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Section 1 Identification of the substance/mixture and the company

- 1.1 Product identifier **Aluminium 2**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- Use of substance Reagent for water analysis
- 1.3 Supplier WAPOTEC GmbH
Franz-Sauer-Strasse 44
A-5020 Salzburg
Tel: +43 662 434342-0
Fax: +43 662 434342-3
- Contact Mr. G. Weiss
Email: office@wapotec.at
- 1.4 Emergency phone +43 662 43 43 42-0
Office hours: MO - TH: 8.00 - 16.00, FR: 8.00 - 12.00
- Toxicity information centre Vienna:**
Phone: +43 1 406 43 43
Available 0-24h



Section 2 Hazards identification

- 2.1 Hazard classification of substance or mixture
-  According to Directive (EC) N° 1272/2008
- H228 Flammable solid.
- H317 May cause an allergic skin reaction.

- 2.2 Label elements

 According to Directive (EC) 1272/2008



GHS02 flame

Warning

Flam. Sol. 2 H228 Flammable solid.



GHS07

Warning

Skin Sens. 1 H317 May cause an allergic skin reaction.

H228 Flammable solid.

- H317 May cause an allergic skin reaction.
- P210 Keep away from heat – no smoking.
- P280 Wear protective gloves.
- P302+P352 IF ON SKIN: Wash with plenty of water.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

☉ Danger defining components for labeling

Methenamin (CAS: 100-97-0)

2.3

Other hazards

No further relevant information available.

Section 3

Composition/information on ingredients

3.2

Mixtures

☉ Chemical characteristics

Mixture of organic and inorganic compounds

☉ Dangerous ingredients

Name	CAS # / EC # / Index #	Conc %	Classification according to Regulation (EC) 1272/2008*	
MethenaminE	100-97-0/ 202-905-8/ 612-101-00-2	90-100	flam. sol 2 skin sens 1	H228 H317

* For the wording of the listed hazard phrases refer to section 16.

Section 4

First-aid measures

4.1

Description of first aid measures

Remove immediately all contaminated clothing soiled by the product.

☉ After inhalation

Supply fresh air; consult doctor in case of symptoms.

☉ After skin contact

Instantly rinse with water.

If skin irritation or rash occurs: Get medical advice/attention.

☉ After eye contact

Rinse opened eye for several minutes under running water minutes (at least 15 minutes). If symptoms persist, consult doctor.

☉ After swallowing

Rinse out mouth and then drink at least 1-2 glasses of water.
 Seek medical treatment in case of complaints.

4.2 Most important symptoms and effects, acute and delayed

Allergic reactions

Irritations

After inhalation:

mucous membrane irritation

coughing

breathing difficulty

After swallowing of large amounts:

gastric or intestinal trouble

pain

sickness

vomiting

Danger risk of skin sensitization

4.3 Indications for immediate medical attention or special treatment needed

No further relevant information available.

Section 5

Fire-fighting measures

5.1 Extinguishing media

☉ Suitable extinguishing media

Water

Carbon dioxide (CO₂)

Foam

Fire-extinguishing powder

☉ Unsuitable extinguishing media for safety reasons

For this substance / mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Combustible

Formation of toxic gases is possible during heating or in case of fire.

Can be released of fire:

Hydrogen cyanide (prussic acid HCN)

Nitrous gases

Nitrogen oxides (NO_x)

Ammonia (NH₃)

5.3 Special protective actions for fire-fighters

☉ Special protective equipment

Wear self-contained breathing apparatus.

Wear full protective suit.

☉ Additional information


Collect contaminated fire fighting water separately. It must not enter drains.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
 Ambient fire may liberate hazardous vapours.



Section 6






Accidental release measures

- 6.1 Personal precautions, protective equipment and suitable emergency procedures.
 Wear protective equipment. Keep unprotected persons away.
 Ensure adequate ventilation.
 Advice for emergency responders
 Protective equipment: see section 8.
- 6.2 Environmental precautions
 Do not allow product to reach sewage system or water bodies.
 Damp down gases/fumes/haze with water spray jet.
- 6.3 Measures and material for containment and cleaning up:
 Ensure adequate ventilation.
 Collect mechanically.
 Dispose of contaminated material as waste according to section 13.
- 6.4 Additional information
 See section 8 for information on personal protection equipment.
 See section 13 for information on disposal.



Section 7

Handling and storage

- 7.1 Precautions for safe handling
 Advice on safe handling
 Use only in well ventilated areas.
 Keep ignition sources away – Do not smoke.
 Take action to prevent static discharges.
 Ensure good ventilation/mechanical exhaustion at workplace.
 Hygiene measures
 Avoid contact with the skin.
 Take off immediately all contaminated clothing.
 Wash hands during breaks and at the end of the work.
 Do not eat, drink or smoke when using this product.
- 7.2 Conditions for safe storage including any incompatibilities
 Storage
 Requirements to be met by storerooms and containers
 Store in cool location.
 Information about storage in one common storage facility

Store away from oxidizing agents.

Further information about storage conditions

Store in cool, dry conditions in well sealed containers.

Protect from heat and direct sunlight.

Protect from the effects of light.

Store under dry conditions.

Protect from humidity and keep away from water.

Product is hygroscopic.

Recommended storage temperature: 20°C +/-5°C

7.3

Specific end uses

No further relevant information available.

Section 8

Exposure controls and personal protection

8.1

Control parameters

Components with specific control parameters

CAS: 100-97-0 Methenamine	
OEL (Sweden)	Short-term value: 5 mg/m ³ Long-term value: 3 mg/m ³ S

Regulatory information OEL (Sweden): AFS2011: 18

DNELs

Derived No Effect Level (DNEL)

CAS: 100-97-0 Methenamine		
Dermal	DNEL	8,8 mg/kg (Worker / long-term / systemic effects)
Inhalative	DNEL	31 mg/m ³ (Worker / long-term / systemic effects)

Recommended monitoring procedures

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

PNECs

Predicted No Effect Concentration (PNEC)

CAS: 100-97-0 Methenamine	
PNEC	100 mg/l (Sewage treatment plant) 0,5 mg/l (Marine water sediment) 2,4 mg/l (Fresh water sediment) 3 mg/l (Fresh water)

Additional information

The lists that were valid during the compilation were used as basis.

8.2

Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.

Personal protective equipment

Breathing equipment

Use breathing protection against the effects of fumes/dust/aerosol.

Recommended filter device for short term use: Filter P2

Hand protection

Protective gloves.

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

Glove material:

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Penetration time of glove material:

Value for the permeation: Level = 1 (<10 min)

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection

Safety glasses

use against the effects of fumes / dust.

Body protection

Protective work clothing.

Limitation and supervision of exposure into the environment

Do not allow product to reach sewage system or water bodies.



Section 9

Physical and chemical properties

9.1

Information on basic physical and chemical properties

Appearance	Tablets
Color	White
Odor	Amine-like
Odor threshold	Not determined
pH-value (9 g/l) at 20 °C	7.5
Melting point/Freezing point	Not determined
Boiling point / Boiling range	Not applicable
Flash point	250° C (CAS 100-97-0)
Flammability (solid, gas)	Flammable solid
Decomposition temperature	>263 °C (CAS 100-97-0)
Auto ignition temperature	Product is not self-igniting

Explosive properties	Product is not capable of dust explosion in the form supplied; enrichment with fine dust causes risk of dust explosion
Lower explosion limit	20 g/m ³ (CAS 100-97-0)
Upper explosion limit	Not determined
Oxidizing properties	None
Vapor pressure at 20 °C	<0,01 hPa (CAS 100-97-0)
Density (20 °C)	1,36 g/cm ³
Relative density	Not determined
Vapour density	Not applicable
Evaporation rate	Not applicable
Solubility in water	Soluble
Partition coefficient: n-octanol-water	Not applicable
Viscosity	Not applicable
Solvent content:	
Organic solvents:	0,0%
Solids content:	100%
Other information	

9.2. No further relevant information available.



Section 10 Stability and reactivity

- | | |
|------|---|
| 10.1 | Reactivity
Dust can combine with air to form an explosive mixture. |
| 10.2 | Chemical stability
Stable at ambient temperature (room temperature). |
| 10.3 | Possibility of hazardous reactions
In contact with nitrites, nitrates or nitrous acid possible release of nitrosamines (carcinogenic)! with nitric acid, acetic anhydride, iodide
---> Explosive
Reacts with peroxides.
Reacts with acids and oxidizing agents. |
| 10.4 | Conditions to avoid
Strong heating. |
| 10.5 | Incompatible materials
No further relevant information available. |
| 10.6 | Hazardous decomposition products |

Nitrous gases
 Formaldehyde
 Ammonia (NH₃)
 In case of fire: see section 5

Section 11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

LD/LC50 values that are relevant for classification

CAS: 100-97-0 methenamine		
Oral	LD ₅₀	9200 mg/kg (rat) (IUCLID)
Dermal	LD ₅₀	> 2000 mg/kg (rat) (OECD 402)

Primary irritant effect

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Based on available data, the classification criteria are not met.

Information on components:		
CAS: 100-97-0 methenamine		
Irritation of skin	OECD 404	(rabbit: non irritation)
Irritation of eyes	OECD 405	(rabbit: non irritation)

Respiratory or skin sensitization

May cause an allergic skin reaction.

Information on components:		
CAS: 100-97-0 methenamine		
Sensitization	OECD 406	(guinea pig: positive)
	Patch test (human)	(positive) (UCLID)

CMR effects (carcinogenetic, mutagenicity and toxicity for reproduction)

The following statements refer to the mixture:

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Cancerogenity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

☉ STOT (specific target organ toxicity) – single exposure

Based on available data, the classification criteria are not met.

☉ STOT (specific target organ toxicity) – repeated exposure

Based on available data, the classification criteria are not met.

☉ Aspiration hazard

Based on available data, the classification criteria are not met.

Information on components

OECD 414: Teratogenicity testing

OECD 473: Mutagenicity testing

OECD 471, 474, 476: Germ mutagenicity testing

CAS: 100-97-0 methenamine		
OECD 471	(negative)	(Bacterial Reverse Mutation Test – Ames test)
OECD 474	(negative)	(Mammalian Erythrocyte Micronucleus Test) (IUCLID)

☉ Additional toxicological information

Under given conditions, contact with nitrites or nitric acid can lead to the formation of nitrosamines, which have shown themselves to be carcinogenic in animal experiments.

☉ Experience with humans

CAS 100-97-0: Can cause kidney damages.



Section 12

Ecological information

12.1

Toxicity

☉ Aquatic toxicity

CAS 100-97-0 methenamine	
EC50	36 mg/l/48h (daphnia magna) (IUCLID)
EC10	5 mg/l (Fisch)
LC50 (static)	41 mg/l/96h (bluegill) (US-EPA)

☉ Bacterial toxicity

Sulphates toxic >2,5 g/l

CAS 100-97-0 methenamine	
EC10 (static)	>5000 mg/l (Bacterial toxicity) (DIN 38412) (Merck, Vibrio fischeri)

☉ Other information

Toxic for fish:

Magnesium compounds: 100 – 400 mg/l

12.2

Persistence and degradability

CAS-No 100-97-0: not easily biodegradable.

CAS 100-97-0 methenamine	
OECD 302 C	39-47% / 28d (not readily biodegradable) (Modified MITI Test (II))

12.3

Bioaccumulation potential

Pow = n-octanol/water partition coefficient.

log Pow < 1 = Does not accumulate in organisms.

CAS 100-97-0 methenamine	
log Pow	-2,84 (.) (experimental)

12.4

Mobility in soil

No further relevant information available.

12.5

Results of PBT- and vPvB-assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

12.6

Other adverse effects

Avoid transfer in the environment.

 Water hazard

Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Section 13

Disposal considerations

13.1

 Waste treatment methods

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Hand over to disposers of hazardous waste.

 European waste catalogue

16 05 06

Laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals.

 Contaminated packaging material

Recommendation: Disposal must be made according to official regulations.

Recommended cleaning agent: Water, if necessary with cleaning agent.

Section 14 Transport information

No dangerous good according to regulation for transport of dangerous goods.

14.1

UN-Number

ADR,IMDG,IATA

1328

14.2

Proper UN-shipping name

ADR,IMDG,IATA

HEXAMETHYLENTETRAMINE

HEXAMETHYLENETETRAMINE

14.3

Transport hazard class

ADR,IMDG,IATA



4.1

(F1) flammable solids, self-reactive substances and solid desensitized explosives

14.4

Packaging group

ADR,IMDG,IATA

III

14.5

Environmental hazards

Not applicable.

14.6

Special precautions for the user

Warning: Flammable solids, self-reactive substances and solid desensitized explosives.

Kemler-number: 40

EMS-number: F-A,S-G

Stowage Category A

14.7

Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

Transport/Additional information

ADR/RID

Limited quantities (LQ) 5 kg

Exempted quantities (EQ) Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

Transport category 3

Tunnel restriction code E

IMDG

Limited quantities (LQ) 5 kg

Exempted quantities (EQ) Code: E1

Maximum net quantity per inner packaging: 30 g
 Maximum net quantity per outer packaging: 1000 g

Section 15 Regulatory information

- 15.1 Safety-, health-, ambient- and legislation specific instructions for substance or mixture
- ☉ Regulation (EC) 1005/2009 on substances that deplete the ozone layer
 None of the ingredients is listed.
 - ☉ Directive 2012/18/UE (SEVESO III)
 Named dangerous substances – Annexe I
 None of the ingredients is listed.
 - ☉ Information about limitation of use
 Employment restrictions concerning young people must be observed.
- 15.2 Chemical safety assessment
 A chemical safety assessment has not been carried out.

Section 16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- ☉ Relevant H-phrases

H228	Flammable solid.
H317	May cause an allergic skin reaction.
- ☉ Training hints
 Provide adequate information, instruction and training for operators.
- ☉ Edition
 Replaces previous versions
- ☉ Written by
 WAPOTEC GmbH
- ☉ Short cut
 n. t. not tested
 n. a. not applicable
 PBT persistent, bio-accumulative, toxic
 vPvB high persistent, high bio-accumulative