

Material Safety Data Sheet

according to Regulation (EC) No. 1907/2006/EG,
Article 31



GENAXXON

b i o s c i e n c e

Product number : M3208

Product name :

Caesium chloride (99.999%) Ultra-Pure

1. Identification of the substance/preparation and of the company

Product identifier

Product Name: Caesium chloride (99.999%) Ultra-Pure

Catalogue-No.: M3208

CAS Number: 97647-17-8

EC Number: 231-600-2

REACH-No.: 01-2119977124-35-XXXX

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

Sector of Use

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites.

SU9 Manufacture of fine chemicals.

SU20 Health services.

Process category

PROC3 Use in closed batch process (synthesis or formulation).

PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities.

PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing).

PROC15 Use as laboratory reagent.

Environmental release category

ERC7 Industrial use of substances in closed systems.

ERC2 Formulation of preparations.

ERC6b Industrial use of reactive processing aids.

Application of the substance / the mixture

Chemical for various applications.

Laboratory chemical.

Details of the supplier of the safety data sheet

Manufacturer /Supplier:

Genaxxon bioscience GmbH, Söflinger Str. 70, 89077 Ulm/Germany.

Tel.: +49 (0)731 3608 123, info@genaxxon.com

Further information available from: General Management

Emergency telephone number: +49 (0)731 3608 123 (Monday till Friday: 7:30 – 18:30 o'clock)

NOTE: If this product is a kit or supplied with more than one material, please refer to the MSDS for each component for hazard information.

Product Use:

This products are for laboratory research use only and are not intended for human or animal diagnostics, therapeutics or other clinical uses.

2. Hazardous identification

Classification of the substance/preparation/mixture

Classification according to Regulation (EC) No 1272/2008

The substance is not classified according to the CLP regulations.

Label elements

Labelling according to Regulation (EC) No 1272/2008:

Hazard pictograms:



GHS08

Signal word: Warning

Hazard statements:

H361: Suspected of damaging fertility or the unborn child

Precautionary statements

P201: Obtain special instructions before use

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

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P308: IF exposed or concerned:

P310: Immediately call a POISON CENTER/doctor.

Other hazards

Result of PBT and vPvB assessment

PBT: not applicable

vPvB: not applicable

3. Composition/information on ingredients

Chemical characterisation: Substances

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CAS-No.: Description

7647-17-8 caesium chloride

Identification number(s)

EC-number: 231-600-2

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
Caesium chloride		
CAS-No.:	7647-17-8	Repr. 2; H361
EINECS:	231-600-2	<=100%

Additional information: For the wording of the listed risk phrases refer to section 16.

4. First-aid measures

Description of first aid measures

General information: No special measures required.

After inhalation:

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

In case of unconsciousness place patient stably in side position for transportation.

If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

After skin contact:

Wash off with plenty of water.

Immediately remove any clothing soiled by the product.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water.

If symptoms persist, consult a doctor.

After swallowing:

Rinse out mouth.

Do not induce vomiting; call for medical help immediately.

Seek medical treatment.

Information for doctor:

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5. Fire-fighting Measures

Extinguishing media

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons unsuitable extinguishing agents: Water with full jet.

Special hazards arising from the substance or mixture:

Non-combustible.

In case of fire, the following can be released:

Hydrogen chloride (HCl).

Ambient fire may liberate hazardous vapours.

Advice for fire-fighters:

Protective equipment:

Wear self-contained respiratory protective device.

No special measures necessary.

Additional information:

Contain escaping vapours with water.

Dispose off fire debris and contaminated fire fighting water in accordance with official regulations.

6. Accidental release Measures

Personal precautions, protective equipment and emergency procedure:

Avoid formation of dust.

Do not dust.

Ensure adequate ventilation.

Environmental precautions: No not allow to enter sewers/surface or ground water.

Methods and materials for containment and cleaning up:

Pick up mechanically.

Clean up affected area

Dispose off the material collected in accordance to regulations.

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 disposal information.

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7. Handling and storage

Handling:

Precautions for safe handling:

No special measures required if used according specifications.

Information about fire – and explosion protection: Normal measures for preventive fire protection.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: No special requirements.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Store under lock and key and with access restricted to technical experts or their assistants only.

Keep container tightly closed.

Protect from humidity and water

This product is hygroscopic.

Recommended storage temperature: +15°C to +25°C.

Storage class: 13

Specific end use(s): No further relevant information available.

8. Exposure controls / personal protection

Additional information about design of technical facilities: No further data; see item 7 of this data sheet.

Control parameters

Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

DNELs

7647-17-8 caesium chloride

Dermal	Long-term – systemic effects, worker	4.18 mg/kg (-)
Inhalative	Long-term – systemic effects, worker	1.47mg/m3 (-)

PNECs

7647-17-8 caesium chloride

Aquatic compartment – freshwater	1.25mg/L (-)
Aquatic compartment – marine water	0.13mg/L (-)
Aquatic compartment – sediment in freshwater	4.9mg/kg (-)
Aquatic compartment – sediment in marine water	0.49mg/kg (-)
Sewage treatment plant	100.3mg/L (-)
Terrestrial compartment - soil	0.25mg/kg (-)

Additional information: The lists valid during the making were used as basis.

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Avoid contact with eyes and skin.

Store protective clothing separately.

Immediately remove all soiled and contaminated clothing.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Required when dusts are generated.

Filter P1 (EN 143).



Required when dusts are generated

Protection of hands:



Protective gloves

The glove material has to be impermeable and resist ant to the product/ the substance/ the preparation.

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Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the permanent contact gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for permeation: Level: >480 min.

As protection from splashes gloves made of the following materials are suitable:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Value for the permeation: Level ≥ 480 min.

Eye/face protection:



Safety glasses (EN 166)

Body protection:

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled.

9. Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance

Form:	Solid
Colour:	White
Odour:	Odourless

pH value at 20°C: 5-9

Change in conditions

Melting point/Melting range:	642°C
Boiling point/Boiling range:	Not determined

Flash point: Not applicable

Ignition temperature: Not applicable

Decomposition temperature: Not applicable

Self-ignition: Product is not self-igniting

Danger of explosion: Product does not present an explosion hazard

Explosion limits:

Lower:	Not determined
Upper:	Not determined

Vapour pressure: Not applicable

Density (20°C): 3.97g/cm³

Bulk density at 20°C: 2000kg/m³

Solubility in / Miscibility with
(water, 25°C): >1000 g/L

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

Viscosity:

Dynamic:	Not applicable
Kinematic:	Not applicable

Solvent content:

Organic solvents:	0.0%
VOC (EC):	0.00%

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Other information:

No further relevant information available.

10. Stability and reactivity

Reactivity

Chemical stability

Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions: Reacts with oxidising agents.

Conditions to avoid: Moisture.

Incompatible materials: strong oxidants.

Hazardous decomposition products: In the event of fire: See chapter 5 of this data sheet.

Additional information: Forms explosive mixtures with air on intensive heating.

11. Toxicological information

Information on toxicological effects

Acute toxicity:

LD50/LC50 values relevant for classification

7647-17-8 caesium chloride

Oral	LD50	2600mg/kg (rat)

Primary irritant effect

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

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

After inhalation: No irritant effect.

Respiratory or skin sensitization: Based on available data, the classification criteria are not met.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenity: Based on available data, the classification criteria are not met.

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

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

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.

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

The product should be treated with usual precautions while handling chemicals.

Chronic exposure

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

12. Ecological Information

Toxicity

Aquatic toxicity:

Typ of test	Effective concentration	Method	Assessment
EC50/72 h (static)	134.3 mg/L (Algae, Growth inhibition test)		
EC50/48 h	37.4 mg/L (daphnia magna)		
LC50/96 h (static)	>100 mg/L (fish)		
NOEC/72 h	12.5 mg/L (Algae)		
NOEC/48 h	23.4 mg/L (daphnia magna) (OECD 202)		
NOEC (21 d)	15.8 mg/L (daphnia magna)		

Persistence and degradability: No further relevant information available

Behaviour in environmental systems

Bioaccumulative potential: No further relevant information available

Mobility in soil: No further relevant information available

Additional ecological information

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

Do not allow to enter water, waste water, or soil.

Results of PBT and vPvB assessment

PBT: Not applicable

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vPvB: Not applicable

Other adverse effects: No further relevant information available.

13. Disposal considerations

Waste treatment methods

Recommendation:

Chemicals must be disposed of in compliance with the respective national regulations. Must not be disposed together with household garbage. Do not allow product to reach sewage system. Contact a licensed professional waste disposal service to dispose of this material.

Observe all federal, state, and local environmental regulations.

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations. Packaging's that may not be cleansed are to be disposed of in the same manner as the product.

Recommended cleaning agents: Water, if necessary together with cleansing agents.

14. Transport information

UN-Number

ADR, ADN, IMDG, IATA

Void

UN proper shipping name

ADR,

Void

IMDG, IATA

Void

Transport hazard class(es)

ADR, IMDG, IATA

Class

Void

Packaging group

ADR, IMDG, IATA

Void

Environmental hazards:

Marine pollutant

No

Special precautions for user

Not applicable.

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

Not applicable

Transport/Additional information:

Not dangerous according to the above specifications.

UN "Model Regulation":

Void

15. Regulatory information

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

Directive 2012/18/EU.

Named dangerous substances - ANNEX I: Substance is not listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. Other information

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Genaxxon bioscience GmbH, shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

Disclaimer

This product is for R&D use only. Not for drug, household or other uses.

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)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

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ICAO: International Civil Aviation Organization

ACAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and labeling of Chemicals

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

VOC: Volatile Organic Compounds (USA, EU)

CAS: Chemical Abstracts Service (division of the American Chemical Society).

EINECS: European Inventory of Existing Commercial Chemical Substances.