

MATERIAL SAFETY DATA SHEET (SDS/MSDS)

CERIC SULPHATE TETRAHYDRATE 99% AR

CAS-No.: 10294-42-5

Product Code: 0719A

Molecular Formula: $\text{CeO}_8\text{S}_2 \cdot 4\text{H}_2\text{O}$

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

1.1. Product identifier

Product form	:	Substance
Trade name	:	Ceric Sulphate Tetrahydrate 99% AR
EC-No.	:	236-644-6
CAS No	:	10294-42-5
Synonyms	:	Cerium(IV) sulfate tetrahydrate

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

1.2.1. Relevant identified uses

Identified uses	:	Laboratory chemicals, Manufacture of substances
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1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Company	:	Chemnovo Synthesis Pvt Ltd. N-226 Near Kumbhavali Naka Tarapur MIDC, Boisar-401 506 Palghar, Maharashtra Telephone : +91 7400096089 Email: export@chemnovo.in
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1.4. Emergency telephone number

Emergency number	:	+ 91 7400096089 (9:00am - 6:00 pm)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 1B	H314
Short-term (acute) aquatic hazard (Category 1)	H400
Long-term (chronic) aquatic hazard (Category 1)	H410

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

GHS09

Signal word (CLP)	:	Danger
Hazard statements (CLP)	:	H314 - Causes severe skin burns and eye damage H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	:	P260 Do not breathe dusts or mists. P273 - Avoid release to the environment P280 - Wear protective gloves, protective clothing, eye protection, face protection P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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

2.3. Other hazards

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.

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	:	Ceric Sulphate Tetrahydrate 99% AR
CAS No	:	10294-42-5
EC-No.	:	236-644-6

Full text of R- and H-statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	:	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
First-aid measures after eye contact	:	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

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First-aid measures after swallowed : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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 : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Sulfur oxides, cerium oxides.

5.3. Advice for firefighter

Protection during firefighting : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

7.3. 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**8.1. Control parameters**

No additional information available

8.2. Exposure controls

Hand protection	:	Protective gloves
Eye protection	:	Chemical goggles or face shield
Skin and body protection	:	Wear suitable protective clothing
Respiratory protection	:	[In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	:	crystalline
Colour	:	yellow-orange
Odour	:	odorless
Odour threshold	:	No data available
pH	:	ca.0,5 at 207 g/l at 20 °C
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point/Freezing point	:	200 °C at 1.013 hPa - OECD Test Guideline 102 -Decomposes without melting., Elimination of water of crystallization
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	> 400 °C at 1.013 hPa - Relative self-ignition temperature for solids
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	< 0,01 hPa at 50 °C - OECD Test Guideline 104/< 0,01 hPa at 20 °C - OECD Test Guideline 104
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Water: ca.207 g/l at 20 °C - OECD Test Guideline 105- (anhydrous)
Log Pow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

No additional information available

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Acute toxicity	:	Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach./Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract
Skin corrosion/irritation	:	Skin - in vitro test . Result: Causes burns. Remarks: (ECHA)
Serious eye damage/irritation	:	Eyes - In vitro study. Result: Corrosive. Remarks: Causes serious eye damage. Risk of blindness!
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Test Type: Ames test. Test system: Escherichia coli/Salmonella typhimurium. Metabolic activation: with and without metabolic activation. Method: OECD Test Guideline 471. Result: negative
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified

SECTION 12: Ecological information**12.1. Toxicity**

No additional information available

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. 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.

12.6. Other adverse effects

Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Product/Packaging disposal recommendations : Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. 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.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / AND

14.1. UN number

UN-No. (ADR) : 3260
UN-No. (IMDG) : 3260
UN-No.(IATA) : 3260
UN-No.(AND) : 3260
UN-No. (RID) : 3260

14.2. UN proper shipping name

Proper Shipping Name (ADR) : CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
Proper Shipping Name (IMDG) : CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
Proper Shipping Name (IATA) : CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
Proper Shipping Name (ADN) : CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
Proper Shipping Name (RID) : CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
Transport document description (ADR): UN 3260 .(CERIUM (IV) SULFATE TETRAHYDRATE), 8, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG) UN 3260 .(CERIUM (IV) SULFATE TETRAHYDRATE), 8, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA) : UN 3260 .(CERIUM (IV) SULFATE TETRAHYDRATE), 8, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN) : UN 3260 .(CERIUM (IV) SULFATE TETRAHYDRATE), 8, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID) : UN 3260 .(CERIUM (IV) SULFATE TETRAHYDRATE), 8, II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 8

Danger labels (ADR) : 8



IMDG

Transport hazard class(es) (IMDG) : 8

Danger labels (IMDG) : 8



IATA

Transport hazard class(es) (IATA) : 8

Hazard labels (IATA) : 8



AND

Transport hazard class(es) (ADN) : 8

Danger labels (AND) : 8



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RID

Transport hazard class(es) (RID) : 8

Danger labels (RID) : 8

:



14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

No Classified

- Transport by sea

No Classified

- Air transport

No Classified

- Inland waterway transport

No Classified

- Rail transport

No Classified

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

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No REACH Annex XVII restrictions

Ceric Sulphate Tetrahydrate 99% AR is not on the REACH Candidate List

Ceric Sulphate Tetrahydrate 99% AR is not on the REACH Annex XIV List

15.1.2. National regulations

Seveso III: Directive 2012/18/EU of the : ENVIRONMENTAL HAZARDS
European Parliament and of the Council on the
control of major-accident hazards involving
dangerous substances.

15.2. Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of R-, H- and EUH-statements:

H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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. Chemnovo Synthesis Pvt Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.chemnovo.in for additional terms and conditions of sale.

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