

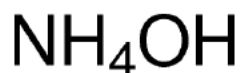
CAS-No.: 1336-21-6 MSDS

## MATERIAL SAFETY DATA SHEET (MSDS)

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

#### 1.1. Product identifier

Product form : Mixture  
:  
EC Index-No. : 007-001-01-2  
EC-No. : 215-647-6  
CAS-No. : 1336-21-6  
Product code : 00025  
Chemical structure :



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

##### 1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial  
For professional use only

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Labogens Fine Chem Industries  
1st Floor , Above Bank of India, Guru Vihar , Rahon Road,  
Ludhiana Pb. (141007)  
+91 9316777775, +91 7707855700  
[sales@labogens.com](mailto:sales@labogens.com) - [www.Labogens.com](http://www.Labogens.com)

#### 1.4. Emergency telephone number

Emergency number : +91 7707855700 (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]

Acute toxicity (oral), Category 4 H302  
Skin corrosion/irritation, Category 1B H314  
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335  
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400

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Full text of H statements : 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) :



GHS05

GHS07

GHS09

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H302 - Harmful if swallowed.  
H314 - Causes severe skin burns and eye damage.  
H335 - May cause respiratory irritation.  
H400 - Very toxic to aquatic life.

Precautionary statements (CLP) :

P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 - Immediately call a POISON CENTER/doctor  
P391 - Collect spillage.

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name    | Product identifier                        | %  | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---------|---|----|---|
| Water   | (CAS-No.) 7732-18-5<br>(EC-No.) 231-791-2 | 70 | Not classified  |
| Ammonia |   | 30 | Not classified  |

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### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

|                                       |   |
|---------------------------------------|---|
| First-aid measures after inhalation   | : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.   |
| First-aid measures after skin contact | : Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.  |
| First-aid measures after eye contact  | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. |
| First-aid measures after ingestion    | : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell.  |

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

|                                   |  |
|-----------------------------------|--|
| Symptoms/effects                  | : Causes severe skin burns and eye damage. |
| Symptoms/effects after inhalation | : May cause respiratory irritation.        |
| Symptoms/effects after ingestion  | : Harmful if swallowed.                    |

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

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

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

#### 5.2. Special hazards arising from the substance or mixture

No additional information available

#### 5.3. Advice for firefighters

|                                |   |
|--------------------------------|---|
| Firefighting instructions      | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection.   |

### 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. |
|----------------------|-----------------------------------|

##### 6.1.2. For emergency responders

|                      |  |
|----------------------|--|
| Protective equipment | : Equip cleanup crew with proper protection. |
| 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. Collect spillage. Store away from other materials. |
|-------------------------|--|

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

|                               |   |
|-------------------------------|---|
| Precautions for safe handling | : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe dust/fume/gas/mist/vapours/spray. |
| Hygiene measures              | : Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling. Wash contaminated clothing before reuse.   |

#### 7.2. Conditions for safe storage, including any incompatibilities

|                        |   |
|------------------------|---|
| Storage conditions     | : Keep container tightly closed. Store in a well-ventilated place. Keep cool. |
| Incompatible products  | : Strong bases. Strong acids.   |
| Incompatible materials | : Sources of ignition. Direct sunlight.                                       |

#### 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

|                               |  |
|-------------------------------|--|
| Personal protective equipment | : Avoid all unnecessary exposure.        |
| Hand protection               | : protective gloves                      |
| Eye protection                | : Chemical goggles or face shield        |
| Skin and body protection      | : Wear suitable protective clothing      |
| Respiratory protection        | : Wear appropriate mask                  |
| Other information             | : Do not eat, drink or smoke during use. |

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

|  |                     |
|--|---------------------|
| Physical state                             | : Liquid            |
| Molecular mass                             | : 35.05 g/mol       |
| Colour                                     | : Clear Colorless.  |
| Odour                                      | : ammonia odour.    |
| Odour threshold                            | : No data available |
| pH   | : 11.7              |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point                              | : -60 °C            |
| Freezing point                             | : No data available |
| Boiling point                              | : 38 - 100 °C       |
| Flash point                                | : No data available |

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|                                  |                             |
|----------------------------------|-----------------------------|
| Auto-ignition temperature        | : 6510 °C                   |
| Decomposition temperature        | : No data available         |
| Flammability (solid, gas)        | : Non flammable.            |
| Vapour pressure                  | : 153 hPa at 20 °C          |
| Relative vapour density at 20 °C | : 1.21                      |
| Relative density                 | : No data available         |
| Density                          | : 0.9 g/cm <sup>3</sup>     |
| Solubility                       | : Water: Infinitely soluble |
| Log Pow                          | : No data available         |
| Viscosity, kinematic             | : No data available         |
| Viscosity, dynamic               | : No data available         |
| Explosive properties             | : No data available         |
| Oxidising properties             | : No data available         |
| Explosive limits                 | : 0.16 - 0.27 vol %         |

### 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. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 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.

|                |                      |
|----------------|----------------------|
| ATE CLP (oral) | 500 mg/kg bodyweight |
|----------------|----------------------|

Skin corrosion/irritation : Causes severe skin burns and eye damage.  
pH: 11.7

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|                                   |  |
|-----------------------------------|--|
| Serious eye damage/irritation     | : Serious eye damage, category 1, implicit<br>pH: 11.7                               |
| Respiratory or skin sensitisation | : Not classified   |
| Additional information            | : Based on available data, the classification criteria are not met                   |
| Germ cell mutagenicity            | : Not classified<br>Based on available data, the classification criteria are not met |
| Carcinogenicity                   | : Not classified   |
| Additional information            | : Based on available data, the classification criteria are not met                   |
| Reproductive toxicity             | : Not classified   |
| Additional information            | : Based on available data, the classification criteria are not met                   |
| STOT-single exposure              | : May cause respiratory irritation.  |
| Additional information            | : Based on available data, the classification criteria are not met                   |
| STOT-repeated exposure            | : Not classified   |
| Additional information            | : Based on available data, the classification criteria are not met                   |
| Aspiration hazard                 | : Not classified   |
| Additional information            | : Based on available data, the classification criteria are not met                   |

Potential adverse human health effects and symptoms : Harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Very toxic to aquatic life.

### 12.2. Persistence and degradability

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|                               |                  |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

### 12.3. Bioaccumulative potential

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|                           |                  |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

### 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

Additional information : Avoid release to the environment.

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

|  |   |
|--|---|
| Product/Packaging disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |
| Ecology - waste materials                  | : Avoid release to the environment.   |

### SECTION 14: Transport information

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

#### 14.1. UN number

|               |        |
|---------------|--------|
| UN-No. (ADR)  | : 2672 |
| UN-No. (IMDG) | : 2672 |
| UN-No. (IATA) | : 2672 |
| UN-No. (ADN)  | : 2672 |
| UN-No. (RID)  | : 2672 |

#### 14.2. UN proper shipping name

|                                       |  |
|---------------------------------------|--|
| Proper Shipping Name (ADR)            | : AMMONIA SOLUTION   |
| Proper Shipping Name (IMDG)           | : AMMONIA SOLUTION   |
| Proper Shipping Name (IATA)           | : Ammonia solution   |
| Proper Shipping Name (ADN)            | : AMMONIA SOLUTION   |
| Proper Shipping Name (RID)            | : AMMONIA SOLUTION   |
| Transport document description (ADR)  | : UN 2672 AMMONIA SOLUTION, 8, III, (E), ENVIRONMENTALLY HAZARDOUS             |
| Transport document description (IMDG) | : UN 2672 AMMONIA SOLUTION, 8, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS |
| Transport document description (IATA) | : UN 2672 Ammonia solution, 8, III, ENVIRONMENTALLY HAZARDOUS                  |
| Transport document description (ADN)  | : UN 2672 AMMONIA SOLUTION, 8, III, ENVIRONMENTALLY HAZARDOUS                  |
| Transport document description (RID)  | : UN 2672 AMMONIA SOLUTION, 8, III, ENVIRONMENTALLY HAZARDOUS                  |

#### 14.3. Transport hazard class(es)

##### ADR

|                                  |     |
|----------------------------------|-----|
| Transport hazard class(es) (ADR) | : 8 |
| Danger labels (ADR)              | : 8 |



##### IMDG

|                                   |     |
|-----------------------------------|-----|
| Transport hazard class(es) (IMDG) | : 8 |
| Danger labels (IMDG)              | : 8 |



##### IATA

|                                   |     |
|-----------------------------------|-----|
| Transport hazard class(es) (IATA) | : 8 |
| Hazard labels (IATA)              | : 8 |

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### ADN

Transport hazard class(es) (ADN) : 8

Danger labels (ADN) : 8



### RID

Transport hazard class(es) (RID) : 8

Danger labels (RID) : 8



### 14.4. Packing group

Packing group (ADR) : III

Packing group (IMDG) : III

Packing group (IATA) : III

Packing group (ADN) : III

Packing group (RID) : III

### 14.5. Environmental hazards

Dangerous for the environment : Yes

Marine pollutant : Yes

Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : C5

Special provisions (ADR) : 543

Limited quantities (ADR) : 5I

Excepted quantities (ADR) : E1

Packing instructions (ADR) : P001, IBC03, LP01, R001

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T7

Portable tank and bulk container special provisions (ADR) : TP1

Tank code (ADR) : L4BN

Vehicle for tank carriage : AT

Transport category (ADR) : 3

Special provisions for carriage - Packages (ADR) : V12

Hazard identification number (Kemler No.) : 80



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Orange plates : 

Tunnel restriction code (ADR) : E  
EAC code : 2R

### - Transport by sea

Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P001, LP01  
IBC packing instructions (IMDG) : IBC03  
IBC special provisions (IMDG) : B11  
Tank instructions (IMDG) : T7  
Tank special provisions (IMDG) : TP1  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-B  
Stowage category (IMDG) : A  
Stowage and handling (IMDG) : SW2, SW5  
Segregation (IMDG) : SG35  
MFAG-No : 154

### - Air transport

PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y841  
PCA limited quantity max net quantity (IATA) : 1L  
PCA packing instructions (IATA) : 852  
PCA max net quantity (IATA) : 5L  
CAO packing instructions (IATA) : 856  
CAO max net quantity (IATA) : 60L  
Special provisions (IATA) : A64  
ERG code (IATA) : 8L

### - Inland waterway transport

Classification code (ADN) : C5  
Special provisions (ADN) : 543  
Limited quantities (ADN) : 5 L  
Excepted quantities (ADN) : E1  
Carriage permitted (ADN) : T  
Equipment required (ADN) : PP, EP  
Number of blue cones/lights (ADN) : 0

### - Rail transport

Classification code (RID) : C5  
Special provisions (RID) : 543  
Limited quantities (RID) : 5L  
Excepted quantities (RID) : E1  
Packing instructions (RID) : P001, IBC03, LP01, R001  
Mixed packing provisions (RID) : MP19  
Portable tank and bulk container instructions (RID) : T7  
Portable tank and bulk container special provisions (RID) : TP1  
Tank codes for RID tanks (RID) : L4BN  
Transport category (RID) : 3

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Special provisions for carriage – Packages (RID) : W12

Colis express (express parcels) (RID) : CE8

Hazard identification number (RID) : 80

### 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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) 2, Significantly hazardous to water (Classification according to AwSV, Annex 1)

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 : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

##### 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 chemical safety assessment has been carried out

## SECTION 16: Other information

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|                   |   |
|-------------------|---|
| Data sources      | : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. |
| Other information | : None.   |

### Full text of H- and EUH-statements:

|                     |  |
|---------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4  |
| Aquatic Acute 1     | Hazardous to the aquatic environment — Acute Hazard, Category 1                            |
| Skin Corr. 1B       | Skin corrosion/irritation, Category 1B   |
| STOT SE 3           | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H302                | Harmful if swallowed.  |
| H314                | Causes severe skin burns and eye damage.   |
| H335                | May cause respiratory irritation.  |
| H400                | Very toxic to aquatic life.  |

*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.*