

### CAS No: 16774-21-3 MSDS

### MATERIAL SAFETY DATA SHEET (MSDS)

1.1. Product identi	ier
Product form	: Substance
CAS No	: : 16774-21-3
Product code	: 01122
1.2. Relevant ident	ified uses of the substance or mixture and uses advised against
1.2.1. Relevant ident	ified uses
Use of the substance/mi	xture : Laboratory chemicals, Manufacture of substances
<b>1.2.2. Uses advised</b> No additional information	
1.3. Details of the	supplier of the safety data sheet
Labogens Fine Chem In 1st Floor , Above Bank o Ludhiana Pb. (141007) +91 9316777775, +91 7 sales@labogens.com	f India, Guru Vihar , Rahon Road, 707855700
1.4. Emergency tel	ephone number
Emergency number	: +91 7707855700 (9:00am - 6:00 pm)
SECTION 2: Hazards id	entification
2.1. Classification	of the substance or mixture
Classification accordir	g to Regulation (EC) No. 1272/2008 [CLP]
Oxidising Solids, Category 2	H272
Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation.	H315

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 classification categories and H statements : see section 16

Safety Data Sheet

Classification according to Directive 67/548/EEC or 1999/45/EC

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 (E	C) No. 1272/2008 [CLP]
Hazard pictograms (CLP)	GHS03 GHS07
Signal word (CLP)	: Danger
Hazard statements (CLP)	<ul> <li>H272 - May intensify fire; oxidiser</li> <li>H302 - Harmful if swallowed</li> <li>H315 - Causes skin irritation</li> <li>H319 - Causes serious eye irritation</li> <li>H335 - May cause respiratory irritation</li> </ul>
Precautionary statements (CLP)	<ul> <li>P220 - Keep/Store away from clothing, combustible materials</li> <li>P261 - Avoid breathing vapours, dust, fume, gas</li> <li>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes.</li> <li>Remove contact lenses, if present and easy to do. Continue rinsing</li> </ul>

#### 2.3. Other hazards

No additional information available

SECTION 3	B: Composition/information on ir	ngredients
3.1. Su	Ibstance	
Name CAS No		AMMONIUM CERIC NITRATE AR/ACS 16774-21-3
Full text of F	R- and H-phrases: see section 16	
3.2. Miz	xture	
Not applicat	ble	
<b>SECTION 4</b>	I: First aid measures	
4.1. De	escription of first aid measures	
First-aid me	easures 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 eye contact	<ul> <li>Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.</li> </ul>
First-aid measures after ingestion	: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.
	l 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.
<b>4.3.</b> Indication of any immediate m No additional information available	edical attention and special treatment needed
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 t	he substance or mixture
No additional information available	
5.3. Advice for firefighters	
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release measu	res
6.1. Personal precautions, protect	ive equipment and emergency procedures
6.1.1. For non-emergency personnel	
Emergency procedures	: Evacuate unnecessary personnel.
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 cont	ainment 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.
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, in	
Storage conditions	: Store in a well-ventilated place. Keep container tightly closed.
7.3. Specific end use(s)	
No additional information available	

Safety Data Sheet

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	: Wear respiratory protection	
SECTION 9: Physical and chemical properties		
9.1. Information on basic physical a		
Physical state	: Solid	
Colour	: Reddish orange.	
Odour	: slight characteristic odor.	
Odour threshold	: No data available	
рН	: 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 reaction	ns
No additional information available	
10.4. Conditions to avoid	
No additional information available	
10.5. Incompatible materials	
No additional information available	
10.6. Hazardous decomposition prod	ucts
No additional information available	
<b>SECTION 11: Toxicological information</b>	
11.1. Information on toxicological eff	ects
	ects : Oral: Harmful if swallowed.
11.1. Information on toxicological eff	
<b>11.1. Information on toxicological eff</b> Acute toxicity	: Oral: Harmful if swallowed.
11.1.       Information on toxicological eff         Acute toxicity         Skin corrosion/irritation	<ul> <li>: Oral: Harmful if swallowed.</li> <li>: Causes skin irritation.</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation	<ul> <li>: Oral: Harmful if swallowed.</li> <li>: Causes skin irritation.</li> <li>: Causes serious eye irritation.</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation	<ul> <li>: Oral: Harmful if swallowed.</li> <li>: Causes skin irritation.</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation	<ul> <li>: Oral: Harmful if swallowed.</li> <li>: Causes skin irritation.</li> <li>: Causes serious eye irritation.</li> <li>: Not classified</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity	<ul> <li>Oral: Harmful if swallowed.</li> <li>Causes skin irritation.</li> <li>Causes serious eye irritation.</li> <li>Not classified</li> <li>Not classified</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity	<ul> <li>Oral: Harmful if swallowed.</li> <li>Causes skin irritation.</li> <li>Causes serious eye irritation.</li> <li>Not classified</li> <li>Not classified</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity         Carcinogenicity         Reproductive toxicity         Specific target organ toxicity (single	<ul> <li>Oral: Harmful if swallowed.</li> <li>Causes skin irritation.</li> <li>Causes serious eye irritation.</li> <li>Not classified</li> <li>Not classified</li> <li>Not classified</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity         Carcinogenicity         Reproductive toxicity	<ul> <li>: Oral: Harmful if swallowed.</li> <li>: Causes skin irritation.</li> <li>: Causes serious eye irritation.</li> <li>: Not classified</li> <li>: Not classified</li> <li>: Not classified</li> <li>: Not classified</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity         Carcinogenicity         Reproductive toxicity         Specific target organ toxicity (single exposure)	<ul> <li>Oral: Harmful if swallowed.</li> <li>Causes skin irritation.</li> <li>Causes serious eye irritation.</li> <li>Not classified</li> <li>Not classified</li> <li>Not classified</li> <li>Not classified</li> <li>May cause respiratory irritation.</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity         Carcinogenicity         Reproductive toxicity         Specific target organ toxicity (single exposure)         Specific target organ toxicity (repeated	<ul> <li>: Oral: Harmful if swallowed.</li> <li>: Causes skin irritation.</li> <li>: Causes serious eye irritation.</li> <li>: Not classified</li> <li>: Not classified</li> <li>: Not classified</li> <li>: Not classified</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity         Carcinogenicity         Reproductive toxicity         Specific target organ toxicity (single exposure)	<ul> <li>Oral: Harmful if swallowed.</li> <li>Causes skin irritation.</li> <li>Causes serious eye irritation.</li> <li>Not classified</li> <li>Not classified</li> <li>Not classified</li> <li>Not classified</li> <li>May cause respiratory irritation.</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity         Carcinogenicity         Reproductive toxicity         Specific target organ toxicity (single exposure)         Specific target organ toxicity (repeated exposure)	<ul> <li>: Oral: Harmful if swallowed.</li> <li>: Causes skin irritation.</li> <li>: Causes serious eye irritation.</li> <li>: Not classified</li> <li>: Not classified</li> <li>: Not classified</li> <li>: Not classified</li> <li>: May cause respiratory irritation.</li> <li>: Not classified</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity         Carcinogenicity         Reproductive toxicity         Specific target organ toxicity (single exposure)         Specific target organ toxicity (repeated	<ul> <li>Oral: Harmful if swallowed.</li> <li>Causes skin irritation.</li> <li>Causes serious eye irritation.</li> <li>Not classified</li> <li>Not classified</li> <li>Not classified</li> <li>Not classified</li> <li>May cause respiratory irritation.</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity         Carcinogenicity         Reproductive toxicity         Specific target organ toxicity (single exposure)         Specific target organ toxicity (repeated exposure)	<ul> <li>: Oral: Harmful if swallowed.</li> <li>: Causes skin irritation.</li> <li>: Causes serious eye irritation.</li> <li>: Not classified</li> <li>: Not classified</li> <li>: Not classified</li> <li>: Not classified</li> <li>: May cause respiratory irritation.</li> <li>: Not classified</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity         Carcinogenicity         Reproductive toxicity         Specific target organ toxicity (single exposure)         Specific target organ toxicity (repeated exposure)         Aspiration hazard	<ul> <li>Cral: Harmful if swallowed.</li> <li>Causes skin irritation.</li> <li>Causes serious eye irritation.</li> <li>Not classified</li> <li>Not classified</li> <li>Not classified</li> <li>May cause respiratory irritation.</li> <li>Not classified</li> <li>Not classified</li> <li>Not classified</li> </ul>
<b>11.1.</b> Information on toxicological eff         Acute toxicity         Skin corrosion/irritation         Serious eye damage/irritation         Respiratory or skin sensitisation         Germ cell mutagenicity         Carcinogenicity         Reproductive toxicity         Specific target organ toxicity (single exposure)         Specific target organ toxicity (repeated exposure)	<ul> <li>: Oral: Harmful if swallowed.</li> <li>: Causes skin irritation.</li> <li>: Causes serious eye irritation.</li> <li>: Not classified</li> <li>: Not classified</li> <li>: Not classified</li> <li>: Not classified</li> <li>: May cause respiratory irritation.</li> <li>: Not classified</li> </ul>

Salety Data Sheet			
SECTION 12: Ecological information			
40.4 Taxialta			
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			
40.5 Describe of DDT and up D			
12.5. Results of PBT and vPvB asses No additional information available	ssment		
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	: Dispose of contents/conta	iner to	
recommendations			
SECTION 14: Transport information			
In accordance with ADR / RID / IMDG / IA	IA/ADN		
14.1. UN number			
UN-No. (ADR)	: 1477		
UN-No. (IMDG)	: 1477		
UN-No.(IATA)	: 1477		
UN-No.(ADN)	: Not regulated		
UN-No. (RID)	: Not regulated		
14.2. UN proper shipping name		Noo	
Proper Shipping Name (ADR)	: NITRATES, INORGANIC,		
Proper Shipping Name (IMDG)	: NITRATES, INORGANIC,		
Proper Shipping Name (IATA)	: NITRATES, INORGANIC,	N.U.S.	
Proper Shipping Name (ADN)	: Not regulated		
Proper Shipping Name (RID)	: Not regulated		
Transport document description (ADR) Transport document description (IMDG)		RGANIC, N.O.S., 5.1, II, (E)	
Transport document description (IMDG) Transport document description (IATA)	: UN 1477 NITRATES, INC : UN 1477 NITRATES, INC		
Hansport document description (IATA)	$\cdot  \text{ON } I \neq I \text{ INFINATES, INC}$	NOMNO, N.O.O., J. I, II	
14.3. Transport hazard class(es)			
ADR			
Transport hazard class(es) (ADR)	: 5.1		
www.labogens.com	Version: 1	21/04/2016	6/10

Danger labels (ADR)	: 5.1
	5.1
IMDG Transport hazard class(es) (IMDG)	: 5.1
Danger labels (IMDG)	: 5.1
	5.1
ΙΑΤΑ	
Transport hazard class(es) (IATA)	: 5.1
Hazard labels (IATA)	: 5.1
	:
	2 · · · · · · · · · · · · · · · · · · ·
	5.1
ADN Transport hazard class(es) (ADN)	: Not regulated
RID	
Transport hazard class(es) (RID)	: Not regulated
14.4. Packing group	
Packing group (ADR)	: 11
Packing group (IMDG)	: 11
Packing group (IATA)	
Packing group (ADN)	: Not regulated
Packing group (RID)	: Not regulated
14.5. Environmental hazards	
Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available
14.6. Special precautions for user	
14.0. Opecial precautions for user	
- Overland transport	: 02
- Overland transport Classification code (ADR)	: O2 : 511
- Overland transport Classification code (ADR) Special provision (ADR)	: 511
- Overland transport Classification code (ADR) Special provision (ADR) Limited quantities (ADR)	: 511 : 1kg
- Overland transport Classification code (ADR) Special provision (ADR) Limited quantities (ADR) Excepted quantities (ADR)	: 511 : 1kg : E2
- Overland transport Classification code (ADR) Special provision (ADR) Limited quantities (ADR)	: 511 : 1kg

#### Safety Data Sheet

ealety Bata elleet	
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 (Kemler No.)	: 50
Orange plates	<sup>:</sup> 50
	1477
Tunnel restriction code (ADR)	: E
EAC code	: 1Y
Transport by and	
- Transport by sea	: 1 kg
Limited quantities (IMDG)	0
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B2, 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
MFAG-No	: 140
Air transport	
- Air transport PCA Excepted quantities (IATA)	· <b>E</b> 2
	: 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 Not regulated	
-	
- Rail transport	
Not regulated	

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

Not applicable

Safety Data Sheet

#### 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 AR/ACS is not on the REACH Candidate List AMMONIUM CERIC NITRATE AR/ACS is not on the REACH Annex XIV List

#### 15.1.2. National regulations

#### Germany

12th Ordinance Implementing the Federal	: Is not subject of the 12. BlmSchV (Hazardous Incident Ordinance)
Immission Control Act - 12.BImSchV	

#### 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 R-, H- and EUH-phrases:

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
0	Oxidising

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product