

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name **Lead (II) sulfate**
 Stock number: 44784
 CAS Number: 7446-14-2
 EC number: 231-198-9
 Index number: 082-001-00-6

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

Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

Alfa Aesar GmbH & Co.KG
 A Johnson Matthey Company
 Zeppelinstr. 7b
 76185 Karlsruhe / Germany
 Tel: +49 (0) 721 84007 280
 Fax: +49 (0) 721 84007 300
 Email: tech@alfa.com
 www.alfa.com


Informing department:

Product safety Tel + +049 (0) 7275 988687-0

1.4 Emergency telephone number:


Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)
 Poison Information Center Mainz
 www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

 GHS08 health hazard

Repr. 1A H360Df May damage the unborn child. Suspected of damaging fertility.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

 GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.


Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

 GHS07


Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.


Classification according to Directive 67/548/EEC or Directive 1999/45/EC

 T; Toxic

R61: May cause harm to the unborn child.

 Xn; Harmful

R62-20/22: Possible risk of impaired fertility. Harmful by inhalation and if swallowed.

 N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R33: Danger of cumulative effects.

Information concerning particular hazards**for human and environment:**

Not applicable

Other hazards that do not result in classification

No information known.

2.2 Label elements**Labelling according to Regulation (EC) No 1272/2008****Hazard pictograms****Signal word****Hazard statements**

The substance is classified and labelled according to the CLP regulation.

GHS07, GHS08, GHS09

Danger

H302 Harmful if swallowed.

H332 Harmful 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.

P260 Do not breathe the dust/fume/gas/mist/vapours/spray.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P281 Use personal protective equipment as required.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Precautionary statements**2.3 Other hazards****Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients**3.1 Substances**

CAS# Designation: 7446-14-2 Lead (II) sulfate

Identification number(s):

EC number: 231-198-9

Index number: 082-001-00-6

SECTION 4: First aid measures**4.1 Description of first aid measures****After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.
Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.

After swallowing

Rinse opened eye for several minutes under running water. Then consult doctor.
Seek medical treatment.

Safety data sheet
according to 1907/2006/EC, Article 31

Revision: 25.07.2012

Printing date 01.07.2013

Trade name **Lead (II) sulfate**

(Contd. of page 1)

4.2 Most important symptoms and effects, both acute and delayed
4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents
5.2 Special hazards arising from the substance or mixture

Use fire fighting measures that suit the environment.
If this product is involved in a fire, the following can be released:
Sulphur oxides (SO_x)
Leadoxide vapour

5.3 Advice for firefighters
Protective equipment:

Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

6.2 Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.

6.3 Methods and material for containment and cleaning up:

Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.

Prevention of secondary hazards:

No special measures required.

6.4 Reference to other sections

See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.
Open and handle container with care.

Information about protection against explosions and fires:

The product is not flammable

7.2 Conditions for safe storage, including any incompatibilities

Storage
Requirements to be met by storerooms and containers:

No special requirements.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Store in a locked cabinet or with access restricted to technical experts or their assistants.
No further relevant information available.

7.3 Specific end use(s)

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters

Components with critical values that require monitoring at the workplace:

7446-14-2 Lead (II) sulfate (100,0%)

MAK (Germany)	vgl. Abschn. XIV
MAK (TRGS 900) (Germany)	0,1 E mg/m ³ als Pb; 25; (DFG)
PEL (USA)	0,05 mg/m ³ as Pb; See 29 CFR 1910,1025
REL (USA)	0,05* mg/m ³ as Pb; *8-hr TWA, Blood Pb<0,06mg/100g whole blood
TLV (USA)	0,05 mg/m ³ as Pb; BEI

Ingredients with biological limit values:

7446-14-2 Lead (II) sulfate (100,0%)

BEI (USA)	30 µg/100 ml blood not critical Lead
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Additional information:

No data

8.2 Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Store protective clothing separately.
Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use breathing protection with high concentrations.

Protection of hands:

Check protective gloves prior to each use for their proper condition.

Material of gloves

Impervious gloves

Penetration time of glove material

Not determined

Eye protection:

Safety glasses

Body protection:

Protective work clothing.

DE/E

(Contd. on page 3)

Trade name **Lead (II) sulfate**

(Contd. of page 2)

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information****Appearance:**

Form: Powder or lump
Colour: White
Smell: Odourless
Odour threshold: Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range: 1170 °C
Boiling point/Boiling range: Not determined
Sublimation temperature / start: Not determined.

Inflammability (solid, gaseous) Not determined.

Ignition temperature: Not determined.

Decomposition temperature: Not determined.

Self-inflammability: Not determined.

Critical values for explosion:

Lower: Not determined

Upper: Not determined

Steam pressure: Not applicable.

Density at 20 °C 6,2 g/cm³

Relative density Not determined.

Vapour density Not applicable.

Evaporation rate Not applicable.

Solubility in / Miscibility with

Water at 25 °C: 0,0425 g/l

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

dynamic: Not applicable.

kinematic: Not applicable.

9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No information known.

10.2 Chemical stability Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions Reacts with strong oxidizing agents

10.5 Incompatible materials: Oxidizing agents

10.6 Hazardous decomposition products: Sulphur oxides (SO_x)

Leadoxide vapour

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity:**

Harmful if inhaled.

Harmful if swallowed.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

LD/LC50 values that are relevant for classification:

No data

Skin irritation or corrosion:

May cause irritation

Eye irritation or corrosion:

May cause irritation

Sensitization:

No sensitizing effect known.

Germ cell mutagenicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.

Carcinogenicity:

EPA-B2: Probable human carcinogen, sufficient evidence from animal studies; inadequate evidence or no data from epidemiologic studies.

IARC-2B: Possibly carcinogenic to humans: limited evidence in humans in the absence of sufficient evidence in experimental animals.

NTP-R: Reasonably anticipated to be a carcinogen: limited evidence from studies in humans or sufficient evidence from studies in experimental animals.

ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans.

Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

May damage fertility or the unborn child.

Reproductive toxicity:**Specific target organ system toxicity - repeated exposure:**

May cause damage to organs through prolonged or repeated exposure.

Specific target organ system toxicity - single exposure:

No effects known.

Aspiration hazard:

No effects known.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:**

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Ecotoxicological effects:**Remark:**

Very toxic for fish

Additional ecological information:**General notes:**

Do not allow material to be released to the environment without proper governmental permits.

Water danger class 3 (Self-assessment): extremely hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into soil.

Also poisonous for fish and plankton in water bodies.

May cause long lasting harmful effects to aquatic life.

Avoid transfer into the environment.

Very toxic for aquatic organisms

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

(Contd. on page 4)
DE/E

Safety data sheet
according to 1907/2006/EC, Article 31

Revision: 25.07.2012

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Trade name **Lead (II) sulfate**

12.6 Other adverse effects No further relevant information available.

(Contd. of page 3)

SECTION 13: Disposal considerations13.1 Waste treatment methods
RecommendationHand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.Uncleaned packagings:
Recommendation:

Disposal must be made according to official regulations.

SECTION 14: Transport informationUN-Number
ADR, IMDG, IATA

UN2291

14.2 UN proper shipping name
ADR
IMDG, IATA2291 LEAD COMPOUND, SOLUBLE, N.O.S. (Lead(II) sulfate)
LEAD COMPOUND, SOLUBLE, N.O.S. (Lead(II) sulfate)

14.3 Transport hazard class(es)

ADR

Class
Label
IMDG, IATA
6.1 (T5) Toxic substances.
6.1
Class
Label
6.1 Toxic substances.
6.1Packing group
ADR, IMDG, IATA

III

14.5 Environmental hazards:

Environmentally hazardous substance, solid

14.6 Special precautions for user

Warning: Toxic substances.

Kemler Number:

60

EMS Number:

F-A,S-A

Segregation groups

Heavy metals and their salts (including their organometallic compounds), lead and its compounds

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC

Code Not applicable.

Transport/Additional information:

ADR
Excepted quantities (EQ):
Limited quantities (LQ)
Transport category
Tunnel restriction code
E1
5 kg
2
E

UN "Model Regulation":

UN2291, LEAD COMPOUND, SOLUBLE, N.O.S. (Lead(II) sulfate), 6.1, III

SECTION 15: Regulatory information

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

Australian Inventory of Chemical

Substances

Substance is listed.

Standard for the Uniform Scheduling of

Drugs and Poisons

Substance is not listed.

National regulations

Information about limitation of use:

Employment restrictions concerning young persons must be observed.
Employment restrictions concerning women of child-bearing age must be observed.
For use only by technically qualified individuals.

Water hazard class:

Water danger class 3 (Self-assessment): extremely hazardous for water.

Other regulations, limitations and prohibitive

regulations

ELINCS (European List of Notified Chemical

Substances)

Substance is not listed.

Substances of very high concern (SVHC)

according to REACH, Article 57

REACH - Pre-registered substances

Substance is not listed.

15.2 Chemical safety assessment:

Substance is listed.

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet: Health, Safety and Environmental Department.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent