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Reviewed on 07/21/2021

# **1** Identification

- · Product name
- · Trade name: Cesium nitrate (99.99%-Cs) PURATREM
- Item number: 93-5545
- · CAS Number:
- 7789-18-6
- *EC number:* 232-146-8
- Details of the supplier of the safety data sheet • Manufacturer/Supplier: Strem Chemicals, Inc.
- 7 Mulliken Way NEWBURYPORT, MA 01950 USA info@strem.com
- · Information department: Technical Department
- Emergency telephone number: EMERGENCY: CHEMTREC: + 1 (800) 424-9300 During normal opening times: +1 (978) 499-1600

# 2 Hazard(s) identification

· Classification of the substance or mixture

Skin Irrit. 2 H315 Causes skin irritation. Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

- · Label elements
- · GHS label elements
- *The substance is classified and labeled according to the Globally Harmonized System (GHS). Hazard pictograms*



· Signal word Warning

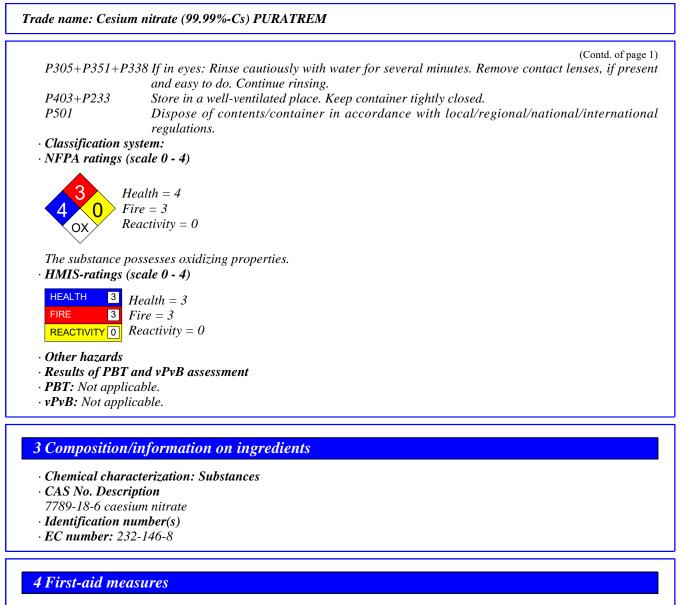
Hazard-determining components of labeling: caesium nitrate
Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P221 Take any precaution to avoid mixing with combustibles.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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- · Description of first aid measures
- · General information: Immediately remove any clothing soiled by the product.
- · After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- · After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- · After swallowing: If symptoms persist consult doctor.
- 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 fighting measures that suit the environment.
- Special hazards arising from the substance or mixture No further relevant information available.

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- · Advice for firefighters
- · Protective equipment: No special measures required.

#### 6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: No special measures required.
- *Methods and material for containment and cleaning up:* Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
- **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.

#### · Protective Action Criteria for Chemicals

· PAC-1:

· PAC-2:

• PAC-3:

### 7 Handling and storage

- · Handling:
- · Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.
- · Information about protection against explosions and fires: No special measures required.
- · 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: Keep receptacle tightly sealed.
- Store in cool, dry conditions in well sealed receptacles.
- · Specific end use(s) No further relevant information available.

# 8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

· Control parameters

- · Components with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.

7.2 mg/m3

79 mg/m3

470 mg/m3

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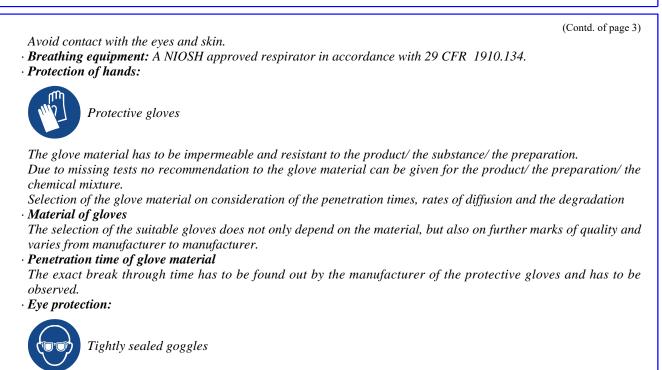
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# Trade name: Cesium nitrate (99.99%-Cs) PURATREM



| Information on basic physical and | chemical properties                           |  |
|-----------------------------------|-----------------------------------------------|--|
| General Information               |                                               |  |
| Appearance:                       |                                               |  |
| Form:                             | Crystalline                                   |  |
| Color:                            | White                                         |  |
| Odor:                             | Odorless                                      |  |
| Odor threshold:                   | Not determined.                               |  |
| pH-value:                         | Not applicable.                               |  |
| Change in condition               |                                               |  |
| Melting point/Melting range:      | 414 °C (777 °F)                               |  |
| Boiling point/Boiling range:      | Undetermined.                                 |  |
| Flash point:                      | Not applicable.                               |  |
| Flammability (solid, gaseous):    | Not determined.                               |  |
| Ignition temperature:             |                                               |  |
| Decomposition temperature:        | Not determined.                               |  |
| Auto igniting:                    | Not determined.                               |  |
| Danger of explosion:              | Product does not present an explosion hazard. |  |
| Explosion limits:                 |                                               |  |
| Lower:                            | Not determined.                               |  |
| Upper:                            | Not determined.                               |  |
| Vapor pressure:                   | Not applicable.                               |  |

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|                                     |                                            | (Contd. of page |
|-------------------------------------|--------------------------------------------|-----------------|
| • Density at 20 •C (68 •F):         | 3.685 g/cm <sup>3</sup> (30.75133 lbs/gal) |                 |
| • Bulk density at 20 •C (68 •F):    | $1.500 \text{ kg/m}^3$                     |                 |
| · Relative density                  | Not determined.                            |                 |
| · Vapor density                     | Not applicable.                            |                 |
| · Evaporation rate                  | Not applicable.                            |                 |
| · Solubility in / Miscibility with  |                                            |                 |
| Water at 20 •C (68 •F):             | 150 g/l                                    |                 |
| Partition coefficient (n-octanol/wa | <b>ter):</b> Not determined.               |                 |
| · Viscosity:                        |                                            |                 |
| Dynamic:                            | Not applicable.                            |                 |
| Kinematic:                          | Not applicable.                            |                 |
| Solvent content:                    |                                            |                 |
| Organic solvents:                   | 0.0 %                                      |                 |
| VOC content:                        | 0.0 g/l / 0.00 lb/gl                       |                 |
| Solids content:                     | 100.0 %                                    |                 |
| • Other information                 | No further relevant information available. |                 |

### **10 Stability and reactivity**

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

# **11 Toxicological information**

- · Information on toxicological effects
- · Acute toxicity:

#### · LD/LC50 values that are relevant for classification:

7789-18-6 caesium nitrate

Oral LD50 2390 mg/kg (rat)

```
Dermal LD50 (ÿ)
```

## · Primary irritant effect:

- on the skin: Irritant to skin and mucous membranes.
- on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- $\cdot$  Additional toxicological information:

· Carcinogenic categories

#### · IARC (International Agency for Research on Cancer)

Substance is not listed.

#### · NTP (National Toxicology Program)

Substance is not listed.

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· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

## **12 Ecological information**

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- *Persistence and degradability* No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- *Mobility in soil* No further relevant information available.
- · Additional ecological information:
- · General notes: Not known to be hazardous to water.
- · Results of PBT and vPvB assessment
- · PBT: Not applicable.
- **vPvB:** Not applicable.
- · Other adverse effects No further relevant information available.

#### **13 Disposal considerations**

· Waste treatment methods

- *Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

| · UN-Number               |                          |  |
|---------------------------|--------------------------|--|
| · DOT, IMDG, IATA         | UN1451                   |  |
| · UN proper shipping name |                          |  |
| $\cdot DOT$               | Cesium nitrate           |  |
| · IMDG, IATA              | CAESIUM NITRATE          |  |
|                           |                          |  |
| · Class                   | 5.1 Oxidizing substances |  |
| · Label                   | 5.1                      |  |



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# Trade name: Cesium nitrate (99.99%-Cs) PURATREM

|                                         | (Contd. of pag                                   |
|-----------------------------------------|--------------------------------------------------|
| IMDG, IATA                              |                                                  |
|                                         |                                                  |
|                                         |                                                  |
|                                         |                                                  |
|                                         |                                                  |
| Class                                   | 5.1 Oxidizing substances                         |
| Label                                   | 5.1                                              |
| Packing group                           |                                                  |
| DOT, IMDG, IATA                         | III                                              |
| Environmental hazards:                  |                                                  |
| Marine pollutant:                       | No                                               |
| Special precautions for user            | Not applicable.                                  |
| Danger code (Kemler):                   | 50                                               |
| Stowage Category                        | A                                                |
| Transport in bulk according to Annex    | II of                                            |
| MARPOL73/78 and the IBC Code            | Not applicable.                                  |
| Transport/Additional information:       |                                                  |
| DOT                                     |                                                  |
| Quantity limitations                    | On passenger aircraft/rail: 25 kg                |
| ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | On cargo aircraft only: 100 kg                   |
| IMDG                                    |                                                  |
| Limited quantities (LQ)                 | 5 kg                                             |
| Excepted quantities $(\widetilde{EQ})$  | Code: El                                         |
| · · · · · ·                             | Maximum net quantity per inner packaging: 30 g   |
|                                         | Maximum net quantity per outer packaging: 1000 g |
| UN "Model Regulation":                  | UN 1451 CESIUM NITRATE, 5.1, III                 |

## **15 Regulatory information**

 $\cdot$  Safety, health and environmental regulations/legislation specific for the substance or mixture  $\cdot$  Sara

| • • | Section | 355 | (extremely | hazardous | substances): |
|-----|---------|-----|------------|-----------|--------------|
|-----|---------|-----|------------|-----------|--------------|

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

Substance is listed.

• TSCA (Toxic Substances Control Act):

Substance is listed.

· Proposition 65

· Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

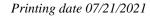
Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

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· Chemicals known to cause developmental toxicity:

Substance is not listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

Substance is not listed.

· TLV (Threshold Limit Value established by ACGIH)

Substance is not listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

#### · GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms



· Signal word Warning

• Hazard-determining components of labeling: caesium nitrate

· Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

#### · Precautionary statements

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

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

- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- *P403+P233* Store in a well-ventilated place. Keep container tightly closed.
- *P501* Dispose of contents/container in accordance with local/regional/national/international regulations.

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

# **16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- · Department issuing SDS: Technical Department.
- · Contact: Technical Director
- · Date of preparation / last revision 07/21/2021 / -
- 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

- DOT: US Department of Transportation
- IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists EINECS: European Inventory of Existing Commercial Chemical Substances

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|                                                                             | (Contd. of page 8)  |
|-----------------------------------------------------------------------------|---------------------|
| CAS: Chemical Abstracts Service (division of the American Chemical Society) | (1 ontai of page o) |
| NFPA: National Fire Protection Association (USA)                            |                     |
| HMIS: Hazardous Materials Identification System (USA)                       |                     |
| VOC: Volatile Organic Compounds (USA, EU)                                   |                     |
| LC50: Lethal concentration, 50 percent                                      |                     |
| LD50: Lethal dose, 50 percent                                               |                     |
| PBT: Persistent, Bioaccumulative and Toxic                                  |                     |
| vPvB: very Persistent and very Bioaccumulative                              |                     |
| NIOSH: National Institute for Occupational Safety                           |                     |
| OSHA: Occupational Safety & Health                                          |                     |
| TLV: Threshold Limit Value                                                  |                     |
| PEL: Permissible Exposure Limit                                             |                     |
| REL: Recommended Exposure Limit                                             |                     |
| Skin Irrit. 2: Skin corrosion/irritation – Category 2                       |                     |
| Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A              |                     |
| STOT SE 3: Specific target organ toxicity (single exposure) – Category 3    |                     |
|                                                                             | US -                |