

# **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	H319
irritation, Category 2	
Specific target organ	H335
toxicity – Single	
exposure, Category 3,	
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 : T3

instructions (ADR)

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

NIET-limitatieve lijst van voor de : The substance is not listed

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](http://www.chemnovo.in) for additional terms and conditions of sale.

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