SAFETY DATA SHEET

Version: v1 Revision Date: 2024-06-25 Print Date: 2024-06-26

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

1.1 Product identifiers

| Product name | : Cerium(III) nitrate hexahydrate |
|----------------|-----------------------------------|
| Product Number | : C431280 |
| Brand | : aladdin |
| CAS-No. | : 10294-41-4 |

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

| Identified uses : Laboratory chemicals, Manufacture of substance | Identified uses | : Laboratory chemicals,Manufacture of substances. |
|--|-----------------|---|
|--|-----------------|---|

1.3 Company

| Company | : ALADDIN SCIENTIFIC CORPORATION |
|----------------------|----------------------------------|
| Address | : 14078 Meridian Parkway, |
| Riverside, CA. 92518 | |
| Telephone | : +1 (833) 552-7181 |
| Fax | : no data available |
| | |

1.4 Emergency telephone number

| CHEMTREC®, Inside the USA | : 1-800-424-9300 |
|----------------------------|------------------|
| CHEMTREC®, Outside the USA | : |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Oxidizing solids Category 2

Skin Corrosion/Irritation Category 2

Serious Eye Damage/Eye Irritation Category 1

Carcinogenicity Category 1B

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word

Danger

| Hazard statement(s) | |
|----------------------------|---|
| H272 | May intensify fire; oxidizer |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H350 | May cause cancer |
| Precautionary statement(s) | |
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P220 | Keep away from clothing and other combustible materials. |
| P221 | Take any precaution to avoid mixing with combustibles/ |
| P235 | Keep cool. |
| P264 | Wash hands [and] thoroughly after handling. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P302+P350 | IF ON SKIN: Gently wash with plenty of soap and 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. |
| P308+P311 | IF exposed or concerned: Call a POISON CENTER/doctor/ |
| P332+P313 | IF SKIN irritation occurs: Get medical advice/attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| P403 | Store in a well-ventilated place. |

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Very toxic to aquatic life with long lasting effects

SECTION 3: Composition/information on ingredients

3.1 Substances

| Synonyms | : Nitric acid cerium salt, Cerium trinitrate, Cerous nitrate hexahydrate |
|------------------|--|
| Formula | : CeN309·6H2O |
| Molecular weight | : 434.22 |
| CAS No. | : 10294-41-4 |
| EC-NO. | : 233-297-2 |
| | |

| Component | Classification | Concentration |
|------------------------------------|-------------------|---------------|
| Cerium(III) nitrate hexahydrate | | |
| | no data available | 99.999% trace |

metals basis

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SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. In case of skin contact

- Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
- In case of eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.

If swallowed

Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

4.2 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

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 Water spray. Carbon dioxide (CO2). Dry chemical. Chemical foam. Unsuitable extinguishing media no data available

5.2 Special hazards arising from the substance or mixture no data available

5.3 Advice for firefighters

wear self-contained breathing and full protective gear.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required.

6.2 Environmental precautions



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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.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed Up containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation.

7.2 Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

7.3 Specific end use(s)

no data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 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

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(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.

Body Protection

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

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Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface 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

If safety requires, prevent further leakage or spillage. Do not let the product enter the sewer.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| a) Appearance | no data available |
|--|-------------------|
| b) Odour | no data available |
| c) Odour Threshold | no data available |
| d) pH | no data available |
| e) Melting point/freezing point | no data available |
| f) Initial boiling point and boiling range | no data available |
| g) Flash point | no data available |
| h) Evaporation rate | no data available |
| i) Flammability (solid, gas) | no data available |
| j) Upper/lower flammability or | |
| explosive limits | no data available |
| k) Vapour pressure | no data available |
| I) Vapour density | no data available |
| m) Relative density | no data available |
| n) Water solubility | no data available |
| o) Partition coefficient: n-octanol/water | no data available |
| p) Auto-ignition temperature | no data available |
| q) Decomposition temperature | no data available |
| r) Viscosity | no data available |
| s) Explosive properties N | no data available |
| t) Oxidizing properties N | no data available |
| | |

9.2 Other safety information

no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable under recommended storage conditions.

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10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

Excess heat. Incompatible products. Avoid dust formation. Combustible material.

10.5 Incompatible materials

Strong oxidizing agents, Strong acids, Strong reducing agents, Cyanides, Combustiblematerial

10.6 Hazardous decomposition products

Nitrogen oxides (NOx), Heavy metal oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity no data available Skin corrosion/irritation no data available Serious eye damage/eye irritation no data available Respiratory or skin sensitisation no data available Germ cell mutagenicity no data available Carcinogenicity no data available Reproductive toxicity no data available Specific target organ toxicity - single exposure no data available Specific target organ toxicity - repeated exposure no data available Aspiration hazard no data available Additional Information no data available

SECTION 12: Ecological information

12.1 Toxicity

no data available

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12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment no data available

12.6 Other adverse effects

no data available

SECTION 13:

13.1 Disposal considerations

Product

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

| DOT (US) | | | |
|--|---|--|--|
| UN number: UN1477 | Packing group: no data available | Class: no data available | |
| Proper shipping name: no data available | Reportable Quantity(RQ): no data available | Poison Inhalation Hazard: no data available | |
| Environmental Hazards: no data available | | | |
| IMDG | | | |
| UN number: UN1477 | Packing group: no data available | EMS-No: no data available | |
| Proper shipping name: no data available | | | |
| ΙΑΤΑ | | | |
| UN number: UN1477 | Packing group: no data available | Class: no data available | |
| Proper shipping name: no data ava | ilable | | |

SECTION 15: Regulatory information

Please note that waste disposal should also meet local regulations. If applicable, the chemical meets the requirements of the Regulations on the Safety Management of Hazardous Chemicals (adopted by the State Council



on December 4, 2013).

SECTION 16: Other information

| Prepared By | Regulatory Affairs ALADDIN SCIENTIFIC CORPORATION Email: QualityAssurance@aladdinsci.com |
|------------------|--|
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