



## MATERIAL SAFETY DATA SHEET

CONTACT : **LEONID CHEMICALS**  
62/A-2 2nd Stage, Industrial Suburb  
Ashokpuram School Road, Yeshwanthpur  
Bangalore-560 022, INDIA  
Ph: +91-80-2337 8354, Fax: +91-80-2357

Ammonium cerium (IV) sulfate dihydrate - 90003

### SECTION 1- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name:

Ammonium cerium (IV) sulfate dihydrate

Catalog Numbers:

A/3760, A/3760/48, A/3771, A/3771/48

Synonyms:

Ceric ammonium sulfate dihydrate.

Company Information:

LEONID CHEMICALS

62/A-2 1st Stage, Yeshwanthpur Industrial Suburb

Ashokpuram School Road

Bangalore-560 022, Karnataka, INDIA

Ph: +91-80-2337 8354, Fax: +91-80-2357 4827

### SECTION 2- COMPOSITION, INFORMATION ON INGREDIENTS

CAS #	:	10378-47-9
Chemical Name	:	Ceric ammonium sulfate dihydrate
%	:	94%
EINECS#	:	unlisted
Hazard Symbols	:	None Listed.
Risk Phrases	:	None Listed.

### SECTION 3- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

The toxicological properties of this material have not been fully investigated.

Potential Health Effects

Eye:

Dust may cause mechanical irritation.

Skin:

May cause skin irritation. The toxicological properties of this material have not been fully investigated.



**Ingestion:**

May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated.

**Inhalation:**

May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.

**Chronic:**

No information found.

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**SECTION 4 - FIRST AID MEASURES**

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**Eyes:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

**Skin:**

In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

**Ingestion:**

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:**

Treat symptomatically and supportively.

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**SECTION 5- FIRE FIGHTING MEASURES**

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**General Information:**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:**

Use water spray, dry chemical, carbon dioxide, or appropriate foam.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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### General Information:

Use proper personal protective equipment as indicated in Section 8.

### Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

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## SECTION 7 - HANDLING AND STORAGE

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### Handling:

Wash thoroughly after handling. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use with adequate ventilation. Wash clothing before reuse. Avoid breathing dust.

### Storage:

Store in a cool, dry, well-ventilated area away from incompatible substances.

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## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

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### Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Personal Protective Equipment

#### Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard En166.

#### Skin:

Wear appropriate protective gloves to prevent skin exposure.

#### Clothing:

Wear appropriate protective clothing to prevent skin exposure.

#### Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

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## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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Physical State	:	Crystalline powder
Color	:	Orange
Odor	:	Information not available.
PH	:	Negligible.
Vapor Pressure	:	Information not available.
Viscosity	:	Information not available.
Boiling Point	:	Not applicable.
Freezing/Melting Point	:	130 deg C
Autoignition Temperature	:	1202 deg F ( 650.00 deg C)
Flash Point	:	Not applicable.
Explosion Limits, lower	:	Information not available.
Explosion Limits, upper	:	Information not available.
Decomposition Temperature	:	Information not available.
Solubility in water	:	Slightly soluble.
Specific Gravity/Density	:	Information not available.
Molecular Formula	:	CeH <sub>16</sub> N <sub>4</sub> O <sub>16</sub> S <sub>4</sub> .2H <sub>2</sub> O
Molecular Weight	:	632.54

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## SECTION 10 - STABILITY AND REACTIVITY

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### Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

### Conditions to Avoid:

Dust generation, excess heat.

### Incompatibilities with Other Materials:

Strong oxidizing agents, strong bases.

### Hazardous Decomposition Products:

Nitrogen oxides, oxides of sulfur.

### Hazardous Polymerization:

Will not occur.

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## SECTION 11 - TOXICOLOGICAL INFORMATION

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RTECS#:

CAS# 7637-03-8 unlisted.

CAS# 10378-47-9 unlisted.

LD50/LC50:

Information not available.

Carcinogenicity:

Sulfuric acid, ammonium cerium(4+) salt (4:4:1) -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Ceric ammonium sulfate dihydrate -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

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## SECTION 12 - ECOLOGICAL INFORMATION

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Information not available.

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## SECTION 13 - DISPOSAL CONSIDERATIONS

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Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

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## SECTION 14 - TRANSPORT INFORMATION

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IATA

Not regulated.

IMO

Not regulated.

RID/ADR

Not regulated.

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## SECTION 15 - REGULATORY INFORMATION

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European/International Regulations  
European Labeling in Accordance with EC Directives

Hazard Symbols:  
No information available.

Risk Phrases:  
No information available.

Safety Phrases:  
S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)  
CAS# 7637-03-8: No information available.  
CAS# 10378-47-9: No information available.

United Kingdom Occupational Exposure Limits  
No information available.

United Kingdom Maximum Exposure Limits  
No information available.

Canada  
CAS# 7637-03-8 is listed on Canada's DSL List.  
CAS# 7637-03-8 is not listed on Canada's Ingredient Disclosure List.  
CAS# 10378-47-9 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits  
No information available.

US FEDERAL  
TSCA  
CAS# 7637-03-8 is listed on the TSCA inventory. CAS# 10378-47-9 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).

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## SECTION 16 - ADDITIONAL INFORMATION

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The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.