

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SDS Reference Number: CM27742

Issue date: 16/09/2016 Revision date: 05/01/2025 Supersedes version of: 08/02/2022 Version: 1.3

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Product name : Ammonium Magnesium Chloride TS (ChP)
Product code : CM27742

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

Main use category : Professional use
Use of the substance/mixture : Certified reference material for laboratory use
Function or use category : Laboratory chemicals

1.3. Details of the supplier of the safety data sheet**Spectracer UK Ltd.**

20 Seymour Mews,
London,
W1H 6BQ,
United Kingdom.

Tel: +44 (0) 207 193 9114

Fax: +44 (0) 203 432 4686

Email: contact@spectracer.comWeb: www.spectracer.com**1.4. Emergency telephone number**

| Country/Area | Organisation/Company | Address | Emergency number | Comment |
|----------------|--|---|--|---------|
| Ireland | National Poisons Information Centre Beaumont Hospital | Beaumont Hospital Beaumont Road 9 Dublin | : +353 1 8379964 | |
| Malta | Medicines & Poisons Info Office | Mater Dei Hospital Msida MSD 2090 Msida | 112 +356 2545 6508 | |
| United Kingdom | National Poisons Information Service (NHS Direct) | http://www.npis.org | 111 (England & Wales only) or 112 (EU) or 08454 24 24 24 (Scotland) | |

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Skin corrosion/irritation, Category 1, Sub-Category 1B H314

Serious eye damage/eye irritation, Category 1 H318

Specific target organ toxicity – Single exposure, Category 3, H335

Respiratory tract irritation

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May cause respiratory irritation. Causes severe skin burns and eye damage. Causes serious eye damage.

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2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

GHS07

Signal word (CLP) :

Danger

Contains :

ammonia

Hazard statements (CLP) :

H314 - Causes severe skin burns and eye damage.

H335 - May cause respiratory irritation.

Precautionary statements (CLP) :

P260 - Do not breathe dusts or mists.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331+P310 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor.

P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor.

P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a

POISON CENTER or doctor.

P312 - Call a POISON CENTRE or doctor if you feel unwell.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

| Component | |
|---|---|
| Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII | ammonia (1336-21-6), ammonium chloride (12125-02-9) |
| Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII | ammonia (1336-21-6), ammonium chloride (12125-02-9) |

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|-------------------|--|--------|--|
| ammonia | CAS-No.: 1336-21-6 EC-No.: 215-647-6 EC Index-No.: 007-001-01-2 REACH-no: 01-2119982985-14-XXXX | 5 – 10 | Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 |
| ammonium chloride | CAS-No.: 12125-02-9 EC-No.: 235-186-4 EC Index-No.: 017-014-00-8 REACH-no: 01-2119489385-24 | 5 – 10 | Acute Tox. 4 (Oral), H302 Skin Corr./Irrit. Not classified Eye Irrit. 2, H319 |

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| Specific concentration limits: | | |
|--------------------------------|--|-----------------------------------|
| Name | Product identifier | Specific concentration limits (%) |
| ammonia | CAS-No.: 1336-21-6 EC-No.: 215-647-6 EC Index-No.: 007-001-01-2 REACH-no: 01-2119982985-14-XXXX | (5 ≤ C < 100) STOT SE 3; H335 |

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures general | : Call a physician immediately. |
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell. |
| First-aid measures after skin contact | : Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. |
| First-aid measures after ingestion | : Rinse mouth. Do not induce vomiting. Call a physician immediately. |
| First-aid measures for first aider | : First aid workers will be equipped with suitable personal protective equipment. |

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

| | |
|-------------------------------------|-------------------------------------|
| Symptoms/effects after inhalation | : May cause respiratory irritation. |
| Symptoms/effects after skin contact | : Burns. |
| Symptoms/effects after eye contact | : Serious damage to eyes. |
| Symptoms/effects after ingestion | : Burns. |

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

5.2. Special hazards arising from the substance or mixture

| | |
|--|--------------------------------|
| Fire hazard | : No fire hazard. |
| Explosion hazard | : No direct explosion hazard. |
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. |

5.3. Advice for firefighters

| | |
|--------------------------------|---|
| Firefighting instructions | : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. |
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

| | |
|------------------|---|
| General measures | : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage. |
|------------------|---|

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For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Packaging materials : Store always product in container of same material as original container.

Germany

Storage class (LGK, TRGS 510)

Joint storage table

: LGK 8B - Non-combustible corrosive substances

| | | | | |
|----------|---------|----------|----------|-----------|
| LGK 1 | LGK 2A | LGK 2B | LGK 3 | LGK 4.1A |
| LGK 4.1B | LGK 4.2 | LGK 4.3 | LGK 5.1A | LGK 5.1B |
| LGK 5.1C | LGK 5.2 | LGK 6.1A | LGK 6.1B | LGK 6.1C |
| LGK 6.1D | LGK 6.2 | LGK 7 | LGK 8A | LGK 8B |
| LGK 10 | LGK 11 | LGK 12 | LGK 13 | LGK 10-13 |

Joint storage not permitted for

Joint storage with restrictions permitted for

Joint storage permitted for

: LGK 1, LGK 5.1A, LGK 5.2, LGK 6.2, LGK 7

: LGK 4.1A, LGK 4.2, LGK 4.3, LGK 5.1C

: LGK 2A, LGK 2B, LGK 3, LGK 4.1B, LGK 5.1B, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13

Switzerland

Storage class (LK)

: LK 8 - Corrosive materials

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

| ammonia (1336-21-6) | |
|---|--|
| EU - Indicative Occupational Exposure Limit (IOEL) | |
| Local name | Ammonia, anhydrous |
| IOEL TWA | 14 mg/m ³ (Ammonia, anhydrous; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value) |
| | 20 ppm (Ammonia, anhydrous; EU; Time-weighted average exposure limit 8 h; Indicative occupational exposure limit value) |
| IOEL STEL | 36 mg/m ³ (Ammonia, anhydrous; EU; Short time value; Indicative occupational exposure limit value) |
| | 50 ppm (Ammonia, anhydrous; EU; Short time value; Indicative occupational exposure limit value) |
| Regulatory reference | COMMISSION DIRECTIVE 2000/39/EC |
| Albania - Occupational Exposure Limits | |
| Local name | Amoniak, anhidër |
| OEL TWA | 14 mg/m ³ |
| | 20 ppm |
| OEL STEL | 36 mg/m ³ |
| | 50 ppm |
| Regulatory reference | VENDIM Nr. 522, datë 6.8.2014 PËR MIRATIMIN E RREGULLORES "PËR MBROJTJEN E SIGURISË DHE SHËNDËTIT TË PUNËMARRËSVE NGA RISQET E LIDHURA ME AGJENTËT KIMIKË NË PUNË" |
| Austria - Occupational Exposure Limits | |
| Local name | Ammoniak |
| MAK (OEL TWA) | 14 mg/m ³ |
| | 20 ppm |
| MAK (OEL STEL) | 36 mg/m ³ |
| | 50 ppm |
| Regulatory reference | BGBI. II Nr. 156/2021 |
| Belgium - Occupational Exposure Limits | |
| Local name | Ammoniac # Ammoniak |
| OEL TWA | 14 mg/m ³ (Ammoniac; Belgium; Time-weighted average exposure limit 8 h) |
| | 20 ppm (Ammoniac; Belgium; Time-weighted average exposure limit 8 h) |
| OEL STEL | 36 mg/m ³ (Ammoniac; Belgium; Short time value) |
| | 50 ppm (Ammoniac; Belgium; Short time value) |
| Regulatory reference | Koninklijk besluit/Arrêté royal 16/11/2023 |
| Bulgaria - Occupational Exposure Limits | |
| Local name | АМОНЯК |
| OEL TWA | 14 mg/m ³ |

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| ammonia (1336-21-6) | |
|---|--|
| | 20 ppm |
| OEL STEL | 36 mg/m ³ |
| | 50 ppm |
| Remark | • (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност) |
| Regulatory reference | Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.) |
| Croatia - Occupational Exposure Limits | |
| Local name | Amonijak, bezvodni |
| GVI (OEL TWA) | 14 mg/m ³ |
| | 20 ppm |
| KGV I (OEL STEL) | 36 mg/m ³ |
| | 50 ppm |
| Remark | K (Skin): (naznaka da tvar može štetno djelovati kroz kožu); T (otrovno); N (opasno za okoliš); EU* (naznaka da se radi o tvarima za koje su utvrđene indikativne granične vrijednosti izloženosti prema Direktivi 2000/39/ EC (prva lista)) |
| Regulatory reference | Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 148/2023) |
| Cyprus - Occupational Exposure Limits | |
| Local name | Αμμωνία, άνυδρη |
| OEL TWA | 14 mg/m ³ |
| | 20 ppm |
| OEL STEL | 36 mg/m ³ |
| | 50 ppm |
| Regulatory reference | Κανονισμοί του 2007 (Κ.Δ.Π. 295/2007) |
| Czech Republic - Occupational Exposure Limits | |
| Local name | Amoniak bezvodý |
| PEL (OEL TWA) | 14 mg/m ³ |
| | 20 ppm |
| NPK-P (OEL C) | 36 mg/m ³ |
| | 50 ppm |
| Remark | I - dráždí sliznice (oči, dýchací cesty) resp. kůži. |
| Regulatory reference | Nařízení vlády č. 361/2007 Sb. (Předpis 330/2023 Sb.) |
| Denmark - Occupational Exposure Limits | |
| Local name | Ammoniak |
| OEL TWA | 14 mg/m ³ |
| | 20 ppm |
| OEL STEL | 36 mg/m ³ |
| | 50 ppm |
| Remark | E (betyder, at stoffet har en EU-grænseværdi) |

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| ammonia (1336-21-6) | |
|--|---|
| Regulatory reference | BEK nr 1619 af 19/12/2024 |
| Estonia - Occupational Exposure Limits | |
| Local name | Ammoniaak |
| OEL TWA | 14 mg/m ³ |
| | 20 ppm |
| OEL STEL | 36 mg/m ³ |
| | 50 ppm |
| Regulatory reference | Vabariigi Valitsuse 20. märtsi 2001. a määruse nr 105 (RT I, 02.04.2024, 13) |
| Finland - Occupational Exposure Limits | |
| Local name | Vedetön ammoniakki |
| HTP (OEL TWA) | 14 mg/m ³ |
| | 20 ppm |
| HTP (OEL STEL) | 36 mg/m ³ |
| | 50 ppm |
| Regulatory reference | HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö) |
| France - Occupational Exposure Limits | |
| Local name | Ammoniac anhydre |
| VME (OEL TWA) | 7 mg/m ³ (Ammoniac anhydre; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante) |
| | 10 ppm (Ammoniac anhydre; France; Time-weighted average exposure limit 8 h; VRC: Valeur réglementaire contraignante) |
| VLE (OEL C/STEL) | 14 mg/m ³ (Ammoniac anhydre; France; Short time value; VRC: Valeur réglementaire contraignante) |
| | 20 ppm (Ammoniac anhydre; France; Short time value; VRC: Valeur réglementaire contraignante) |
| Remark | Valeurs règlementaires contraignantes |
| Regulatory reference | Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849) |
| Germany - Occupational Exposure Limits (TRGS 900) | |
| Local name | Ammoniak |
| AGW (OEL TWA) | 14 mg/m ³ |
| | 20 ppm |
| Peak exposure limitation factor | 2(l) |
| Remark | DFG,EU,Y |
| Regulatory reference | TRGS900 |
| Gibraltar - Occupational Exposure Limits | |
| Local name | Ammonia, anhydrous |
| OEL TWA | 14 mg/m ³ |
| | 20 ppm |
| OEL STEL | 36 mg/m ³ |
| | 50 ppm |

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| ammonia (1336-21-6) | |
|---|---|
| Regulatory reference | Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181) |
| Greece - Occupational Exposure Limits | |
| Local name | Αμμωνία |
| OEL TWA | 35 mg/m ³ |
| | 50 ppm |
| OEL STEL | 35 mg/m ³ |
| | 50 ppm |
| Regulatory reference | Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους |
| Hungary - Occupational Exposure Limits | |
| Local name | AMMÓNIA |
| AK (OEL TWA) | 14 mg/m ³ |
| | 20 ppm |
| CK (OEL STEL) | 36 mg/m ³ |
| | 50 ppm |
| Remark | m (maró hatású anyag, amely felmarja a bőrt, nyálkahártyát, szemet vagy mindhármat); EU1 (2000/39/EK irányelvben közölt érték); N (Irritáló anyagok, egyszerű fojtógázok, csekély egészségkárosító hatással bíró anyagok) |
| Regulatory reference | 5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről |
| Ireland - Occupational Exposure Limits | |
| Local name | Ammonia, anhydrous |
| OEL TWA | 14 mg/m ³ |
| | 20 ppm |
| OEL STEL | 36 mg/m ³ |
| | 50 ppm |
| Remark | IOELV (Indicative Occupational Exposure Limit Values) |
| Regulatory reference | Chemical Agents Code of Practice 2024 |
| Italy - Occupational Exposure Limits | |
| Local name | Ammoniaci anidra |
| OEL TWA | 14 mg/m ³ |
| | 20 ppm |
| OEL STEL | 36 mg/m ³ |
| | 50 ppm |
| Regulatory reference | Allegato XXXVIII del Decreto Legislativo 4 settembre 2024, n. 135 |
| Latvia - Occupational Exposure Limits | |
| Local name | Amonjaks |
| OEL TWA | 14 mg/m ³ |
| | 20 ppm |
| OEL STEL | 36 mg/m ³ |

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| ammonia (1336-21-6) | |
|--|---|
| | 50 ppm |
| Regulatory reference | Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 191). |
| Lithuania - Occupational Exposure Limits | |
| Local name | Amoniakas (bevandenis) |
| IPRV (OEL TWA) | 14 mg/m ³ |
| | 20 ppm |
| TPRV (OEL STEL) | 36 mg/m ³ |
| | 50 ppm |
| Regulatory reference | LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12) |
| Luxembourg - Occupational Exposure Limits | |
| Local name | Ammoniac anhydre |
| OEL TWA | 14 mg/m ³ |
| | 20 ppm |
| OEL STEL | 36 mg/m ³ |
| | 50 ppm |
| Regulatory reference | Mémorial A N° 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail |
| Malta - Occupational Exposure Limits | |
| Local name | Ammonia, anhydrous # Ammonia, anidru |
| OEL TWA | 14 mg/m ³ |
| | 20 ppm |
| OEL STEL | 36 mg/m ³ |
| | 50 ppm |
| Regulatory reference | S.L. 424.24 - Chemical Agents at Work Regulations (L.N. 356 of 2021) # L.S. 424.24 - Regolamenti dwar Aġenti Kīmiċi fuq il-Post tax-Xogħol (A.L. 356 tal-2021) |
| Netherlands - Occupational Exposure Limits | |
| Local name | Ammoniak |
| TGG-8u (OEL TWA) | 14 mg/m ³ (Ammoniak; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value) |
| | 20 ppm (Ammoniak; Netherlands; Time-weighted average exposure limit 8 h; Public occupational exposure limit value) |
| TGG-15min (OEL STEL) | 36 mg/m ³ (Ammoniak; Netherlands; Short time value; Public occupational exposure limit value) |
| | 51 ppm (Ammoniak; Netherlands; Short time value; Public occupational exposure limit value) |
| Regulatory reference | Arbeidsomstandighedenregeling 2024 |
| Poland - Occupational Exposure Limits | |
| Local name | Amoniak |
| NDS (OEL TWA) | 14 mg/m ³ |
| NDSch (OEL STEL) | 28 mg/m ³ |

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| ammonia (1336-21-6) | |
|--|---|
| Regulatory reference | Dz. U. 2024 poz. 1017 wraz z późn. zm. |
| Portugal - Occupational Exposure Limits | |
| Local name | Amoníaco |
| OEL TWA | 25 ppm |
| OEL STEL | 35 ppm |
| Regulatory reference | Norma Portuguesa NP 1796:2014 |
| Romania - Occupational Exposure Limits | |
| Local name | Amoniac |
| OEL TWA | 14 mg/m ³ 20 ppm |
| OEL STEL | 36 mg/m ³ 50 ppm |
| Regulatory reference | Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024) |
| Serbia - Occupational Exposure Limits | |
| Local name | амонијак, анхидровани |
| OEL TWA | 14 mg/m ³ 20 ppm |
| OEL STEL | 36 mg/m ³ 50 ppm |
| Remark | EY* – напомена да се ради о хемијским материјама за које су утврђене индикативне граничне вредности изложености према Директиви 2000/39/EЗ (прва листа); К – напомена да хемијска материја може штетно деловати на кожу |
| Regulatory reference | ПРАВИЛНИК о превентивним мерама за безбедан и здрав рад при излагању хемијским материјама („Службени гласник РС”, бр. 106/09, 117/17 и 107/21) |
| Slovakia - Occupational Exposure Limits | |
| Local name | Amoniak |
| NPHV (OEL TWA) | 14 mg/m ³ 20 ppm |
| NPHV (OEL STEL) | 36 mg/m ³ 50 ppm |
| Regulatory reference | Nariadenie vlády č. 355/2006 Z. z. (122/2024 Z. z.) |
| Slovenia - Occupational Exposure Limits | |
| Local name | amonijak, brezvodni |
| OEL TWA | 14 mg/m ³ 20 ppm |
| OEL STEL | 35 mg/m ³ 50 ppm |
| Remark | Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti), EU |
| Regulatory reference | Uradni list RS, št. 29/2024 z dne 4. 4. 2024 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu |

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| ammonia (1336-21-6) | |
|--|---|
| Spain - Occupational Exposure Limits | |
| Local name | Amoniaco |
| VLA-ED (OEL TWA) | 14 mg/m ³ |
| | 20 ppm |
| VLA-EC (OEL STEL) | 36 mg/m ³ |
| | 50 ppm |
| Remark | VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo. Todos estos agentes químicos figuran al menos en una de las directivas de valores límite indicativos publicadas hasta ahora (ver Anexo C. Bibliografía). Los estados miembros disponen de un tiempo fijado en dichas directivas para su transposición a los valores límites de cada país miembro. Una vez adoptados, estos valores tienen la misma validez que el resto de los valores adoptados por el país). |
| Regulatory reference | Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT |
| Sweden - Occupational Exposure Limits | |
| Local name | Ammoniak |
| NGV (OEL TWA) | 14 mg/m ³ |
| | 20 ppm |
| KGV (OEL STEL) | 36 mg/m ³ |
| | 50 ppm |
| Remark | 2 (Korttidsgränsvärde som avser 5-minutersperiod gäller för ammoniak, diisocyanater, 2,6-diisopropylfenylisocyanat, fenylisocyanat, isocyanosyra och metylisocyanat. Korttidsgränsvärde som avser 1-minuters-period gäller för akrylsyra) |
| Regulatory reference | Hygieniska gränsvärden (AFS 2018:1) |
| United Kingdom - Occupational Exposure Limits | |
| Local name | Ammonia, anhydrous |
| WEL TWA (OEL TWA) | 18 mg/m ³ Ammonia, anhydrous; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005) |
| | 25 ppm Ammonia, anhydrous; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005) |
| WEL STEL (OEL STEL) | 25 mg/m ³ Ammonia, anhydrous; United Kingdom; Short time value; Workplace exposure limit (EH40/2005) |
| | 35 ppm Ammonia, anhydrous; United Kingdom; Short time value; Workplace exposure limit (EH40/2005) |
| Regulatory reference | EH40/2005 (Fourth edition, 2020). HSE |
| Iceland - Occupational Exposure Limits | |
| Local name | Ammóníak |
| OEL TWA | 14 mg/m ³ |
| | 20 ppm |
| OEL STEL | 36 mg/m ³ |
| | 50 ppm |
| Remark | H |
| Regulatory reference | Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009) |

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| ammonia (1336-21-6) | |
|---|--|
| Norway - Occupational Exposure Limits | |
| Local name | Ammoniakk |
| Grenseverdi (OEL TWA) | 11 mg/m ³ |
| | 15 ppm |
| Korttidsverdi (OEL STEL) | 36 mg/m ³ |
| | 50 ppm |
| Remark | E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet. |
| Regulatory reference | FOR-2024-04-05-581 |
| North Macedonia - Occupational Exposure Limits | |
| Local name | Амонијак, безводен |
| OEL TWA | 14 mg/m ³ |
| | 20 ppm |
| KTV | 2.5 |
| Short time value [mg/m ³] | 35 mg/m ³ |
| Short time value [ppm] | 50 ppm |
| Remark | (KTV) краткотрајна вредност (КТВ) значи концентрација на опасни хемиски супстанции во воздухот на работното место внатре во зона на дишење, на која работникот без опасност по здравјето може да е изложен на покусо време. Изложеноста на краткотрајни вредности може да трае највеќе 15 минути и не смее да се повтори повеќе од четирипати во работната смена, при што меѓу две изложености на оваа концентрација мора да измине најмалку 60 минути. Краткотрајната вредност е изразена во mg/m ³ или во ml/m ³ (ppm) а е дадена како многукратни дозволени пречекорувања на граничната вредност; (EU) European Union – гранична вредност, определена на ниво на Европската унија |
| Regulatory reference | Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија” бр.46/10) |
| Switzerland - Occupational Exposure Limits | |
| Local name | Ammoniak |
| MAK (OEL TWA) | 14 mg/m ³ |
| | 20 ppm |
| KZGW (OEL STEL) | 28 mg/m ³ |
| | 40 ppm |
| Notation | SS _c / SS _c |
| Remark | SS _c - Auge ^{KT HU} & OAW ^{KT HU} - NIOSH, OSHA |
| Regulatory reference | www.suva.ch, 01.01.2025 |
| USA - ACGIH - Occupational Exposure Limits | |
| Local name | Ammonia |
| ACGIH® TLV® TWA | 25 ppm (Ammonia; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value) |
| ACGIH® TLV® STEL | 35 ppm (Ammonia; USA; Short time value; TLV - Adopted Value) |
| Remark (ACGIH) | Eye dam; URT irr |
| Regulatory reference | ACGIH 2024 |

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| ammonium chloride (12125-02-9) | |
|--|---|
| Belgium - Occupational Exposure Limits | |
| Local name | Ammonium (chlorure d') (fumées) # Ammoniumchloride (rook) |
| OEL TWA | 10 mg/m ³ |
| OEL STEL | 20 mg/m ³ |
| Regulatory reference | Koninklijk besluit/Arrêté royal 16/11/2023 |
| Bulgaria - Occupational Exposure Limits | |
| Local name | Амониев хлорид |
| OEL TWA | 10 mg/m ³ |
| Regulatory reference | Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.) |
| Croatia - Occupational Exposure Limits | |
| Local name | Amonijev klorid |
| GVI (OEL TWA) | 10 mg/m ³ |
| KGVI (OEL STEL) | 20 mg/m ³ |
| Regulatory reference | Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, граниčnim vrijednostima izloženosti i biološkim граниčnim vrijednostima (NN 148/2023) |
| Czech Republic - Occupational Exposure Limits | |
| Local name | Chlorid amonný |
| PEL (OEL TWA) | 5 mg/m ³ (dýmy) |
| NPK-P (OEL C) | 10 mg/m ³ (dýmy) |
| Remark | I - dráždí sliznice (oči, dýchací cesty) resp. kůži. |
| Regulatory reference | Nařízení vlády č. 361/2007 Sb. (Předpis 330/2023 Sb.) |
| Denmark - Occupational Exposure Limits | |
| Local name | Ammoniumchloridrøg |
| OEL TWA | 10 mg/m ³ |
| Regulatory reference | BEK nr 1619 af 19/12/2024 |
| Greece - Occupational Exposure Limits | |
| Local name | Χλωριούχο αμμώνιο (καπνός) |
| OEL TWA | 10 mg/m ³ |
| OEL STEL | 20 mg/m ³ |
| Regulatory reference | Π.Δ. 90/1999 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους |
| Ireland - Occupational Exposure Limits | |
| Local name | Ammonium chloride, fume |
| OEL TWA | 10 mg/m ³ |
| OEL STEL | 20 mg/m ³ |
| Remark | Advisory OELV (Advisory Occupational Exposure Limit Values) |
| Regulatory reference | Chemical Agents Code of Practice 2024 |

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| ammonium chloride (12125-02-9) | |
|--|--|
| Latvia - Occupational Exposure Limits | |
| Local name | Amonija hlorīds |
| OEL TWA | 10 mg/m ³ |
| Regulatory reference | Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 191). |
| Lithuania - Occupational Exposure Limits | |
| Local name | Amonio chloridas |
| IPRV (OEL TWA) | 10 mg/m ³ |
| Regulatory reference | LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12) |
| Portugal - Occupational Exposure Limits | |
| Local name | Cloreto de amónio, fumos |
| OEL TWA | 10 mg/m ³ |
| OEL STEL | 20 mg/m ³ |
| Regulatory reference | Norma Portuguesa NP 1796:2014 |
| Romania - Occupational Exposure Limits | |
| Local name | Clorură de amoniu |
| OEL TWA | 5 mg/m ³ |
| OEL STEL | 10 mg/m ³ |
| Regulatory reference | Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024) |
| Spain - Occupational Exposure Limits | |
| Local name | Cloruro amónico |
| VLA-ED (OEL TWA) | 10 mg/m ³ humos |
| VLA-EC (OEL STEL) | 20 mg/m ³ humos |
| Regulatory reference | Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT |
| United Kingdom - Occupational Exposure Limits | |
| Local name | Ammonium chloride |
| WEL TWA (OEL TWA) | 10 mg/m ³ fume |
| WEL STEL (OEL STEL) | 20 mg/m ³ fume |
| Regulatory reference | EH40/2005 (Fourth edition, 2020). HSE |
| Iceland - Occupational Exposure Limits | |
| Local name | Ammóníumklóríðreykur |
| OEL TWA | 10 mg/m ³ |
| Regulatory reference | Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 390/2009) |
| Norway - Occupational Exposure Limits | |
| Local name | Ammoniumklorid |
| Grenseverdi (OEL TWA) | 10 mg/m ³ |
| Korttidsverdi (OEL STEL) | 20 mg/m ³ |
| Remark | 1) Grenseverdien er fastsatt lik verdien for sjenerende støv. |
| Regulatory reference | FOR-2024-04-05-581 |

Ammonium Magnesium Chloride TS (ChP)

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ammonium chloride (12125-02-9)

Switzerland - Occupational Exposure Limits

| | |
|----------------------|---------------------------------------|
| Local name | Chlorure d'ammonium / Ammoniumchlorid |
| MAK (OEL TWA) | 3 mg/m ³ (a) / (a) |
| Regulatory reference | www.suva.ch, 01.01.2025 |

USA - ACGIH - Occupational Exposure Limits

| | |
|----------------------|---------------------------|
| Local name | Ammonium chloride, fume |
| ACGIH® TLV® TWA | 10 mg/m ³ |
| ACGIH® TLV® STEL | 20 mg/m ³ |
| Remark (ACGIH) | TLV® Basis: Eye & URT irr |
| Regulatory reference | ACGIH 2024 |

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|-----------------|------------------|
| Physical state | : Liquid |
| Colour | : Not available |
| Odour | : Ammoniacal. |
| Odour threshold | : Not available |
| Melting point | : Not applicable |

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| | |
|---|------------------------|
| Freezing point | : ≈ 0 °C |
| Boiling point | : ≈ 100 °C |
| Flammability | : Non flammable. |
| Lower explosion limit | : Not available |
| Upper explosion limit | : Not available |
| Flash point | : Not available |
| Auto-ignition temperature | : Not available |
| Decomposition temperature | : Not available |
| pH | : > 11 |
| Viscosity, kinematic | : Not available |
| Solubility | : Miscible with water. |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : Not available |
| Vapour pressure at 50°C | : Not available |
| Density | : Not available |
| Relative density | : ≈ 1.4 |
| Relative vapour density at 20°C | : Not available |
| Particle characteristics | : Not applicable |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

| | |
|-----------------------------|------------------|
| Acute toxicity (oral) | : Not classified |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

| ammonia (1336-21-6) | |
|--------------------------------|-------------------------|
| LD50 oral rat | 350 mg/kg bodyweight |
| ammonium chloride (12125-02-9) | |
| LD50 oral rat | 1410 mg/kg bodyweight |
| LD50 dermal rat | > 2000 mg/kg bodyweight |

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ammonium chloride (12125-02-9)

| | |
|---------------------------|---|
| LC50, intravenous, mouse | 353 mg/kg bw |
| Skin corrosion/irritation | : Causes severe skin burns. pH: > 11 |

ammonia (1336-21-6)

| | |
|----|--------|
| pH | > 11.5 |
|----|--------|

ammonium chloride (12125-02-9)

| | |
|-------------------------------|--|
| pH | 5 – 5.5 25 °C (10%) |
| Serious eye damage/irritation | : Causes serious eye damage. pH: > 11 |

ammonia (1336-21-6)

| | |
|----|--------|
| pH | > 11.5 |
|----|--------|

ammonium chloride (12125-02-9)

| | |
|-----------------------------------|---------------------|
| pH | 5 – 5.5 25 °C (10%) |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |

ammonia (1336-21-6)

| | |
|---|-------------------------------------|
| NOAEL (chronic, oral, animal/male, 2 years) | 256 mg/kg bodyweight rat |
| NOAEL (chronic, oral, animal/female, 2 years) | 284 mg/kg bodyweight rat |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : May cause respiratory irritation. |

ammonia (1336-21-6)

| | |
|------------------------|-----------------------------------|
| STOT-single exposure | May cause respiratory irritation. |
| STOT-repeated exposure | : Not classified |

ammonium chloride (12125-02-9)

| | |
|----------------------------|---------------------------|
| NOAEL (oral, rat, 90 days) | ≈ 1695.7 mg/kg bodyweight |
| Aspiration hazard | : Not classified |

ammonium chloride (12125-02-9)

| | |
|----------------------|----------------|
| Viscosity, kinematic | Not applicable |
|----------------------|----------------|

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

| | |
|---|---|
| Ecology - general | : Before neutralisation, the product may represent a danger to aquatic organisms. |
| Hazardous to the aquatic environment, short-term (acute) | : Not classified |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified |

ammonia (1336-21-6)

| | |
|----------------------|--|
| LC50 - Fish [1] | 0.75 – 3.4 mg/l Pimephales promelas (Fathead minnow) |
| EC50 - Crustacea [1] | 101 mg/l Daphnia magna (Water flea) |

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| ammonia (1336-21-6) | |
|---------------------|--------------------------------------|
| LOEC (chronic) | 1.3 mg/l Daphnia magna (Water flea) |
| NOEC (chronic) | 0.79 mg/l Daphnia magna (Water flea) |
| NOEC chronic fish | 1.2 mg/l Oncorhynchus gorboscha |

| ammonium chloride (12125-02-9) | |
|--------------------------------|--|
| LC50 - Fish [1] | 209 mg/l Cyprinus carpio (Common carp) |
| EC50 - Crustacea [1] | 136.6 mg/l Daphnia magna (Water flea) |
| NOEC (chronic) | 14.6 mg/l Daphnia magna (Water flea) |
| NOEC chronic fish | 11.8 mg/l Pimephales promelas (Fathead minnow) |

12.2. Persistence and degradability

| Ammonium Magnesium Chloride TS (ChP) | |
|--------------------------------------|--------------------|
| Persistence and degradability | Rapidly degradable |

| ammonia (1336-21-6) | |
|-------------------------------|--------------------|
| Persistence and degradability | Rapidly degradable |

| ammonium chloride (12125-02-9) | |
|--------------------------------|--------------------|
| Persistence and degradability | Rapidly degradable |

12.3. Bioaccumulative potential

| ammonia (1336-21-6) | |
|---|-------|
| Partition coefficient n-octanol/water (Log Pow) | -2.66 |

| ammonium chloride (12125-02-9) | |
|---|-------------------------|
| Partition coefficient n-octanol/water (Log Pow) | -4.37 (estimated value) |

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

| Component | |
|---|---|
| Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII | ammonia (1336-21-6), ammonium chloride (12125-02-9) |
| Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII | ammonia (1336-21-6), ammonium chloride (12125-02-9) |

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.

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| | |
|--|---|
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Sewage disposal recommendations | : Disposal must be done according to official regulations. |
| Product/Packaging disposal recommendations | : Disposal must be done according to official regulations. |
| Additional information | : Do not re-use empty containers. |
| Ecological waste information | : Avoid release to the environment. |

SECTION 14: Transport information

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

| ADR | IMDG | IATA | ADN | RID |
|---|---|---|---|---|
| 14.1. UN number or ID number | | | | |
| UN 3266 | UN 3266 | UN 3266 | UN 3266 | UN 3266 |
| 14.2. UN proper shipping name | | | | |
| CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (ammonia) | CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (ammonia) | Corrosive liquid, basic, inorganic, n.o.s. (ammonia) | CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (ammonia) | CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (ammonia) |
| Transport document description | | | | |
| UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (ammonia), 8, II, (E) | UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (ammonia), 8, II | UN 3266 Corrosive liquid, basic, inorganic, n.o.s. (ammonia), 8, II | UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (ammonia), 8, II | UN 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (ammonia), 8, II |
| 14.3. Transport hazard class(es) | | | | |
| 8 | 8 | 8 | 8 | 8 |
|  |  |  |  |  |
| 14.4. Packing group | | | | |
| II | II | II | II | II |
| 14.5. Environmental hazards | | | | |
| Dangerous for the environment: No | Dangerous for the environment: No Marine pollutant: No EmS-No. (Fire): F-A EmS-No. (Spillage): S-B | Dangerous for the environment: No | Dangerous for the environment: No | Dangerous for the environment: No |
| No supplementary information available | | | | |

14.6. Special precautions for user

Overland transport

| | |
|---|---------------|
| Classification code (ADR) | : C5 |
| Special provisions (ADR) | : 274 |
| Limited quantities (ADR) | : 1I |
| Excepted quantities (ADR) | : E2 |
| Packing instructions (ADR) | : P001, IBC02 |
| Mixed packing provisions (ADR) | : MP15 |
| Portable tank and bulk container instructions (ADR) | : T11 |
| Portable tank and bulk container special provisions (ADR) | : TP2, TP27 |
| Tank code (ADR) | : L4BN |
| Tank special provisions (ADR) | : TU42 |
| Vehicle for tank carriage | : AT |
| Transport category (ADR) | : 2 |

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Hazard identification number (Kemler No.) : 80
Orange plates :



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

Transport by sea

Special provisions (IMDG) : 274
Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T11
Tank special provisions (IMDG) : TP2, TP27
Stowage category (IMDG) : B
Stowage and handling (IMDG) : SW2
Segregation (IMDG) : SGG18, SG35
Properties and observations (IMDG) : Reacts violently with acids. Causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y840
PCA limited quantity max net quantity (IATA) : 0.5L
PCA packing instructions (IATA) : 851
PCA max net quantity (IATA) : 1L
CAO packing instructions (IATA) : 855
CAO max net quantity (IATA) : 30L
Special provisions (IATA) : A3, A803
ERG code (IATA) : 8L

Inland waterway transport

Classification code (ADN) : C5
Special provisions (ADN) : 274
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
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) : 274
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02
Mixed packing provisions (RID) : MP15
Portable tank and bulk container instructions (RID) : T11
Portable tank and bulk container special provisions (RID) : TP2, TP27
Tank codes for RID tanks (RID) : L4BN
Special provisions for RID tanks (RID) : TU42
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE6
Hazard identification number (RID) : 80

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

| EU restriction list (REACH Annex XVII) | | |
|--|--|---|
| Reference code | Applicable on | Entry title or description |
| 3(b) | Ammonium Magnesium Chloride TS (ChP) ; ammonia | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10 |
| 3(c) | ammonia | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1 |
| 65. | ammonium chloride | Inorganic ammonium salts |

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

Austria

Toxic Substances Ordinance 2000 : Is not subject to the Toxic Substances Ordinance 2000.

Germany

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).
Major Accidents Ordinance (12. BImSchV) : Is not subject to the Major Accidents Ordinance (12. BImSchV)

Netherlands

ABM category : A(2) - toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW-lijst van kankerverwekkende stoffen : None of the components are listed
SZW-lijst van mutagene stoffen : None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

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Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

Poland

Polish National Regulations : Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).
Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)
Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).
ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

| Indication of changes | | |
|-----------------------|------------------------------------|-----------------|
| Section | Changed item | Comments |
| 4.1 | First-aid measures for first aider | Added |
| 4.2 | Symptoms/effects after inhalation | Added |
| 5.1 | Unsuitable extinguishing media | Added |
| 5.2 | Explosion hazard | Added |
| 5.2 | Fire hazard | Added |
| 5.3 | Firefighting instructions | Added |
| 6.1 | Emergency procedures | Added |
| 6.1 | Protective equipment | Added |
| 6.1 | General measures | Added |
| 6.3 | For containment | Added |
| 7.1 | Additional hazards when processed | Added |
| 7.2 | Technical measures | Added |
| 7.2 | Packaging materials | Added |
| 7.2 | Storage conditions | Modified |

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| Indication of changes | | |
|-----------------------|--|-----------------|
| Section | Changed item | Comments |
| 9 | Flammability | Modified |
| 13.1 | Product/Packaging disposal recommendations | Added |
| 13.1 | Sewage disposal recommendations | Added |
| 13.1 | Additional information | Added |
| 13.1 | Regional waste regulation | Added |
| 16 | Abbreviations and acronyms | Modified |

| Abbreviations and acronyms: | |
|-----------------------------|---|
| ACGIH | American Conference of Government Industrial Hygienists |
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BLV | Biological limit value |
| BOD | Biochemical oxygen demand (BOD) |
| CAS-No. | Chemical Abstract Service number |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| COD | Chemical oxygen demand (COD) |
| CSA | Chemical safety assessment |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC-No. | European Community number |
| EC50 | Median effective concentration |
| ED | Endocrine disruptor |
| EN | European Standard |
| EWC | European waste catalogue |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| Log Kow | Partition coefficient n-octanol/water (Log Kow) |
| Log Pow | Partition coefficient n-octanol/water (Log Pow) |
| MAK | maximum workplace concentration |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |

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| Abbreviations and acronyms: | |
|-----------------------------|--|
| NOEC | No-Observed Effect Concentration |
| N.O.S. | Not Otherwise Specified |
| OECD | Organisation for Economic Co-operation and Development |
| OEL | Occupational Exposure Limit |
| OSHA | Occupational Safety Health Administration |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| PPE | Personal protection equipment |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| TF | Technical function |
| ThOD | Theoretical oxygen demand (ThOD) |
| TLM | Median Tolerance Limit |
| TWA | Time Weighted Average |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and Very Bioaccumulative |
| UFI | Unique Formula Identifier |

| 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 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1, Sub-Category 1B |
| Skin Corr./Irrit. Not classified | Skin corrosion/irritation Not classified |
| 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. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H400 | Very toxic to aquatic life. |

| Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]: | | |
|---|------|--------------------|
| Skin Corr. 1B | H314 | Calculation method |
| Eye Dam. 1 | H318 | Calculation method |
| STOT SE 3 | H335 | Calculation method |

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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.