exposure Limits	
Local name	Lood
TGG-8u (OEL TWA)	0,15 mg/m ³ (en anorganische loodverbindingen)
Remark	(zie tevens artikel 4.19a Arbeidsomstandighedenregeling)
Regulatory reference	Arbeidsomstandighedenregeling 2024
Netherlands - Biological limit values	
Local name	Lood en anorganische loodverbindingen
BLV	70 µg/100ml Het loodgehalte in het bloed
Regulatory reference	Arbeidsomstandighedenregeling 2024
Portugal - Occupational Exposure Limits	
Local name	Chumbo elementar e compostos inorgânicos , expressos em Pb
OEL TWA	0,05 mg/m ³
Remark	A3 (Agente carcinogénico confirmado nos animais de laboratório con relevância desconhecida no Homem); IBE (Índice biológico de exposição)
Regulatory reference	Norma Portuguesa NP 1796:2014
Portugal - Biological Exposure Indices	
Local name	Chumbo
BEI	30 µg/100ml Parâmetro: Chumbo - Meio: sangue - Momento da amostragem: Não crítico
Remark	Mulheres em idade de gestação, cujo teor de chumbo no sangue exceda 10 µg/dl, estão em risco de gerar uma criança com um teor de chumbo no sangue superior ao valor de referência de 10 µg/dl do CDC ("Centre for Disease Control"). Se o teor de chumbo no sangue dessas crianças permanecer elevado, podem estar sujeitas a um risco agravado de contrair défices cognitivos. O teor de chumbo no sangue dessas crianças deve ser monitorizado e devem ser tomadas medidas para que a exposição ao chumbo seja reduzida
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Plumb și compuși (în afară de PbS)
OEL TWA	0,05 mg/m ³
OEL STEL	0,1 mg/m ³
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	0,5 mg/m ³ inhalovateľná frakcia
Spain - Occupational Exposure Limits	
Local name	Plomo

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

lead nitrate (10099-74-8)	
VLA-ED (OEL TWA)	0,15 mg/m ³ elemental 0,15 mg/m ³ Compuestos inorgánicos de plomo, como Pb
Remark	k (Véase el Real Decreto 374/2001, de 6 de abril (BOE nº 104 de 1 de mayo de 2001), sobre la protección de la salud y seguridad de los trabajadores contra los riesgos relacionados con los agentes químicos durante el trabajo), VLB® (Agente químico que tiene Valor Límite Biológico específico en este documento), TR1A (Cuando las pruebas utilizadas para la clasificación procedan principalmente de datos en humanos).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT
Spain - Biological limit values	
Local name	Plomo y sus derivados iónicos
BLV	70 µg/dl Parámetro: Plomo - Medio: Sangre - Momento de muestreo: No crítico - Notas: k
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT
Sweden - Occupational Exposure Limits	
Local name	Bly, och oorg. föreningar (som Pb)
NGV (OEL TWA)	0,05 mg/m ³ respirabelt damm 0,1 mg/m ³ inhalerbart damm
Remark	B (Ämnet kan orsaka hörselskada. Exponering för ämnet nära det befintliga yrkeshygieniska gränsvärdet och vid samtidig exponering för buller nära insatsvärdet 80 dB kan orsaka hörselskada); M (Medicinska kontroller kan krävas för hantering av ämnet. Se vidare föreskrifterna om medicinska kontroller i arbetslivet. För vissa ämnen ska arbetsgivaren erbjuda läkarundersökning och för andra ämnen gäller krav på periodisk läkarundersökning och tjänstbarhetsbedömning); R (Ämnet är reproduktionsstörande. Med reproduktionsstörande ämnen avses ämnen som kan medföra skadliga effekter på fortplantningsförmågan eller avkommans utveckling); 3 (Med inhalerbar fraktion menas den mängd partiklar, av totalmängden partiklar i luften, som man inandas genom näsa och mun. Den respirabla fraktionen är de inhalerbara partiklar som når längst ner i luftvägarna, till alveolerna i lungorna); 14 (För bly och kadmium finns biologiska gränsvärden. Även kvicksilver kan mätas biologiskt)
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
Sweden - Biological limit values	
Local name	Bly
BLV	0,5 µmol/l Blyhalten i blod för kvinnor under 50 år 1,5 µmol/l Blyhalten i blod för kvinnor som har fyllt 50 år och män
Regulatory reference	Medicinska kontroller i arbetslivet (AFS 2019:3)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	15 mg/cm ³ Lead other than lead alkyls; United Kingdom; Time-weighted average exposure limit 8 h; Occupational exposure limit (Control of lead at work)
Iceland - Occupational Exposure Limits	
Local name	Blý, duft, ryk, reykur, ólífræn sambönd, sem Pb
OEL TWA	0,05 mg/m ³
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009)

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

lead nitrate (10099-74-8)	
North Macedonia - Occupational Exposure Limits	
Local name	Олово и неговите соединенија (сметано како Pb) освен оловен арсенат, олово хромат и алкилоловни соединенија
OEL TWA	0,1 mg/m ³ (l) инхалабилна фракција – дел на вкупно суспендирани материи, кои работникот ги вдишува
KTV	4
Short time value [mg/m ³]	0,4 mg/m ³
Remark	(KTV) краткотрајна вредност (КТВ) значи концентрација на опасни хемиски супстанции во воздухот на работното место внатре во зона на дишење, на која работникот без опасност по здравјето може да е изложен на покусо време. Изложеноста на краткотрајни вредности може да трае највеќе 15 минути и не смее да се повтори повеќе од четирипати во работната смена, при што меѓу две изложености на оваа концентрација мора да измине најмалку 60 минути. Краткотрајната вредност е изразена во mg/m ³ или во ml/m ³ (ppm) а е дадена како многукратни дозволени пречекорувања на граничната вредност; (BAT) биолошка гранична вредност – праг на биолошка гранична вредност, што значи предупредување на опасна хемиска супстанца и нејзини метаболити во ткивата, телесните течности или издишувањето на воздухот, без оглед на тоа, дали опасната хемиска супстанца е внесена во организмот со вдишување, голтање или преку кожата; (EU) European Union – гранична вредност, определена на ниво на Европската унија
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија“ бр.46/10)
Switzerland - Occupational Exposure Limits	
Local name	Blei und seine Verbindungen, außer Alkylverbindungen (als Pb berechnet)
MAK (OEL TWA)	0,1 mg/m ³
KZGW (OEL STEL)	0,8 mg/m ³
Notation	C2, R1 _A , SS _B , B / C2, R1 _A , SS _B , B
Remark	e(mg/m ³) - B C2 R2 _F R1 _{AD} SS _B - NS, Blut - HSE, NIOSH
Regulatory reference	www.suva.ch, 01.01.2024
Switzerland - BAT	
Local name	Plomb et ses composés (sauf les alcoylés) / Blei und seine Verbindungen (ausser Alkylverbindungen)
BAT	100 µg/l (0.48 µmol/l; Paramètre biologique: Plomb (femmes < 45 ans); Substrat d'examen: Sang complet; Moment du prélèvement: Indifférent.) / (0.48 µmol/l; Biologischer Parameter: Blei (Frauen < 45 Jahre); Untersuchungsmaterial: Vollblut; Probennahmezeitpunkt: Keine Beschränkung.) 400 µg/l (1.93 µmol/l; Paramètre biologique: Plomb (hommes; femmes > 45 ans); Substrat d'examen: Sang complet; Moment du prélèvement: Indifférent.) / (1.93 µmol/l; Biologischer Parameter: Blei (Männer; Frauen > 45 Jahre); Untersuchungsmaterial: Vollblut; Probennahmezeitpunkt: Keine Beschränkung.)
Remark	Influence de l'environnement. / Umwelteinflüsse.
Regulatory reference	Ordonnance 832.30 (OPA), article 50 al. 3, www.suva.ch/valeurs-limites / Verordnung 832.30 (VUV), Art. 50 Abs. 3, www.suva.ch/grenzwerte

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

lead nitrate (10099-74-8)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Lead and inorganic compounds, as Pb
ACGIH OEL TWA	0,05 mg/m ³
Remark (ACGIH)	TLV® Basis: CNS & PNS impair; hematologic eff. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
Regulatory reference	ACGIH 2024

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

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	: Liquid
Colour	: Not available
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: 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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

lead nitrate (10099-74-8)	
LD50 oral rat	4665 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat	> 5,05 mg/L air

Skin corrosion/irritation : Not classified

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

lead nitrate (10099-74-8)	
pH	3 – 4 (20 %)

Serious eye damage/irritation : Causes serious eye damage.

lead nitrate (10099-74-8)	
pH	3 – 4 (20 %)

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

lead nitrate (10099-74-8)	
IARC group	2A - Probably carcinogenic to humans

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 nitrate (10099-74-8)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life. 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) : Toxic to aquatic life with long lasting effects.

lead nitrate (10099-74-8)	
LC50 - Fish [1]	40,8 – 3597,9 µg/l (µg Pb/L) Pimephales promelas (Fathead minnow)
EC50 - Crustacea [1]	26,4 µg/l (µg Pb/L) Ceriodaphnia dubia

12.2. Persistence and degradability

Lead nitrate 0.1M
Volumetric solution
European Pharmacopoeia (Ph Eur) Ref: 3003100

Persistence and degradability : Rapidly degradable

lead nitrate (10099-74-8)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

lead nitrate (10099-74-8)	
Bioaccumulative potential	bioaccumulable.

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	lead nitrate (10099-74-8)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	lead nitrate (10099-74-8)

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
Ecological waste information	: Avoid release to the environment.
European List of Waste (LoW, EC 2000/532)	: 16 05 06* - laboratory chemicals consisting of or containing dangerous substances including mixtures of laboratory chemicals

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (lead nitrate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (lead nitrate)	Environmentally hazardous substance, liquid, n.o.s. (lead nitrate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (lead nitrate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (lead nitrate)
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (lead nitrate), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (lead nitrate), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (lead nitrate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (lead nitrate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (lead nitrate), 9, III

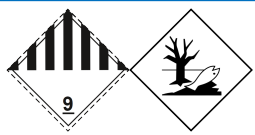

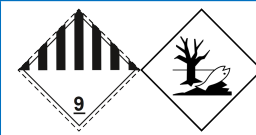
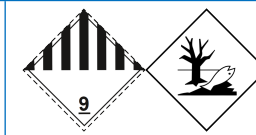
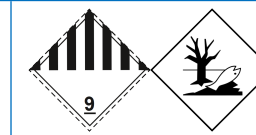
Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes EmS-No. (Fire): F-A EmS-No. (Spillage): S-F	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)	: M6
Special provisions (ADR)	: 274, 335, 375, 601
Limited quantities (ADR)	: 5I
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
Orange plates	:



Tunnel restriction code (ADR)	: -
EAC code	: •3Z

Transport by sea

Special provisions (IMDG)	: 274, 335, 969
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
Stowage category (IMDG)	: A

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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 provisions (IATA)	: A97, A158, A197, A215
ERG code (IATA)	: 9L

Inland waterway transport

Classification code (ADN)	: M6
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: M6
Special provisions (RID)	: 274, 335, 375, 601
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Special packing provisions (RID)	: PP1
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1, TP29
Tank codes for RID tanks (RID)	: LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
3(b)	Lead nitrate 0.1M Volumetric solution European Pharmacopoeia (Ph Eur) Ref: 3003100	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(c)	Lead nitrate 0.1M Volumetric solution European Pharmacopoeia (Ph Eur) Ref: 3003100	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
63.	Lead nitrate 0.1M Volumetric solution European Pharmacopoeia (Ph Eur) Ref: 3003100 ; lead nitrate	Lead and its compounds

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations $\geq 0.1\%$ or SCL: Lead dinitrate (EC 233-245-9, CAS 10099-74-8)

PIC Regulation (Prior Informed Consent)

Contains substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals): lead dinitrate (10099-74-8)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 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 the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

France

Occupational diseases	
Code	Description
RG 1	Conditions caused by lead and its compounds

Germany

VOC ordinance (ChemVOCFarbV) :

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

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 to the Hazardous Incident Ordinance (12. BImSchV)

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Netherlands

- ABM category : Z(2) - biodegradable substances with hazardous properties for humans and the environment (carcinogenicity/ mutagenicity/reprotoxicity/bioacumulative potential or toxicity)
- SZW-lijst van kankerverwekkende stoffen : None of the components are listed
- SZW-lijst van mutagene stoffen : None of the components are listed
- SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed
- SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : lead nitrate is listed
- SZW-lijst van reprotoxische stoffen – Ontwikkeling : lead nitrate is listed

Denmark

- 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
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

Poland

- Polish National Regulations : Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).
Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)
Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).
ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes		
Section	Changed item	Comments
4.1	First-aid measures for first aider	Added
4.2	Symptoms/effects after inhalation	Added
4.2	Symptoms/effects after ingestion	Added

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Indication of changes		
Section	Changed item	Comments
4.2	Chronic symptoms	Added
5.1	Unsuitable extinguishing media	Added
5.2	Explosion hazard	Added
5.2	Fire hazard	Added
5.3	Firefighting instructions	Added
6.1	Emergency procedures	Added
6.1	Protective equipment	Added
6.1	General measures	Added
6.3	For containment	Modified
7.1	Additional hazards when processed	Added
7.2	Technical measures	Added
7.2	Packaging materials	Added
7.2	Storage conditions	Modified
9	Flammability	Modified
13.1	Sewage disposal recommendations	Added
13.1	Additional information	Added
13.1	Regional waste regulation	Added
13.1	Product/Packaging disposal recommendations	Modified
15.1	REACH Annex XVII	Modified
16	Abbreviations and acronyms	Modified

Abbreviations and acronyms:	
ACGIH	American Conference of Government Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:	
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4

Lead nitrate 0.1M

Volumetric solution

European Pharmacopoeia (Ph Eur) Ref: 3003100

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:	
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
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Ox. Sol. 2	Oxidising Solids, Category 2
Repr. 1A	Reproductive toxicity, Category 1A
Repr. 2	Reproductive toxicity, Category 2
Skin Sens. 1B	Skin sensitisation, category 1B
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
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.
H411	Toxic to aquatic life with long lasting effects.
EUH201	Contains lead. Should not be used on surfaces liable to be chewed or sucked by children.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Eye Dam. 1	H318	Calculation method
Skin Sens. 1	H317	Calculation method
Carc. 2	H351	Calculation method
Repr. 1A	H360Df	Calculation method
STOT RE 2	H373	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 2	H411	Calculation method

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.