

Creation Date Oct-2013 Revision Date Oct-2018 Revision Number 2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Description: Lead (II) acetate trihydrate

Product Grade: SQ

Cat No. : Q24985, Q24985FX

Synonyms Acetic acid, lead salt trihydrate

CAS-No 6080-56-4

Molecular Formula C4 H6 O4 Pb. 3 H2 O

Reach Registration Number 01-2119532202-56 (for the anhydrous form)

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

Recommended Use Laboratory chemicals
Uses advised against No Information available

1.3. Details of the supplier of the safety data sheet

Company Thermo Fisher Scientific India Pvt. Ltd

403-404, B-wing, Delphi, Hiranandani Business Park,

Powai, Mumbai 400076, INDIA.

E-mail address laboratorysolutions@thermofisher.com

1.4. Emergency telephone number

India Toll Free: 18 00 22 22 30 Chemtrec US: (800)424-9300 Chemtrec EU: 001(202)483-7616

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

Reproductive Toxicity Category 1A
Specific target organ toxicity - (repeated exposure) Category 2

Environmental hazards

Acute aquatic toxicity

Chronic aquatic toxicity

Category 1

Category 1

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Symbol(s) T - Toxic

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SECTION 2: HAZARDS IDENTIFICATION

R-phrase(s) R33 - Danger of cumulative effects

R61 - May cause harm to the unborn child R62 - Possible risk of impaired fertility

R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

2.2. Label elements



Signal Word

Danger

Hazard Statements

H360Df - May damage the unborn child. Suspected of damaging fertility

H373 - May cause damage to organs through prolonged or repeated exposure if swallowed

H410 - Very 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

Precautionary Statements

P281 - Use personal protective equipment as required

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P273 - Avoid release to the environment

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell

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

2.3. Other hazards

No information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

| Component | CAS-No | EC-No. | Weight % | CLP Classification - Regulation (EC) No 1272/2008 | DSD Classification - 67/548/EEC |
|-------------------------------|-----------|-------------------|----------|---|--|
| Lead (II) acetate, trihydrate | 6080-56-4 | | >95 | Repr. 1A (H360Df) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) | R33 Xn; R48/22 N; R50-53 Repr.Cat.1; R61 Repr.Cat.3; R62 |
| Lead acetate | 301-04-2 | EEC No. 206-104-4 | - | Repr. 1A (H360Df) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) | R33 Xn; R48/22 N; R50-53 Repr.Cat.1; R61 Repr.Cat.3; R62 |

| Reach Registration Number | 01-2119532202-56 (for the anhydrous form) |
|---------------------------|---|
|---------------------------|---|

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

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SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain

medical attention.

Skin ContactWash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Ingestion Do not induce vomiting. Call a physician or Poison Control Center immediately.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation

if victim ingested or inhaled the substance; induce artificial respiration with a respiratory

medical device. Obtain medical attention.

Protection of First-aiders Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination

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

No information available

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

Notes to Physician Treat symptomatically

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂), lead oxides.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment.

6.3. Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

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6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Do not breathe vapors/dust. Do not ingest.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere.

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s):

UK - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement.

Component Lead (II) acetate, trihydrate

Lead acetate

| European Union | The United Kingdom | France | Belgium | Spain |
|----------------|----------------------------------|----------------------------------|---------|-------|
| | STEL: 0.45 mg/m ³ 15 | TWA / VME: 0.1 mg/m ³ | | |
| | min ¯ | (8 heures). restrictive | | |
| | TWA: 0.15 mg/m ³ 8 hr | limit | | |
| | STEL: 0.45 mg/m ³ 15 | TWA / VME: 0.1 mg/m ³ | | |
| | min | (8 heures). restrictive | | |
| | TWA: 0.15 mg/m ³ 8 hr | limit | | |

Component Lead acetate

| Italy | Germany | Portugal | The Netherlands | Finland |
|-------|---------|----------|-----------------|------------------------------|
| | | | | TWA: 0.1 mg/m ³ 8 |
| | | | | tunteina |

Component Lead (II) acetate, trihydrate

Lead acetate

| Austria | Denmark | Denmark Switzerland | | Norway |
|---|---------|---|--|-------------------------------------|
| STEL: 0.4 mg/m ³ 15 Minuten | | STEL: 0.8 mg/m ³ 15 Minuten | | |
| TWA: 0.1 mg/m ³ 8 | | MAK: 0.1 mg/m ³ 8 | | |
| Stunden | | Stunden | | |
| STEL: 0.4 mg/m ³ 15 | | STEL: 0.8 mg/m ³ 15 | | TWA: 0.05 mg/m ³ 8 timer |
| Minuten | | Minuten | | STEL: 0.15 mg/m ³ 15 |
| TWA: 0.1 mg/m ³ 8 | | MAK: 0.1 mg/m ³ 8 | | minutter. Pb |
| Stunden | | Stunden | | |

Biological limit values

List source(s):

Component Lead acetate

| European Union | United Kingdom | France | Spain | Germany |
|----------------|----------------|----------------------|-------|---------|
| | | Lead: 400 µg/L blood | | |
| | | Lead: 300 µg/L blood | | |
| | | Lead: 200 µg/L blood | | |
| | | Lead: 100 µg/L blood | | |

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Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

MDHS6/3 Lead and inorganic compounds of lead in air Laboratory method using flame or electrothermal atomic absorption spectrometry

Derived No Effect Level (DNEL)No information available.

| Route of exposure | Acute effects (local) | Acute effects | Chronic effects (local) | Chronic effects |
|-------------------|-----------------------|---------------|-------------------------|-----------------|
| | , , | (systemic) | , , | (systemic) |
| Oral | | | | |
| Dermal | | | | |
| Inhalation | | | | |
| | | | | |

Predicted No Effect Concentration

No information available.

(PNEC)

8.2. Exposure controls

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source.

Personal protective equipment

Eye Protection Goggles (European standard - EN 166)

Hand Protection Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments |
|---|-----------------------------------|-----------------|-------------|-----------------------|
| Natural rubber Nitrile rubber Neoprene PVC | See manufacturers recommendations | - | EN 374 | (minimum requirement) |

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Remove gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate

certified respirators

To protect the wearer, respiratory protective equipment must be the correct fit and be used and

maintained properly.

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are

exceeded or if irritation or other symptoms are experienced...

Recommended Filter type: Particulates filter conforming to EN 143.

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure

limits are exceeded or if irritation or other symptoms are experienced.

Recommended half mask:- Particle filtering: EN149:2001 When RPE is used a face piece Fit Test should be conducted.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

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Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

Solid

Solid

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

AppearanceWhitePhysical StateSolid.Odorvinegar-likeOdor ThresholdNo data available

pH 5.5-6.5 5% aq.solution

Melting Point/Range75°C / 167°FSoftening PointNo data available

Boiling Point/Range No information available.

Flash Point No information available. Method - No information available.

Evaporation Rate Not applicable

Flammability (solid,gas)

No information available.

Explosion Limits No data available.

Vapor Pressure No data available
Vapor Density Not applicable

Specific Gravity / Density

No data available

Bulk Density

No data available

Water Solubility 625 g/L

Solubility in other solvents No information available.

Partition Coefficient (n-

octanol/water)

Autoignition Temperature

Not applicable
> 100°C

Viscosity Not applicable Solid

Explosive PropertiesNo information available. **Oxidizing Properties**No information available.

9.2. Other information

Molecular Formula C4 H6 O4 Pb . 3 H2 O

Molecular Weight 379.33

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None known, based on information available.

10.2. Chemical stability

Sensitive to air.

10.3. Possibility of hazardous reactions

Hazardous Polymerization
Hazardous Reactions
Hazardous polymerization does not occur.
None under normal processing.

10.4. Conditions to avoid

Incompatible products, Excess heat, Avoid dust formation, Exposure to air.

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10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂), lead oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

(a) acute toxicity;

Oral Based on available data, the classification criteria are not met
Dermal Based on available data, the classification criteria are not met
Inhalation Based on available data, the classification criteria are not met

| Component LD50 Oral | | LD50 Dermal | LC50 Inhalation |
|-------------------------------|------------------|-------------|-----------------|
| Lead (II) acetate, trihydrate | 4665 mg/kg (Rat) | | |

(b) skin corrosion/irritation; Based on available data, the classification criteria are not met

(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;

RespiratorySkin

Based on available data, the classification criteria are not met
Based on available data, the classification criteria are not met

(e) germ cell mutagenicity; Based on available data, the classification criteria are not met

(f) carcinogenicity; Based on available data, the classification criteria are not met

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component | EU | UK | Germany | IARC |
|--------------|----|----|---------|---------|
| Lead acetate | | | | group 3 |

(g) reproductive toxicity; Category 1A

Reproductive Effects

Developmental Effects
Teratogenicity

Possible risk of impaired fertility.

May cause harm to the unborn child.

May cause harm to the unborn child.

(h) STOT-single exposure; Based on available data, the classification criteria are not met

(i) STOT-repeated exposure; Category 2

Target Organs Central nervous system (CNS), Kidney, Blood, Liver, Reproductive System.

(j) aspiration hazard; Not applicable

Solid

Other Adverse Effects

Tumorigenic effects have been reported in experimental animals. See actual entry in RTECS

for complete information No information available.

Symptoms / effects, both acute and delayed

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SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic

environment. The product contains following substances which are hazardous for the

environment. May cause long-term adverse effects in the environment. Do not allow material to

contaminate ground water system..

The product includes heavy metals. Prevent release into the environment. Special 12.2. Persistence and degradability

pretreatment required

Persistence May persist, based on information available.

Degradation in sewage treatment plant

Contains substances known to be hazardous to the environment or not degradable in waste

water treatment plants.

12.3. Bioaccumulative potential May have some potential to bioaccumulate

The product is water soluble, and may spread in water systems. Will likely be mobile in the 12.4. Mobility in soil

environment due to its water solubility. Highly mobile in soils.

12.5. Results of PBT and vPvB

assessment

No data available for assessment

12.6. Other adverse effects

Endocrine Disruptor Information Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected endocrine disruptors

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused

Products

Should not be released into the environment. Waste is classified as hazardous. Dispose of in

accordance with the European Directives on waste and hazardous waste. Dispose of in

accordance with local regulations.

Dispose of this container to hazardous or special waste collection point... **Contaminated Packaging**

According to the European Waste Catalogue, Waste Codes are not product specific, but **European Waste Catalogue (EWC)**

application specific.

Other Information Do not dispose of waste into sewer. Waste codes should be assigned by the user based on the

application for which the product was used. Do not empty into drains. Do not let this chemical

enter the environment.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

UN1616 14.1. UN number

14.2. UN proper shipping name LEAD ACETATE

14.3. Transport hazard class(es) 6.1 14.4. Packing group

Ш

ADR

14.1. UN number UN1616

14.2. UN proper shipping name LEAD ACETATE

14.3. Transport hazard class(es) 14.4. Packing group Ш

6.1

IATA

14.1. UN number UN1616

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14.2. UN proper shipping name LEAD ACETATE

14.3. Transport hazard class(es) 6.1 **14.4. Packing group** III

14.5. Environmental hazards Dangerous for the environment

Product is a marine pollutant according to the criteria set by IMDG/IMO

14.6. Special precautions for user
14.7. Transport in bulk according to

No special precautions required Not applicable, packaged goods

Annex II of MARPOL73/78 and the

IBC Code

SECTION 15: REGULATORY INFORMATION

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

International Inventories X = listed

| Component | EINECS | ELINCS | NLP | TSCA | DSL | NDSL | PICCS | ENCS | CHINA | AICS | KECL |
|-------------------------------|-----------|--------|-----|------|-----|------|-------|------|-------|------|------|
| Lead (II) acetate, trihydrate | - | - | | - | - | - | X | Χ | X | Χ | - |
| Lead acetate | 206-104-4 | - | | Х | Х | - | Х | Х | Х | Х | Х |

| Component | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|-------------------------------|--|---|--|
| Lead (II) acetate, trihydrate | | Use restricted. See item 30. (see http://eur-lex.europa.eu/LexUriServ/LexUriServ.d o?uri=CELEX:32006R1907:EN:NOT for restriction details) | SVHC candidate list - Toxic for reproduction (Article 57 c) |
| Lead acetate | | Use restricted. See item 30. (see http://eur-lex.europa.eu/LexUriServ/LexUriServ.d o?uri=CELEX:32006R1907:EN:NOT for restriction details) | SVHC candidate list - Toxic for reproduction (Article 57 c) |

National Regulations

| Component | Germany - Water Classification (VwVwS) | Germany - TA-Luft Class |
|-------------------------------|--|-------------------------|
| Lead (II) acetate, trihydrate | WGK 3 | |
| Lead acetate | WGK 3 | |

| Component | France - INRS (Tables of occupational diseases) | |
|--------------|---|--|
| Lead acetate | Tableaux des maladies professionnelles (TMP) - RG 1 | |

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

Take note of Dir 94/33/EC on the protection of young people at work

Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

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SECTION 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R61 - May cause harm to the unborn child

R33 - Danger of cumulative effects

R62 - Possible risk of impaired fertility

R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed

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

Full text of H-Statements referred to under sections 2 and 3

H360Df - May damage the unborn child. 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

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Existing and Evaluated Chemical Substances

WEL - Workplace Exposure Limit

ACGIH - American Conference of Industrial Hygiene

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

ADR - European Agreement Concerning the International Carriage of

Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime

Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic

Substances List

ENCS - Japan Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

PNEC - Predicted No Effect Concentration

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ICAO/IATA - International Civil Aviation Organization/International Air

Transport Association

MARPOL - International Convention for the Prevention of Pollution from

Ships

ATE - Acute Toxicity Estimate

VOC - Volatile Organic Compounds

Key literature references and sources for data

Suppliers safety data sheet,

Chemadvisor - LOLI,

Merck index,

RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

Chemical incident response training.

Creation Date Oct-2013 **Next Revision Date** Oct-2023

Revision Summary SDS section 1 updated and update of Format.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

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End of Safety Data Sheet