

MATERIAL SAFETY DATA SHEET (SDS/MSDS)

**AMMONIUM CERIC NITRATE 98% EXTRA
PURE**

CAS-No.: 16774-21-3

Product Code: 00193

Molecular Formula: $(\text{NH}_4)_2\text{Ce}(\text{NO}_3)_6$

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

1.1. Product identifier

Product form : Substance
Trade name : Ammonium Ceric Nitrate 98% Extra Pure
EC-No. : 240-827-6
CAS-No. : 16774-21-3
Synonyms : Ceric ammonium nitrate

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

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

1.4. Emergency telephone number

Emergency number : + 91 7400096089 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Oxidising Solids,	H272
Category 2	
Acute toxicity (oral),	H302
Category 4	
Skin corrosion/irritation,	H315
Category 2	
Serious eye damage/eye irritation, Category 2	H319
Specific target organ toxicity – Single exposure, Category 3,	H335
Respiratory tract irritation	

Full text of hazard classes and H-statements : see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

O; Xn; Xi; R22-36-37-38

Full text of R-phrases: 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) :



GHS03



GHS07

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H272 - May intensify fire; oxidiser.

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H319 - Causes serious eye irritation.

H335 - May cause respiratory irritation.

Precautionary statements (CLP) :

P220 - Keep/Store away from clothing, combustible materials.

P261 - Avoid breathing vapours, dust, fume, gas.

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

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : Ammonium Ceric Nitrate 98% Extra Pure
CAS-No. : 16774-21-3
EC-No. : 240-827-6

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 :	Assure fresh air breathing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact :	Wash with plenty of soap and water. Get medical advice/attention.
First-aid measures after eye contact :	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion :	Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after skin contact :	Causes skin irritation.
Symptoms/injuries after eye contact :	Causes eye irritation.
Symptoms/injuries after ingestion :	Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media :	Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media :	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard :	May intensify fire; oxidiser
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5.3. Advice for firefighter

Protection during firefighting :	Do not enter fire area without proper protective equipment, including respiratory protection.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures :	Evacuate unnecessary personnel.
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6.1.2. For emergency responders

Protective equipment :	Use personal protective equipment as required.
Emergency procedures :	Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up :	Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. On land, sweep or shovel into suitable containers.
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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 contact with skin and eyes. Do not breathe vapours. Avoid dust formation.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Store in a well-ventilated place. Keep container tightly closed.
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7.3. Specific end use(s)

No additional information available

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 safety glasses
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	:	Solid
Colour	:	Reddish orange.
Odour	:	slight characteristic odor.
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Solubility	:	Water: 141 g/100ml @ 250C
Log Pow	:	No data available
Viscosity, kinematic	:	No data available

Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	The substance or mixture is classified as oxidizing with the subcategory 2.
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 normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Direct sunlight. Air contact. Moisture.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Oral: Harmful if swallowed.
Skin corrosion/irritation	:	Causes skin irritation.
Serious eye damage/irritation	:	Causes serious eye irritation.
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	May cause respiratory irritation.
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified
Potential adverse human health effects and symptoms	:	Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

No additional information available

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

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations	:	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
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SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR)	:	1477
UN-No. (IMDG)	:	1477
UN-No. (IATA)	:	1477
UN-No. (ADN)	:	1477
UN-No. (RID)	:	1477

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	NITRATES, INORGANIC, N.O.S.
Proper Shipping Name (IMDG)	:	NITRATES, INORGANIC, N.O.S.
Proper Shipping Name (IATA)	:	NITRATES, INORGANIC, N.O.S.
Proper Shipping Name (ADN)	:	NITRATES, INORGANIC, N.O.S.
Proper Shipping Name (RID)	:	NITRATES, INORGANIC, N.O.S.
Transport document description (ADR)	:	UN 1477 NITRATES, INORGANIC, N.O.S., 5.1, II, (E)
Transport document description (IMDG)	:	UN 1477 NITRATES, INORGANIC, N.O.S., 5.1, II
Transport document description (IATA)	:	UN 1477 NITRATES, INORGANIC, N.O.S., 5.1, II
Transport document description (ADN)	:	UN 1477 NITRATES, INORGANIC, N.O.S., 5.1, II
Transport document description (RID)	:	UN 1477 NITRATES, INORGANIC, N.O.S., 5.1, II

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 5.1

Danger labels (ADR) : 5.1

:



IMDG

Transport hazard class(es) (IMDG) : 5.1

Danger labels (IMDG) : 5.1

:



IATA

Transport hazard class(es) (IATA) : 5.1

Hazard labels (IATA) : 5.1

:



AND

Transport hazard class(es) (ADN) : 5.1

Danger labels (ADN) : 5.1

:



RID

Transport hazard class(es) (RID) : 5.1
Danger labels (RID) : 5.1



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 : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : O2
Special provision (ADR) : 511
Limited quantities (ADR) : 1kg
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P002, IBC08
Special packing provisions (ADR) : B4
Mixed packing provisions (ADR) : Mp10
Portable tank and bulk container instructions (ADR) : T3

Portable tank and bulk container special

provisions (ADR) : Tp33
Tank code (ADR) : SGAN
Tank special provisions (ADR) : Tu3
Vehicle for tank carriage : AT
Transport category (ADR) : 2
Special provisions for carriage - Packages (ADR) : V11
Special provisions for carriage - Loading, unloading and handling (ADR) : Cv24
Hazard identification number : 50

(Kemler No.)

Orange plates

50
1477

Tunnel restriction code (ADR)	:	E
EAC code	:	1Y
- Transport by sea		
Limited quantities (IMDG)	:	1 kg
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P002
IBC packing instructions (IMDG)	:	IBC08
IBC special provisions (IMDG)	:	B21, B4
Tank instructions (IMDG)	:	T3
Tank special provisions (IMDG)	:	Tp33
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-Q
Stowage category (IMDG)	:	A
Segregation (IMDG)	:	SG38, Sg49
Properties and observations (IMDG)	:	Solids. Solid mixtures with combustible material are readily ignited and may burn fiercely. Harmful if swallowed.
MFAG-No	:	140
- Air transport		
PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y544
PCA limited quantity max net quantity (IATA)	:	2.5kg
PCA packing instructions (IATA)	:	558
PCA max net quantity (IATA)	:	5kg
CAO packing instructions (IATA)	:	562
CAO max net quantity (IATA)	:	25kg
Special provision (IATA)	:	A3
ERG code (IATA)	:	5L
- Inland waterway transport		
Classification code (ADN)	:	O2
Special provisions (ADN)	:	511
Limited quantities (ADN)	:	1 kg
Excepted quantities (ADN)	:	E2
Equipment required (ADN)	:	PP
Number of blue cones/lights (ADN)	:	0
- Rail transport		
Classification code (RID)	:	O2

Special provisions (RID)	:	511
Excepted quantities (RID)	:	E2
Packing instructions (RID)	:	P002, IBC08
Special packing provisions (RID)	:	B4
Mixed packing provisions (RID)	:	Mp10
Portable tank and bulk container instructions (RID)	:	T3
Portable tank and bulk container special provisions (RID)	:	Tp33
Tank codes for RID tanks (RID)	:	SGAN
Special provisions for RID tanks (RID)	:	Tu3
Transport category (RID)	:	2
Special provisions for carriage – Packages (RID)	:	W11
Special provisions for carriage – Loading, unloading and handling (RID)	:	Cw24
Colis express (express parcels) (RID)	:	Ce10
Hazard identification number (RID)	:	50

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

No REACH Annex XVII restrictions

Ammonium Ceric Nitrate 98% Extra Pure is not on the REACH Candidate List

Ammonium Ceric Nitrate 98% Extra Pure is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

12th Ordinance Implementing the Federal Immission Control Act – 12.BImSchV :

Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen

The substance is not listed

SZW-lijst van mutagene stoffen :

The substance is not listed

NIET-limitatieve lijst van voor de :

The substance is not listed

voortplanting giftige stoffen – Borstvoeding

The substance is not listed

NIET-limitatieve lijst van voor de :

voortplanting giftige stoffen –

Vruchtbaarheid

NIET-limitatieve lijst van voor de :

The substance is not listed

voortplanting giftige stoffen – Ontwikkeling

Denmark

Recommendations Danish Regulation :

Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Ox. Sol. 2	Oxidising Solids, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H272	May intensify fire; oxidiser
H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
O	Oxidising

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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