



OCI Company Ltd.

Material Safety Data Sheet

MSDS

0.1N-Cerium(IV) Tetraammonium Sulfate

Section 1 - Chemical Product and Company Identification

SUBSTANCE: 0.1N-Cerium(IV) Tetraammonium Sulfate

Recommended use : Laboratory chemicals, Testing, Research and Industrial use

Restriction of use : Not for use other than for non-drinking, testing, research and industrial purposes

Company Identification

Company : OCI Company Ltd.

Address : 94, Sogong-ro, Jung-gu, Seoul, KOREA

Tel No. : 82 - 2 - 727 - 9494

Section 2 - Hazards Identification

- 1) Hazard Classification
- Acute toxicity (Inhale): 4
 - Skin corrosion/irritation : 2
 - Serious eye damage / Eye irritation : 1
 - Carcinogenicity :1A
 - Specific target organ toxicity following single exposure : 2
 - Specific target organ toxicity following repeated exposure : 2

2) Warning signal

Symbol



Signal word

Danger

Hazard statement

- H332 Harmful if inhaled
- H315 Causes skin irritation
- H318 Causes serious eye damage
- H350 May cause cancer
- H371 May cause damage to organs
- H373 May cause damage to organs through prolonged or repeated exposure

Prevention precautionary statements

- P261 In contact with water releases flammable gas
- P271 Use only outdoors or in a well-ventilated area.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P264 Keep only in original container
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P202 Do not handle until all safety precautions have been read and understood.

P270 Do not eat, drink or smoke when using this product.
.P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P321 Specific treatment
P363 Wash contaminated clothing before reuse
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/shower.
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+P313 IF exposed or concerned: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P405 Store locked up.
P501 Dispose of contents/container to the related laws.

3) NFPA

Health Rating	3
Flammability Rating	0
Reactivity Rating	2

Section 3 - Composition, Information on Ingredients

COMPONENT: Cerium(IV) Tetraammonium Sulfate
CAS No.: 10378-47-9
PERCENTAGE: 6~7

COMPONENT: Sulfuric acid
CAS No.: 7664-93-9
PERCENTAGE: 4-5

COMPONENT: Water
CAS No.: 7732-18-5
PERCENTAGE: 88-90

Section 4 - First Aid Measures

Inhalation: Move to fresh air. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Call a physician or poison control center immediately.

Ingestion: Call a physician or poison control center immediately. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs.

Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Eye Contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately. In case of irritation from airborne exposure, move to fresh air.

Get medical attention immediately.

Section 5 - Fire Fighting Measures

Fire: Concentrated material is a strong dehydrating agent. Reacts with organic materials and may cause ignition of finely divided materials on contact.

Explosion: Contact with most metals causes formation of flammable and explosive hydrogen gas.

Fire Extinguishing Media: Carbon dioxide (CO₂). Dry chemical powder. Foam. Do not use water as an extinguisher.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Structural firefighter's protective clothing is ineffective for fires involving this material. Stay away from sealed containers.

Section 6 - Accidental Release Measures

Personal protection : Wear appropriate protective equipment and clothing during clean-up. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

Environmental protection : Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Methods for containment : Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.

Section 7 - Handling and Storage

Storage: Do not store in metal containers. Keep tightly closed in a dry, cool and well-ventilated place.

Handling: Do not get in eyes, on skin, on clothing. Do not taste or swallow. Wash thoroughly after handling. Do not eat, drink or smoke when using the product. Use caution when combining with water; DO NOT add water to acid, ALWAYS add acid to water while stirring to prevent release of heat, steam and fumes.

Section 8 - Exposure Controls, Personal Protection

Eye / face protection : Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection : Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves.

Respiratory protection : If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Chemical respirator with acid gas cartridge.

General hygiene considerations : Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

General : Wear chemical protective equipment that is specifically recommended by the manufacturer. Launder contaminated clothing before reuse.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: Clear colorless to yellow
Odor: Odorless
pH: <1
Vapor Pressure: 1mmHg @20°C
Vapor Density: No data available
Evaporation Rate: No data available
Viscosity: No data available
Boiling Point: 100°C
Freezing/Melting Point: 0°C
Decomposition Temperature: No data available
Solubility: Soluble
Specific Gravity/Density: 1.07

Section 10 - Stability and Reactivity

Chemical Stability: Material is stable under normal conditions. Material reacts with water.

Conditions to Avoid: Moisture. Heat.

Incompatibilities with Other Materials: Water. Cyanides. Strong oxidizing agents. Strong reducing agents. Metals. Halogens. Organic compounds. Potassium.

Hazardous Decomposition Products: Sulphur oxides. Irritating and/or toxic fumes and gases may be emitted upon the products decomposition.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

Sensitization : Not a skin sensitizer.

Acute effects : Strongly corrosive. May cause deep tissue damage. Vapors are corrosive. After some hours, injured persons may develop serious shortness of breath and lung edema.

Local effects : Causes severe burns.

Chronic effects : Corrosive. Prolonged contact causes serious tissue damage.

Carcinogenicity : Contains a substance which may cause cancer by inhalation. Suspected to increase risk of cancer.

Section 12 - Ecological Information

Ecotoxicity : Harmful to aquatic life. The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

Persistence and degradability : Expected to be readily biodegradable.

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

Section 13 - Disposal Considerations

Dispose of this material and its container to hazardous or special waste collection point.

Incinerate the material under controlled conditions in an approved incinerator. All wastes must be handled in accordance with local, state and federal regulations.

Since emptied containers retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

Section 14 - Transport Information

Shipping Name: No data available

Hazard Class: No data available

UN Number: No data available

Packing Group: No data available

Section 15 - Regulatory Information

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200 and Korea Chemicals Management Association.

Section 16 - Other Information

Sources : KOSHA, National Emergency Management Agency

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