Contact
Tel.: +34 6280 94 398
E-mail: fireassay@fireassay.eu – www.fireassay.eu

Safety Data Sheet dated 23/1/2025, version 2

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

1.1. Product identifier

Mixture identification:

Trade name:	Monóxido de plomo
CAS number:	1317-36-8
EC number:	215-267-0
Index number:	082-001-00-6

REACH number: 01-2119531110-62

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

Recommended use:
Only professional use.

1.3. Details of the supplier of the safety data sheet

Company:
FIRE ASSAY SL- Carrer Novell 43, 2nd- Barcelona - España
Teléfono: +34 93 418 13 10
Horario: de Lunes a Viernes de 9h a 17h

Competent person responsible for the safety data sheet:
Gabriel Coral gabriel.coral@fireassay.eu

1.4. Emergency telephone number

Telephone: +34 93 418 13 10
Opening hours: Monday to Friday from 9am to 5pm

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Warning, Acute Tox. 4, Harmful if swallowed.

Warning, Acute Tox. 4, Harmful if inhaled.

Warning, Carc. 2, Suspected of causing cancer.

Danger, Repr. 1A, May damage the unborn child. Suspected of damaging fertility. Lact., May cause harm to breast-fed children.

Danger, STOT RE 1, Causes damage to organs (nervous system, kidneys, blood) through prolonged or repeated exposure.

Warning, Aquatic Chronic 1, Very toxic to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:

Danger

Hazard statements:

H302+H332 Harmful if swallowed or if inhaled.
H351 Suspected of causing cancer.
H360Df May damage the unborn child. Suspected of damaging fertility.
H362 May cause harm to breast-fed children.
H372 Causes damage to organs (nervous system, kidneys, blood) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:

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P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist.
P263 Avoid contact during pregnancy and while nursing.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.

Special Provisions:
None

Special provisions according to Annex XVII of REACH and subsequent amendments:
Restricted to professional users.

2.3. Other hazards
Lead monoxide - REACH No.: 01-2119531110-62, Index number: 082-001-00-6, CAS: 1317-36-8, EC: 215-267-0:
PBT

Other Hazards:
No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances
Identification of the substance:

Trade code:	GCS01
CAS number:	1317-36-8
EC number:	215-267-0

REACH number: 01-2119531110-62

M factor: M (chronic): 1 (acute):10

3.2. Mixtures
N.A.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:
Immediately take off all contaminated clothing.
Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.
Wash thoroughly the body (shower or bath).
Remove contaminated clothing immediately and dispose off safely.
After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

In case of Ingestion:
Do NOT induce vomiting.
Give nothing to eat or drink.

In case of Inhalation:
If breathing is irregular or stopped, administer artificial respiration.
In case of inhalation, consult a doctor immediately and show him packing or label.

4.2. Most important symptoms and effects, both acute and delayed
None

4.3. Indication of any immediate medical attention and special treatment needed
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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Treatment: Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Use water spray, alcohol resistant foam, dry powder, or carbon dioxide.
Extinguishing media which must not be used for safety reasons:
Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.
Burning produces heavy smoke.
Hazardous combustion products:
Toxic gases or vapours.

5.3. Advice for firefighters

Use suitable breathing apparatus .
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Provide adequate ventilation.
Use appropriate respiratory protection.
See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
Exercise the greatest care when handling or opening the container.
Use localized ventilation system.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
See also section 8 for recommended protective equipment.
Advice on general occupational hygiene:
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.
Incompatible materials:
None in particular.

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Instructions as regards storage premises:
Adequately ventilated premises.

7.3. Specific end use(s)
None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Lead monoxide - CAS: 1317-36-8
TWA - TWA: 0.15 mg/m3
ACGIH - TWA(8h): 0.05 mg/m3 - Notes: A3, BEI - CNS and PNS impair, hematologic eff

DNEL Exposure Limit Values
Lead monoxide - CAS: 1317-36-8
Worker Professional: 10 µg/dL - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values
Lead monoxide - CAS: 1317-36-8
Target: Fresh Water - Value: 3.1 µg/l
Target: Marine water - Value: 3.5 µg/l
Target: Plant wastewater treatment - Value: 100 µg/l
Target: Freshwater sediments - Value: 174 mg/kg
Target: Marine water sediments - Value: 164 mg/kg
Target: Soil (agricultural) - Value: 212 mg/kg

8.2. Exposure controls
Eye protection:
Dust protection eye glasses.
Protection for skin:
Chemical protection clothing.
Protection for hands:
Rubber nitrile: thickness> 0.45 mm Time of perforation> 480 min (EN 374)
Respiratory protection:
In case of dust formation use:
Mask with filter "P", white colour
Thermal Hazards:
None
Environmental exposure controls:
One or more of the following measures may if necessary be taken to reduce emissions to water:
- Chemical precipitation: used primarily to remove the metal ions
- Sedimentation
- Filtration: used as final clarification step
- Electrolysis: for low metal concentration
- Reverse osmosis: extensively used for the removal of dissolved metals
- Ion exchange: final cleaning step in the removal of heavy metal from process wastewater

One or more of the following measures may if necessary be taken to reduce emissions to air:
- Electrostatic precipitators using wide electrode spacing: Wet electrostatic precipitators:
- Cyclones, but as primary collector Fabric or bag filters: high efficiency in controlling fine particulate (melting): achieve emission values Membrane filtration techniques can achieve
- Ceramic and metal mesh filters. PM10 particles are removed
- Wet scrubbers

Lead compound removal from treatment works should be at least the minimum default 84% removal used in the CSR. Solid material collected from on-site treatment must be sent for metal recovery or treated as hazardous waste. Waste water treatment sludge must be recycled, incinerated or landfilled and not used as agricultural fertiliser.

Appropriate engineering controls:
None

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Physical state:	Powder	--	--
Colour:	Characteristic	--	--
Odour:	Odourless	--	--
Melting point/freezing point:	886 °C	--	--
Boiling point or initial boiling point and boiling range:	> 600°C	--	--
Flammability:	N.A.	--	--
Lower and upper explosion limit:	N.A.	--	--
Flash point:	N.A.	--	--
Auto-ignition temperature:	N.A.	--	--
Decomposition temperature:	> 600°C	--	--
pH:	8-9 100g/l 20ºC	--	--
Kinematic viscosity:	N.A.	--	--
Solubility in water:	8-9 100g/l 20ºC	--	--
Solubility in oil:	N.A.	--	--
Partition coefficient n-octanol/water (log value):	N.A.	--	--
Vapour pressure:	N.A.	--	--
Density and/or relative density:	9.96	--	--
Relative vapour density:	N.A.	--	--
Particle characteristics:			
Particle size:	N.A.	--	--

9.2. Other information

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicological information of the substance:

Lead monoxide - CAS: 1317-36-8

a) acute toxicity

The product is classified: Acute Tox. 4 H302;Acute Tox. 4 H332

Test: LD50 - Route: Oral - Species: Rat > 2000 mg/kg - Based on available data, the classification criteria are not met

Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg - Based on available data, the classification criteria are not met

Test: ATE - Route: Inhalation - Species: Rat 1.5

b) skin corrosion/irritation

Not classified

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Test: Skin Irritant - Species: Rabbit Negative - Based on available data, the classification criteria are not met

c) serious eye damage/irritation

Not classified

Test: Eye Irritant - Species: Rabbit Negative - Based on available data, the classification criteria are not met

d) respiratory or skin sensitisation

Not classified

Test: Skin Sensitization - Species: Guinea pig Negative - Based on available data, the classification criteria are not met

e) germ cell mutagenicity

Not classified

Based on available data, the classification criteria are not met

f) carcinogenicity

The product is classified: Carc. 2 H351

g) reproductive toxicity

The product is classified: Repr. 1A H360Df;Lact. H362

h) STOT-single exposure

Not classified

Based on available data, the classification criteria are not met

i) STOT-repeated exposure

The product is classified: STOT RE 1 H372

j) aspiration hazard

Not classified

Based on available data, the classification criteria are not met

11.2. Information on other hazards

Endocrine disrupting properties:

This substance has no endocrine disrupting properties

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Lead monoxide - CAS: 1317-36-8

The product is classified: Aquatic Chronic 1 - H410

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 0.04-0.81 mg/l - Duration h: 96 - Notes: pH> 6.5 - 7.5

Endpoint: EC50 - Species: Daphnia 0.073-0.655 mg/l - Duration h: 48 - Notes: pH> 6.5 - 7.5

Endpoint: EC50 - Species: Algae 0.072-0.388 mg/l - Duration h: 72 - Notes: pH> 6.5 - 7.5

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish 0.0178-1.558 mg/l

12.2. Persistence and degradability

None

N.A.

12.3. Bioaccumulative potential

Lead monoxide - CAS: 1317-36-8

Bioaccumulation: Low Bioaccumulative potential 1.552

12.4. Mobility in soil

Lead monoxide - CAS: 1317-36-8

Mobility in soil: Not mobile - Test: log/Koc 5.2 - Notes: Sedimento agua dulce

12.5. Results of PBT and vPvB assessment

Substance PBT

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number or ID number

ADR-UN Number:	2291
IATA-UN Number:	2291
IMDG-UN Number:	2291

14.2. UN proper shipping name

ADR-Shipping Name:	LEAD COMPOUND, SOLUBLE, N.O.S.
IATA-Shipping Name:	LEAD COMPOUND, SOLUBLE, N.O.S.
IMDG-Shipping Name:	LEAD COMPOUND, SOLUBLE, N.O.S.

14.3. Transport hazard class(es)

ADR-Class:	6.1
ADR - Hazard identification number:	60
IATA-Class:	6.1
IATA-Label:	6.1
IMDG-Class:	6.1

14.4. Packing group

ADR-Packing Group:	III
IATA-Packing group:	III
IMDG-Packing group:	III

14.5. Environmental hazards

ADR-Enviromental Pollutant:	Yes
IMDG-Marine pollutant:	Marine Pollutant
IMDG-EmS:	F-A , S-A

14.6. Special precautions for user

ADR-Subsidiary hazards:	-
ADR-S.P.:	199 274 535
ADR-Transport category (Tunnel restriction code):	2 (E)
IATA-Passenger Aircraft:	670
IATA-Subsidiary hazards:	-
IATA-Cargo Aircraft:	677
IATA-S.P.:	A92
IATA-ERG:	6L
IMDG-Subsidiary hazards:	-
IMDG-Stowage and handling:	Category A
IMDG-Segregation:	-

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) n. 2020/878
Regulation (EU) n. 286/2011 (ATP 2 CLP)

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Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2020/217 (ATP 14 CLP)
Regulation (EU) n. 2020/1182 (ATP 15 CLP)
Regulation (EU) n. 2021/643 (ATP 16 CLP)
Regulation (EU) n. 2021/849 (ATP 17 CLP)
Regulation (EU) n. 2022/692 (ATP 18 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

No restriction.

Restrictions related to the substances contained:

Restriction 30
Restriction 63
Restriction 72
Restriction 75

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)
Regulation (EC) nr 648/2004 (detergents).
Dir. 2004/42/EC (VOC directive)

SVHC Substances:

Substances in candidate list (Art. 59 Reg. 1907/2006, REACH):

Lead monoxide

Toxic to reproduction, PBT

Provisions related to directive EU 2012/18 (Seveso III):

N.A.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the substance.

SECTION 16: Other information

Full text of phrases referred to in Section 2:

H302 Harmful if swallowed.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.
H360Df May damage the unborn child. Suspected of damaging fertility.
H362 May cause harm to breast-fed children.
H372 Causes damage to organs (nervous system, kidneys, blood) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Hazard class and hazard category	Code	Description
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Carc. 2	3.6/2	Carcinogenicity, Category 2
Repr. 1A	3.7/1A	Reproductive toxicity, Category 1A
Lact.	3.7/Lact.	Reproductive toxicity, Hazard category for lactation effects

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STOT RE 1	3.9/1	Specific target organ toxicity - repeated exposure, Category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1

This document was prepared by a competent person who has received appropriate training.
Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.
It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.
This MSDS cancels and replaces any preceding release.

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road.
ATE:	Acute Toxicity Estimate
ATEmix:	Acute toxicity Estimate (Mixtures)
CAS:	Chemical Abstracts Service (division of the American Chemical Society).
CLP:	Classification, Labeling, Packaging.
DNEL:	Derived No Effect Level.
EINECS:	European Inventory of Existing Commercial Chemical Substances.
GefStoffVO:	Ordinance on Hazardous Substances, Germany.
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals.
IATA:	International Air Transport Association.
IATA-DGR:	Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO:	International Civil Aviation Organization.
ICAO-TI:	Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG:	International Maritime Code for Dangerous Goods.
INCI:	International Nomenclature of Cosmetic Ingredients.
KSt:	Explosion coefficient.
LC50:	Lethal concentration, for 50 percent of test population.
LD50:	Lethal dose, for 50 percent of test population.
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.