

Creation Date 19-Jun-2009

Revision Date 13-Dec-2020

Revision Number 7

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Product identifier**

**Product Description:** Ammonia, ca 7N solution in methanol  
**Cat No. :** 133710000; 133710010; 133710025; 133710250  
**Molecular Formula** H3 N

**Unique Formula Identifier (UFI)** 5EFJ-6TF4-SW01-XM4S

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

**Recommended Use** Laboratory chemicals.  
**Uses advised against** No Information available

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

**Company**

**UK entity/business name**  
 Fisher Scientific UK  
 Bishop Meadow Road,  
 Loughborough, Leicestershire LE11 5RG, United Kingdom  
 General info; Tel: +44 (0)1509 231166

**EU entity/business name**  
 Acros Organics BVBA  
 Janssen Pharmaceuticaan 3a, 2440 Geel, Belgium  
 General Info; Tel: +32-14-57 52 11 (info@acros.com)  
 Technical Support; Tel +32-14-56 56 00 (acros.techsupport@thermofisher.com)

**E-mail address** begel.sdsdesk@thermofisher.com

**1.4. Emergency telephone number**

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

**Poison Centre - Emergency information services**

**Ireland** : National Poisons Information Centre (NPIC) -  
**01 809 2166** (8am-10pm, 7 days a week)  
**Malta** : +356 2395 2000  
**Cyprus** : +357 2240 5611

**SECTION 2: HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

**CLP Classification - Regulation (EC) No 1272/2008**

**Physical hazards**

# SAFETY DATA SHEET

Ammonia, ca 7N solution in methanol

Revision Date 13-Dec-2020

|  |                     |
|--|---------------------|
| Flammable liquids                                  | Category 2 (H225)   |
| <b>Health hazards</b>                              |                     |
| Acute oral toxicity                                | Category 3 (H301)   |
| Acute dermal toxicity                              | Category 3 (H311)   |
| Acute Inhalation Toxicity - Vapors                 | Category 3 (H331)   |
| Skin Corrosion/Irritation                          | Category 1 B (H314) |
| Serious Eye Damage/Eye Irritation                  | Category 1 (H318)   |
| Specific target organ toxicity - (single exposure) | Category 1 (H370)   |
| <b>Environmental hazards</b>                       |                     |
| Chronic aquatic toxicity                           | Category 3 (H412)   |

Full text of Hazard Statements: see section 16

## 2.2. Label elements



Signal Word

Danger

## Hazard Statements

- H225 - Highly flammable liquid and vapor
- H314 - Causes severe skin burns and eye damage
- H370 - Causes damage to organs
- H412 - Harmful to aquatic life with long lasting effects
- H301 + H311 + H331 - Toxic if swallowed, in contact with skin or if inhaled

## Precautionary Statements

- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
- 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 or doctor/physician
- P308 + P313 - IF exposed or concerned: Get medical advice/attention
- P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

## 2.3. Other hazards

Toxic to terrestrial vertebrates

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

# SAFETY DATA SHEET

Ammonia, ca 7N solution in methanol

Revision Date 13-Dec-2020

## 3.2. Mixtures

| Component      | CAS No    | EC No             | Weight % | CLP Classification - Regulation (EC) No 1272/2008   |
|----------------|-----------|-------------------|----------|---|
| Ammonia        | 7664-41-7 | EEC No. 231-635-3 | 12       | Flam. Gas 2 (H221)<br>Skin Corr. 1B (H314)<br>Acute Tox. 3 (H331)<br>Aquatic Acute 1 (H400)<br>Aquatic Chronic 2 (H411)<br>(EUH071) |
| Methyl alcohol | 67-56-1   | 200-659-6         | 88       | Flam. Liq. 2 (H225)<br>Acute Tox. 3 (H301)<br>Acute Tox. 3 (H311)<br>Acute Tox. 3 (H331)<br>STOT SE 1 (H370)                        |

| Component      | Specific concentration limits (SCL's)                              | M-Factor | Component notes |
|----------------|--|----------|-----------------|
| Ammonia        | STOT SE 3 : C ≥ 5 %  | 1        | -               |
| Methyl alcohol | STOT SE 1 (H370) :: C ≥ 10%<br>STOT SE 2 (H371) ::<br>3% ≤ C < 10% | -        | -               |

| Components | Reach Registration Number |
|------------|---------------------------|
| Ammonia    | 01-2119488876-14          |
| Methanol   | 01-2119433307-44          |

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

|   |  |
|---|--|
| <b>General Advice</b>                     | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.  |
| <b>Eye Contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.   |
| <b>Skin Contact</b>                       | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.  |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Call a physician or poison control center immediately.   |
| <b>Inhalation</b>                         | If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Remove to fresh air. Immediate medical attention is required. |
| <b>Self-Protection of the First Aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.   |

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

Causes burns by all exposure routes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

# SAFETY DATA SHEET

Ammonia, ca 7N solution in methanol

Revision Date 13-Dec-2020

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

**Notes to Physician** Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

#### **Extinguishing media which must not be used for safety reasons**

No information available.

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

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

#### **Hazardous Combustion Products**

Nitrogen oxides (NO<sub>x</sub>), Ammonia, Formaldehyde.

### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Take precautionary measures against static discharges.

### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

### 6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity

# SAFETY DATA SHEET

Ammonia, ca 7N solution in methanol

Revision Date 13-Dec-2020

discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

## Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

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

Keep away from heat, sparks and flame. Refrigerator/flammables. Corrosives area. Store under an inert atmosphere. Protect from moisture. Keep containers tightly closed in a dry, cool and well-ventilated place.

**Technical Rules for Hazardous Substances (TRGS) 510**      Class 3  
**Storage Class (LGK) (Germany)**

## 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

List source(s): **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC **UK** - EH40/2005 Work Exposure Limits, Fourth edition. Published 2020. **IRE** - 2021 Code of Practice for the Chemical Agents Regulations, Schedule 1. Published by the Health and Safety Authority

| Component      | The United Kingdom  | European Union   | Ireland  |
|----------------|---|--|--|
| Ammonia        | STEL: 35 ppm 15 min<br>STEL: 25 mg/m <sup>3</sup> 15 min<br>TWA: 25 ppm 8 hr<br>TWA: 18 mg/m <sup>3</sup> 8 hr  | TWA: 20 ppm (8h)<br>TWA: 14 mg/m <sup>3</sup> (8h)<br>STEL: 50 ppm (15min)<br>STEL: 36 mg/m <sup>3</sup> (15min) | TWA: 20 ppm 8 hr.<br>anhydrous<br>TWA: 14 mg/m <sup>3</sup> 8 hr.<br>anhydrous<br>STEL: 50 ppm 15 min<br>STEL: 36 mg/m <sup>3</sup> 15 min |
| Methyl alcohol | WEL - TWA: 200 ppm TWA;<br>266 mg/m <sup>3</sup> TWA<br>WEL - STEL: 250 ppm<br>STEL; 333 mg/m <sup>3</sup> STEL | TWA: 200 ppm 8 hr<br>TWA: 260 mg/m <sup>3</sup> 8 hr<br>Skin   | TWA: 200 ppm 8 hr.<br>TWA: 260 mg/m <sup>3</sup> 8 hr.<br>STEL: 600 ppm 15 min<br>STEL: 780 mg/m <sup>3</sup> 15 min<br>Skin               |

#### Biological limit values

List source(s):

#### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

| Component                        | Acute effects local<br>(Dermal) | Acute effects<br>systemic (Dermal) | Chronic effects local<br>(Dermal) | Chronic effects<br>systemic (Dermal) |
|----------------------------------|---------------------------------|------------------------------------|-----------------------------------|--------------------------------------|
| Ammonia<br>7664-41-7 ( 12 )      |                                 | DNEL = 6.8mg/kg<br>bw/day          |                                   | DNEL = 6.8mg/kg<br>bw/day            |
| Methyl alcohol<br>67-56-1 ( 88 ) |                                 | DNEL = 20mg/kg<br>bw/day           |                                   | DNEL = 20mg/kg<br>bw/day             |

| Component | Acute effects local<br>(Inhalation) | Acute effects<br>systemic (Inhalation) | Chronic effects local<br>(Inhalation) | Chronic effects<br>systemic (Inhalation) |
|-----------|-------------------------------------|--|---------------------------------------|--|
|           |                                     |  |                                       |  |

# SAFETY DATA SHEET

Ammonia, ca 7N solution in methanol

Revision Date 13-Dec-2020

|                                  |                             |                              |                             |                              |
|----------------------------------|-----------------------------|------------------------------|-----------------------------|------------------------------|
| Ammonia<br>7664-41-7 ( 12 )      | DNEL = 36mg/m <sup>3</sup>  | DNEL = 47.6mg/m <sup>3</sup> | DNEL = 14mg/m <sup>3</sup>  | DNEL = 47.6mg/m <sup>3</sup> |
| Methyl alcohol<br>67-56-1 ( 88 ) | DNEL = 130mg/m <sup>3</sup> | DNEL = 130mg/m <sup>3</sup>  | DNEL = 130mg/m <sup>3</sup> | DNEL = 130mg/m <sup>3</sup>  |

## Predicted No Effect Concentration (PNEC)

See values below.

| Component                        | Fresh water       | Fresh water sediment       | Water Intermittent | Microorganisms in sewage treatment | Soil (Agriculture)      |
|----------------------------------|-------------------|----------------------------|--------------------|------------------------------------|-------------------------|
| Ammonia<br>7664-41-7 ( 12 )      | PNEC = 0.0011mg/L |                            | PNEC = 0.0068mg/L  |                                    |                         |
| Methyl alcohol<br>67-56-1 ( 88 ) | PNEC = 20.8mg/L   | PNEC = 77mg/kg sediment dw | PNEC = 1540mg/L    | PNEC = 100mg/L                     | PNEC = 100mg/kg soil dw |

| Component                        | Marine water      | Marine water sediment       | Marine water intermittent | Food chain | Air |
|----------------------------------|-------------------|-----------------------------|---------------------------|------------|-----|
| Ammonia<br>7664-41-7 ( 12 )      | PNEC = 0.0011mg/L |                             |                           |            |     |
| Methyl alcohol<br>67-56-1 ( 88 ) | PNEC = 2.08mg/L   | PNEC = 7.7mg/kg sediment dw |                           |            |     |

## 8.2. Exposure controls

### Engineering Measures

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

**Eye Protection** Goggles (European standard - EN 166)

**Hand Protection** Protective gloves

| Glove material | Breakthrough time                 | Glove thickness | EU standard | Glove comments        |
|----------------|-----------------------------------|-----------------|-------------|-----------------------|
| Natural rubber | See manufacturers recommendations | -               | EN 374      | (minimum requirement) |
| Nitrile rubber |                                   |                 |             |                       |
| Neoprene       |                                   |                 |             |                       |
| PVC            |                                   |                 |             |                       |

**Skin and body protection** Long sleeved clothing.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.

(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Large scale/emergency use** Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced  
**Recommended Filter type:** Particulates filter conforming to EN 143 or Inorganic gases and vapours filter Type B Grey conforming to EN14387

# SAFETY DATA SHEET

Ammonia, ca 7N solution in methanol

Revision Date 13-Dec-2020

**Small scale/Laboratory use** Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
**Recommended half mask:-** Particle filtering: EN149:2001  
When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls** Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

|  |                                |  |
|--|--------------------------------|--|
| <b>Physical State</b>                          | Liquid                         |  |
| <b>Appearance</b>                              | Clear Colorless - Light yellow |  |
| <b>Odor</b>                                    | Ammonia-like                   |  |
| <b>Odor Threshold</b>                          | No data available              |  |
| <b>Melting Point/Range</b>                     | No data available              |  |
| <b>Softening Point</b>                         | No data available              |  |
| <b>Boiling Point/Range</b>                     | No information available       |  |
| <b>Flammability (liquid)</b>                   | Highly flammable               | On basis of test data                    |
| <b>Flammability (solid,gas)</b>                | Not applicable                 | Liquid                                   |
| <b>Explosion Limits</b>                        | No data available              |  |
| <b>Flash Point</b>                             | 14 °C / 57.2 °F                | <b>Method -</b> No information available |
| <b>Autoignition Temperature</b>                | No data available              |  |
| <b>Decomposition Temperature</b>               | No data available              |  |
| <b>pH</b>                                      | Not applicable                 |  |
| <b>Viscosity</b>                               | No data available              |  |
| <b>Water Solubility</b>                        | No information available       |  |
| <b>Solubility in other solvents</b>            | No information available       |  |
| <b>Partition Coefficient (n-octanol/water)</b> |                                |  |
| <b>Component</b>                               | <b>log Pow</b>                 |  |
| Methyl alcohol                                 | -0.74                          |  |
| <b>Vapor Pressure</b>                          | No data available              |  |
| <b>Density / Specific Gravity</b>              | 0.770                          |  |
| <b>Bulk Density</b>                            | Not applicable                 | Liquid                                   |
| <b>Vapor Density</b>                           | No data available              | (Air = 1.0)                              |
| <b>Particle characteristics</b>                | Not applicable (liquid)        |  |

### 9.2. Other information

|                             |   |
|-----------------------------|---|
| <b>Molecular Formula</b>    | H3 N  |
| <b>Molecular Weight</b>     | 17.03                                       |
| <b>Explosive Properties</b> | Vapors may form explosive mixtures with air |

## SECTION 10: STABILITY AND REACTIVITY

**10.1. Reactivity** None known, based on information available

**10.2. Chemical stability** Hygroscopic.

**10.3. Possibility of hazardous reactions**

# SAFETY DATA SHEET

Ammonia, ca 7N solution in methanol

Revision Date 13-Dec-2020

## Hazardous Polymerization Hazardous Reactions

Hazardous polymerization does not occur.  
None under normal processing.

## 10.4. Conditions to avoid

Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition. Exposure to moist air or water.

## 10.5. Incompatible materials

Strong oxidizing agents. Acids. Acid chlorides. Acid anhydrides. Strong reducing agents. Water. Halogens.

## 10.6. Hazardous decomposition products

Nitrogen oxides (NOx). Ammonia. Formaldehyde.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Product Information

#### (a) acute toxicity;

Oral Category 3  
Dermal Category 3  
Inhalation Category 3

#### Toxicology data for the components

| Component      | LD50 Oral                      | LD50 Dermal                   | LC50 Inhalation   |
|----------------|--------------------------------|-------------------------------|---|
| Ammonia        | LD50 = 350 mg/kg ( Rat )       | -                             | LC50 = 9850 mg/m <sup>3</sup> ( Rat ) 1 h<br>LC50 = 13770 mg/m <sup>3</sup> ( Rat ) 1 h |
| Methyl alcohol | LD50 = 1187 – 2769 mg/kg (Rat) | LD50 = 17100 mg/kg ( Rabbit ) | LC50 = 128.2 mg/L ( Rat ) 4 h   |

(b) skin corrosion/irritation; Category 1 B

(c) serious eye damage/irritation; Category 1

#### (d) respiratory or skin sensitization;

Respiratory No data available  
Skin No data available

| Component                        | Test method   | Test species | Study result    |
|----------------------------------|---|--------------|-----------------|
| Methyl alcohol<br>67-56-1 ( 88 ) | OECD Test Guideline 406<br>Guinea Pig Maximisation Test<br>(GPMT) | guinea pig   | non-sensitising |

(e) germ cell mutagenicity; No data available

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

| Component                        | Test method             | Test species / Duration          | Study result              |
|----------------------------------|-------------------------|----------------------------------|---------------------------|
| Methyl alcohol<br>67-56-1 ( 88 ) | OECD Test Guideline 416 | Rat / Inhalation<br>2 Generation | NOAEC =<br>1.3 mg/l (air) |



# SAFETY DATA SHEET

Ammonia, ca 7N solution in methanol

Revision Date 13-Dec-2020

**(h) STOT-single exposure;** Category 1  
**Results / Target organs** Optic nerve, Central nervous system (CNS).

**(i) STOT-repeated exposure;** No data available  
**Target Organs** No information available.

**(j) aspiration hazard;** No data available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Symptoms / effects,both acute and delayed** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

## 11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecotoxicity effects** The product contains following substances which are hazardous for the environment. Contains a substance which is: Very toxic to aquatic organisms.

| Component      | Freshwater Fish  | Water Flea  | Freshwater Algae |
|----------------|--|---|------------------|
| Ammonia        | LC50: 0.26 - 4.6 mg/L, 96h (Lepomis macrochirus)<br>LC50: = 1.17 mg/L, 96h flow-through (Lepomis macrochirus)<br>LC50: 0.73 - 2.35 mg/L, 96h (Pimephales promelas)<br>LC50: = 5.9 mg/L, 96h static (Pimephales promelas)<br>LC50: > 1.5 mg/L, 96h (Poecilia reticulata)<br>LC50: = 1.19 mg/L, 96h static (Poecilia reticulata)<br>LC50: = 0.44 mg/L, 96h (Cyprinus carpio) | EC50 = 25.4 mg/L, 48h (Daphnia magna)<br>NOEC = 0.79 mg/L (Daphnia magna) |                  |
| Methyl alcohol | Pimephales promelas: LC50 > 10000 mg/L 96h   | EC50 > 10000 mg/L 24h   |                  |

| Component      | Microtox  | M-Factor |
|----------------|---|----------|
| Ammonia        | EC50 = 2.0 mg/L 5 min   | 1        |
| Methyl alcohol | EC50 = 39000 mg/L 25 min<br>EC50 = 40000 mg/L 15 min<br>EC50 = 43000 mg/L 5 min |          |

**12.2. Persistence and degradability** No information available  
**Persistence** Persistence is unlikely.

# SAFETY DATA SHEET

Ammonia, ca 7N solution in methanol

Revision Date 13-Dec-2020

|                      |  |                                |
|----------------------|--|--------------------------------|
| <b>Degradability</b> | Not relevant for inorganic substances. |                                |
|                      | <b>Component</b>                       | <b>Degradability</b>           |
|                      | Methyl alcohol<br>67-56-1 ( 88 )       | DT50 ~ 17.2d<br>>94% after 20d |

**Degradation in sewage treatment plant** Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**12.3. Bioaccumulative potential** Bioaccumulation is unlikely

| Component      | log Pow | Bioconcentration factor (BCF) |
|----------------|---------|-------------------------------|
| Methyl alcohol | -0.74   | <10                           |

**12.4. Mobility in soil** No information available .

**12.5. Results of PBT and vPvB assessment** No data available for assessment.

**12.6. Endocrine disrupting properties**

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

**12.7. Other adverse effects**  
**Persistent Organic Pollutant**  
**Ozone Depletion Potential**

This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods**

**Waste from Residues/Unused Products** Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

**European Waste Catalogue (EWC)** According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

**Other Information** Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment.

## SECTION 14: TRANSPORT INFORMATION

**IMDG/IMO**

**14.1. UN number** UN3286  
**14.2. UN proper shipping name** Flammable liquid, toxic, corrosive, n.o.s.  
**Technical Shipping Name** Methanol, ammonia  
**14.3. Transport hazard class(es)** 3  
**Subsidiary Hazard Class** 6.1, 8

# SAFETY DATA SHEET

Ammonia, ca 7N solution in methanol

Revision Date 13-Dec-2020

**14.4. Packing group** II

## ADR

**14.1. UN number** UN3286  
**14.2. UN proper shipping name** Flammable liquid, toxic, corrosive, n.o.s.  
**Technical Shipping Name** Methanol, ammonia  
**14.3. Transport hazard class(es)** 3  
**Subsidiary Hazard Class** 6.1, 8  
**14.4. Packing group** II

## IATA

**14.1. UN number** UN3286  
**14.2. UN proper shipping name** FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.\*  
**Technical Shipping Name** Methanol, ammonia  
**14.3. Transport hazard class(es)** 3  
**Subsidiary Hazard Class** 6.1, 8  
**14.4. Packing group** II

**14.5. Environmental hazards** No hazards identified  
**14.6. Special precautions for user** No special precautions required  
**14.7. Maritime transport in bulk according to IMO instruments** Not applicable, packaged goods

## SECTION 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### International Inventories

China, X = listed, Australia, U.S.A. (TSCA), Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), Korea (KECL), China (IECSC), Japan (ENCS), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component      | CAS No    | EINECS    | ELINCS | NLP | IECSC | TCSI | KECL     | ENCS | ISHL |
|----------------|-----------|-----------|--------|-----|-------|------|----------|------|------|
| Ammonia        | 7664-41-7 | 231-635-3 | -      | -   | X     | X    | KE-01625 | X    | X    |
| Methyl alcohol | 67-56-1   | 200-659-6 | -      | -   | X     | X    | KE-23193 | X    | X    |

| Component      | CAS No    | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|----------------|-----------|------|---|-----|------|------|-------|-------|
| Ammonia        | 7664-41-7 | X    | ACTIVE  | X   | -    | X    | X     | X     |
| Methyl alcohol | 67-56-1   | X    | ACTIVE  | X   | -    | X    | X     | X     |

**Legend:** X - Listed '-' - Not Listed **KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

#### Authorisation/Restrictions according to EU REACH

| Component      | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|----------------|---|---|---|
| Ammonia        | -   | Use restricted. See item 75. (see link for restriction details)               | -   |
| Methyl alcohol | -   | Use restricted. See item 69. (see link for restriction details)               | -   |

<https://echa.europa.eu/substances-restricted-under-reach>

# SAFETY DATA SHEET

Ammonia, ca 7N solution in methanol

Revision Date 13-Dec-2020

| Component      | CAS No    | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|----------------|-----------|---|--|
| Ammonia        | 7664-41-7 | 50 tonne  | 200 tonne  |
| Methyl alcohol | 67-56-1   | 500 tonne   | 5000 tonne   |

## Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

## National Regulations

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

## WGK Classification

Water endangering class = 2 (self classification)

| Component      | Germany - Water Classification (VwVwS) | Germany - TA-Luft Class |
|----------------|--|-------------------------|
| Ammonia        | WGK2                                   |                         |
| Methyl alcohol | WGK 2                                  |                         |

| Component      | France - INRS (Tables of occupational diseases)      |
|----------------|--|
| Methyl alcohol | Tableaux des maladies professionnelles (TMP) - RG 84 |

| Component                        | Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81) | Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC) | Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure |
|----------------------------------|--|---|---|
| Methyl alcohol<br>67-56-1 ( 88 ) | Prohibited and Restricted Substances   | Group I   |   |

## 15.2. Chemical safety assessment

Chemical Safety Assessment/Reports (CSA/CSR) are not required for mixtures

## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

H301 - Toxic if swallowed  
H311 - Toxic in contact with skin  
H331 - Toxic if inhaled  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H370 - Causes damage to organs  
H412 - Harmful to aquatic life with long lasting effects  
H221 - Flammable gas  
H225 - Highly flammable liquid and vapor  
H400 - Very toxic to aquatic life  
H411 - Toxic to aquatic life with long lasting effects  
EUH071 - Corrosive to the respiratory tract

# SAFETY DATA SHEET

Ammonia, ca 7N solution in methanol

Revision Date 13-Dec-2020

## Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/MDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

### **Key literature references and sources for data**

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (Volatile Organic Compound)

### **Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:**

**Physical hazards** On basis of test data

**Health Hazards** Calculation method

**Environmental hazards** Calculation method

### **Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

**Creation Date** 19-Jun-2009

**Revision Date** 13-Dec-2020

**Revision Summary** Not applicable.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 .**

### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**