

Safety Data Sheet

according to UK REACH Regulation

Cesium chloride-lanthanum chlorid-buffer solution for flame AAS 10 g/l CsCl + 100 g/l La according t

Revision date: 14.09.2023 Product code: 26181 Page 1 of 12

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

1.1. Product identifier

Cesium chloride-lanthanum chlorid-buffer solution for flame AAS 10 g/l CsCl + 100 g/l La according t

UFI: GSGA-A2J9-700J-8RV9

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

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH Street: Stempelstraße 6 Place: D-47167 Duisburg Telephone: 0203/5194-0

E-mail: info@analytichem.de

Contact person: Abteilung Produktsicherheit Telephone: 0203/5194-107/117

E-mail: produktsicherheit@analytichem.de

Internet: www.analytichem.de

Responsible Department: Abteilung Produktsicherheit

1.4. Emergency telephone
 number:
 For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire,
 Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada:

1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls

Telefax: 0203/5194-290

accepted)

Further Information

inapplicable, this product is a mixture REACH registration number see section 3

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Hazard components for labelling

Lanthan(III)-chlorid Heptahydrat

Signal word:

Danger

Pictograms:







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Hazard statements

H317 May cause an allergic skin reaction.
H318 Causes serious eve damage.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves and eye/face protection.

P302+P352 IF ON SKIN: Wash with plenty of water.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses. if

present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

Hazardous components

CAS No	Chemical name	Chemical name		
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
10025-84-0	Lanthan(III)-chlorid Heptahydrat		20 - < 25 %	
	233-237-5			
	Met. Corr. 1, Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 2; H290 H318 H317 H411			
7647-17-8	caesium chloride			< 1 %
	231-600-2		01-2119977124-35	
	Repr. 2; H361			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity	
	Specific Conc. Limits, M-factors and ATE			
10025-84-0	233-237-5	Lanthan(III)-chlorid Heptahydrat	20 - < 25 %	
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 3200 mg/kg			
7647-17-8	231-600-2	caesium chloride	< 1 %	
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 2500 mg/kg			

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

No data available



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After inhalation

Provide fresh air.

Call a doctor if you feel unwell.

After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

In case of skin irritation, consult a physician.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Irritant

Allergic reactions

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible liquids

Hazardous combustion products

In case of fire may be liberated:

Hydrochloric gas

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Avoid contact with skin, eyes and clothes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe vapour/aerosol.

For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert



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

For emergency responders

Precautionary statements For emergency responders: Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.

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

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Read label before use. Handle and open container with care.

When using do not eat, drink, smoke, sniff. Keep container tightly closed.

Use personal protection equipment.

Provide adequate ventilation.

Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink

Further information on handling

Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary.

Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Hints on joint storage

national regulations

Further information on storage conditions

Unsuitable container/equipment material: Metal



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7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
10025-84-0	Lanthan(III)-chlorid Heptahydrat			
Worker DNEL,	long-term	inhalation	systemic	108,44 mg/m³
Worker DNEL, long-term		dermal	systemic	123 mg/kg bw/day
7647-17-8 caesium chloride				
Worker DNEL, long-term		inhalation	systemic	1,47 mg/m³
Worker DNEL, long-term		dermal	systemic	4,18 mg/kg bw/day

PNEC values

CAS No	Substance		
Environmental	Environmental compartment Value		
10025-84-0	Lanthan(III)-chlorid Heptahydrat		
Freshwater		0,018 mg/l	
Freshwater (int	ermittent releases)	0,021 mg/l	
Marine water		0,002 mg/l	
Micro-organisms in sewage treatment plants (STP)		12,5 mg/l	
7647-17-8	caesium chloride		
Freshwater		1,25 mg/l	
Freshwater (intermittent releases) 0,37 m		0,37 mg/l	
Marine water		0,13 mg/l	
Freshwater sediment 4,9 m		4,9 mg/kg	
Marine sediment 0,4		0,49 mg/kg	
Micro-organisms in sewage treatment plants (STP)		100,3 mg/l	
Soil 0,25 mg/kg		0,25 mg/kg	

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection:

Face protection shield

goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four



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control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: vertrieb@kcl.de with the following specification (test according to EN 374):

By long-term hand contact

Recommended glove articles: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11 mm Wearing time with permanent contact: > 480 min

By short-term hand contact

Recommended glove articles: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11 mm Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing. Protective clothing acid-resistant

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Thermal hazards

No data available

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid
Colour: colourless
Odour: odourless
Odour threshold: No data available

Melting point/freezing point:

No data available

Boiling point or initial boiling point and

No data available

boiling range:

Flammability: not applicable
Lower explosion limits: No data available
Upper explosion limits: No data available
Flash point: X
Auto-ignition temperature: No data available
Decomposition temperature: No data available

pH-Value: 0,5
Viscosity / kinematic: No data available

Water solubility: easily soluble



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Solubility in other solvents

not determined

No data available Dissolution rate: Partition coefficient n-octanol/water: No data available Dispersion stability: No data available Vapour pressure: No data available Vapour pressure: No data available Density: 1,15 g/cm³ No data available Relative density: No data available Bulk density: Relative vapour density: No data available No data available Particle characteristics:

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

No data available

Sustaining combustion: No data available

Self-ignition temperature

Solid: not applicable
Gas: not applicable

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:

Solvent separation test:

No data available

Solvent content:

Solid content:

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

No data available

Viscosity / dynamic:

Flow time:

No data available

No data available

Further Information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Metal

10.6. Hazardous decomposition products

In case of fire may be liberated:



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SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
10025-84-0	Lanthan(III)-chlorid He	ptahydrat				
	oral	LD50 mg/kg	3200	Rat	Study report (1976)	other: Guidelines of the Department of T
	dermal	LD50 mg/kg	> 2000	Rabbit	Study report (1976)	other: Guidelines of the Department of T
7647-17-8	caesium chloride					
	oral	LD50 mg/kg	2500	Mouse	Mutation Research, 244, 295-298 (1990)	other: no data
	dermal	LD50 mg/kg	> 2000	Rat	Study report (2012)	OECD Guideline 402

Irritation and corrosivity

Causes serious eye damage.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (Lanthan(III)-chlorid Heptahydrat)

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Information on likely routes of exposure

There are no data available on the mixture itself.

Specific effects in experiment on an animal

There are no data available on the mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.



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11.2. Information on other hazards

Endocrine disrupting properties

There are no data available on the mixture itself.

Other information

There are no data available on the mixture itself.

Further information

Irritant

Allergic reactions

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic life with long lasting effects.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
10025-84-0	Lanthan(III)-chlorid Hepta	hydrat					
	Acute algae toxicity	ErC50	16 mg/l	72 h	Desmodesmus subspicatus	Study report (1995)	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	1,18	48 h	other aquatic crustacea: Daphnia carinata	Publication (2000)	OECD Guideline 202
	Fish toxicity	NOEC mg/l	0,26	21 d	Cyprinus carpio	Study report (1995)	OECD Guideline 204
	Crustacea toxicity	NOEC	0,1 mg/l	21 d	Daphnia magna	Study report (1995)	other: OECD Guideline 202 and EEC Draft
	Acute bacteria toxicity	(EC50 mg/l)	390	3 h	activated sludge of a predominantly domestic sewag	Study report (2009)	OECD Guideline 209
7647-17-8	caesium chloride						
	Acute fish toxicity	LC50 mg/l	> 100	96 h	Danio rerio	Study report (2011)	OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	133,99	72 h	Pseudokirchneriella subcapitata	Study report (2011)	OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	37,4	48 h	Daphnia magna	Study report (2012)	OECD Guideline 202
	Fish toxicity	NOEC	43 mg/l	35 d	Danio rerio	Study report (2012)	OECD Guideline 210
	Crustacea toxicity	NOEC mg/l	15,8	21 d	Daphnia magna	Study report (2012)	OECD Guideline 211
	Acute bacteria toxicity	(EC50 mg/l)	> 1000	3 h	activated sludge, domestic	Study report (2011)	OECD Guideline 209

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
7647-17-8	caesium chloride	0,54



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BCF

CAS No	Chemical name	BCF	Species	Source
10025-84-0	Lanthan(III)-chlorid Heptahydrat	0,5 - 1,27	Cyprinus carpio	Publication (1996)

12.4. Mobility in soil

There are no data available on the mixture itself.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not empty into drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

inio transport (iii.bo)	
14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.



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14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

Information according to 2012/18/EU

Not subject to 2012/18/EU (SEVESO III)

(SEVESO III):

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile

work protection guideline' (94/33/EC).

Water hazard class (D): 2 - obviously hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,4,6,8,9,10,11,12,14,15.

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

EINECS. European inventory of Existing Commercial Chemical Sub

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service LC50: Lethal concentration, 50%

LD50: Lethal dose, 50% Met. Corr: Corrosive to metals Eye Dam: Eye damage Skin Sens: Skin sensitisation Repr: Reproductive toxicity

Aquatic Chronic: Chronic aquatic hazard

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Eye Dam. 1; H318	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H290	may be corrosive to metals.
H317	May cause an allergic skin reaction.
H318	Causes serious eve damage.

H361 Suspected of damaging fertility or the unborn child.



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H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)