# Chemical Safety Data Sheet MSDS / SDS

# **Cesium nitrate**

Revision Date:2025-02-01 Revision Number:1

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

#### **Product identifier**

Product name : Cesium nitrate

CBnumber : CB7325113

CAS : 7789-18-6

EINECS Number : 200-272-2

Synonyms : L-GLYCINE, Cesium nitrate

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.

Uses advised against : none

# **Company Identification**

Company : Chemicalbook

Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing

Telephone : 010-86108875

# SECTION 2: Hazards identification

# GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word Danger

# Precautionary statements

P405 Store locked up.

P371+P380+P375 in case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

P370+P378 In case of fire: Use  $\dots$  for extinction.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P221 Take any precaution to avoid mixing with combustibles/...

P220 Keep/Store away from clothing/.../combustible materials.

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

#### **Hazard statements**

H335 May cause respiratory irritation

H319 Causes serious eye irritation

H318 Causes serious eye damage

H315 Causes skin irritation

H314 Causes severe skin burns and eye damage

H303 May be harmfulif swallowed

H302 Harmful if swallowed

H272 May intensify fire; oxidizer

H271 May cause fire or explosion; strong oxidiser

# SECTION 3: Composition/information on ingredients

# **Substance**

Product name : Cesium nitrate

Synonyms : L-GLYCINE, Cesium nitrate

CAS : 7789-18-6
EC number : 200-272-2
MF : CsNO3
MW : 194.91

# SECTION 4: First aid measures

# Description of first aid measures

# General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

# In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

# In case of eye contact

Flush eyes with water as a precaution.

# If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

# Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

# Indication of any immediate medical attention and special treatment needed

No data available

# **SECTION 5: Firefighting measures**

# **Extinguishing media**

## Suitable extinguishing media

Dry powder Dry sand

# Special hazards arising from the substance or mixture

Nitrogen oxides (NOx), Cesium/cesium oxides

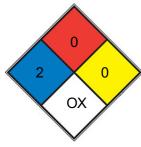
# Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

#### **Further information**

Use water spray to cool unopened containers.

#### **NFPA 704**



HEALTH 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. diethyl ether, ammonium phosphate, iodine)

Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, N2)

SPEC. HAZ.

# SECTION 6: Accidental release measures

# Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

# **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

# Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in

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container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

## Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

# Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking.

For precautions see section 2.2.

## Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Store in cool place. hygroscopic

## Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

# SECTION 8: Exposure controls/personal protection

# control parameter

#### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

# **Exposure controls**

## Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

# Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:Dermatril? (KCL 740 / Aldrich Z677272, Size M)

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested: Dermatril? (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Body Protection** 

Annearance

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full- face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

# SECTION 9: Physical and chemical properties

white Crystals with lumns

# Information on basic physicochemical properties

Oxidizing properties	The substance or mixture is classified as oxidizing with the category 1.
Explosive properties	No data available
Viscosity	No data available
Decomposition temperature	No data available
Autoignition temperature	>400 °C
Partition coefficient: n-octanol/water	No data available
Water solubility	H <sub>2</sub> O: 100 mg/mL
Relative density	3,685 g/mL at 25 °C
Vapour density	No data available
Vapour pressure	No data available
limits	
Upper/lower flammability or explosive	No data available
Flammability (solid, gas)	No data available
Evaporation rate	No data available
Flash point	Not applicable
Initial boiling point and boiling range	233 °C
Melting point/freezing point	Melting point/range: 414 °C - lit.
pH	5.0-7.5 (50g/l, H2O, 20°C)
Odour Threshold	No data available
Odour	No data available
Appearance	white Crystals with lumps

## Other safety information

No data available

# SECTION 10: Stability and reactivity

# Reactivity

No data available

# **Chemical stability**

Stable under recommended storage conditions.

# Possibility of hazardous reactions

No data available

#### Conditions to avoid

No data available

## Incompatible materials

Strong reducing agents, Alcohols, Organic materials, Aluminum

# Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NOx), Cesium/cesium oxides

Other decomposition products - No data available In the event of fire: see section 5

# **SECTION 11: Toxicological information**

# Information on toxicological effects

# Acute toxicity

LD50 Oral - Rat - female - > 300 - < 2.000 mg/kg (OECD Test Guideline 423)

LD50 Dermal - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402)

#### Skin corrosion/irritation

# Serious eye damage/eye irritation

Eyes - In vitro study Result: No eye irritation (OECD Test Guideline 438)

#### Respiratory or skin sensitisation

(OECD Test Guideline 429)

# Germ cell mutagenicity

Ames test

Escherichia coli/Salmonella typhimurium Result: negative

#### Carcinogenicity

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.

# Reproductive toxicity

Specific target organ toxicity - single exposure Specific target organ toxicity - repeated exposure Aspiration hazard

#### Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 28 d - No observed adverse effect level - 100 mg/kg

RTECS: FL0700000

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

The following applies to nitrites/nitrates in general: methaemoglobinaemia after the uptake of large quantities.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

#### Toxicity

LD50 i.p. in rats: 1.2 g/kg (Cochran)

# **SECTION 12: Ecological information**

## **Toxicity**

# Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

# **Bioaccumulative potential**

# Mobility in soil

#### Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### Other adverse effects

# SECTION 13: Disposal considerations

#### Waste treatment methods

# **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material

must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

# Contaminated packaging

Dispose of as unused product.

# **SECTION 14: Transport information**

## **UN** number

ADR/RID: 1451 IMDG: 1451

# UN proper shipping name

ADR/RID: CAESIUM NITRATE IMDG: CAESIUM NITRATE IATA: Caesium nitrate

## Transport hazard class(es)

ADR/RID: 5.1 IMDG: 5.1 IATA: 5.1

#### **Packaging group**

ADR/RID: III IMDG: III IATA: III

## **Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

## Special precautions for user

No data available

# **SECTION 15: Regulatory information**

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

#### Regulations on the Safety Management of Hazardous Chemicals

China Catalog of Hazardous chemicals 2015:Listed. website: https://www.mem.gov.cn/

## Measures for Environmental Management of New Chemical Substances

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: https://www.mee.gov.cn/

EC Inventory:Listed.

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: https://echa.europa.eu/

Korea Existing Chemicals List (KECL):Listed. website: http://ncis.nier.go.kr

New Zealand Inventory of Chemicals (NZIoC):Listed. website: https://www.epa.govt.nz/

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: https://emb.gov.ph/

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: https://www.epa.gov/

Vietnam National Chemical Inventory:Listed. website: https://chemicaldata.gov.vn/

# SECTION 16: Other information

## Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS: Chemical Abstracts Service

EC50: Effective Concentration 50%

IATA: International Air Transportation Association

IMDG: International Maritime Dangerous Goods

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

STEL: Short term exposure limit
TWA: Time Weighted Average

## References

- [1] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- [2] ChemlDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- [3] ECHA European Chemicals Agency, website: https://echa.europa.eu/
- [4] eChemPortal The Global Portal to Information on Chemical Substances by OECD, website:

http://www.echemportal.org/echemportal/index?pageID=0&request\_locale=en

- [5] ERG Emergency Response Guidebook by U.S. Department of Transportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
- [6] Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- [7] HSDB Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- [8] IARC International Agency for Research on Cancer, website: http://www.iarc.fr/
- [9] IPCS The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- 【10】 Sigma-Aldrich, website: https://www.sigmaaldrich.com/

#### Disclaimer:

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