

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 09.02.2016

Version number 49

Revision: 09.02.2016

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

- **1.1 Product identifier**
 - **Product name:** Aluminium No. 2
 - **Catalog number:** 00515471, (4)515471BT, (4)515470BT, 515473(0), 00515470BT, 00515471BT, 00515479BT
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
 - **Application of the substance / the preparation:** Reagent for water analysis
- **1.3 Details of the supplier of the safety data sheet**
 - **Supplier:**
Tintometer GmbH
Schleefstr. 8-12
DE-44287 Dortmund
Made in Germany
www.lovibond.com
 - **Informing department:**
e-mail: produktsicherheit@tintometer.de
Product Safety Department
 - **Contact for technical details:**
Technical Department
e-mail: technik@tintometer.de
- **1.4 Emergency telephone number:**
Poison Center Berlin, Germany
phone: 0049-30 30686 790
Languages: English and German

phone: +49 (0) 231 945100
E-Mail: sales@tintometer.de

* SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
 - **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Sol. 2 H228 Flammable solid.



GHS07

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

- **2.2 Label elements**
 - **Labelling according to Regulation (EC) No 1272/2008** The product is classified and labelled according to the CLP regulation.
 - **Hazard pictograms**



GHS02 GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**
methenamine
- **Hazard statements**
H228 Flammable solid.
H317 May cause an allergic skin reaction.

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Precautionary statements

- 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.

2.3 Other hazards No further relevant information available.**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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture of organic and inorganic compounds

Dangerous components:

CAS: 100-97-0 EINECS: 202-905-8 Index No: 612-101-00-2 Reg.nr.: 01-2119474895-20-XXXX	methenamine	 Flam. Sol. 2, H228;  Skin Sens. 1, H317	90-100%
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Additional information For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Instantly remove any 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 (at least 15 min). If symptoms persist, consult doctor.

After swallowing

Rinse out mouth and then drink 1-2 glasses of water.

Seek medical treatment in case of complaints.

4.2 Most important symptoms and effects, both 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 Indication of any immediate medical attention and special treatment needed: No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media**Suitable extinguishing agents**

Water

Carbon dioxide (CO₂), Foam, Fire-extinguishing powder

5.2 Special hazards arising from the substance or mixture

combustible

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

Hydrogen cyanide (HCN)

nitrous gases

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nitrogen oxides (NO_x)Ammonia (NH₃)

formaldehyde

• 5.3 Advice for firefighters**• 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 emergency procedures**• Advice for non-emergency personnel:**

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 Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Collect mechanically.

Dispose of contaminated material as waste according to item 13.

• 6.4 Reference to other sections

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 precautionary measures against static discharge.

• 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 oxidising agents.**• Storage class** 4.1 B**• 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.

This product is hygroscopic.

• Recommended storage temperature: 20 °C +/- 5 °C**• 7.3 Specific end use(s)** No further relevant information available.

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* SECTION 8: Exposure controls/personal protection

• 8.1 Control parameters

• Components with limit values that require monitoring at the workplace:

CAS: 100-97-0 methenamine

OEL (Sweden)	Short-term value: 5 mg/m ³ Long-term value: 3 mg/m ³ S
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• 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) 2.4 mg/l (Fresh water sediment) 3 mg/l (Fresh water)
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• 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 item 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

• Protection of hands:

Protective gloves.

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

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

• Material of gloves

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.

Risk of explosion.

* SECTION 9: Physical and chemical properties

• 9.1 Information on basic physical and chemical properties

• Appearance:

Form / Physical state:	Tablets
Colour:	White

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· Odour:	Amine-like
· Odour threshold:	Not determined.
· pH-value (9 g/l) at 20 °C:	7.5
· Melting point/Freezing point:	Not determined
· Initial boiling point and boiling range:	Not determined
· 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 explosive. The following applies in general to flammable organic substances / preparations: Dust explosion possible if in powder or granular form (fine distribution), mixed with air.
· Flammability or explosive limits:	
Lower:	20 g/m ³ (CAS 100-97-0)
Upper:	Not determined.
· Oxidising properties:	none
· Vapour pressure at 20 °C:	< 0.01 hPa (CAS 100-97-0)
· Density at 20 °C:	1.36 g/cm ³
· Relative density:	Not determined.
· Vapour density:	Not applicable.
· Evaporation rate:	Not applicable.
· Solubility(ies):	
Water:	Soluble
· Partition coefficient (n-octanol/water):	Not applicable.
· Viscosity:	Not applicable.
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	100.0 %
· 9.2 Other information	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 oxidizing agents
Reacts with acids
- **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.

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· LD/LC50 values that are relevant for classification:		
CAS: 100-97-0 methenamine		
Oral	LD50	9200 mg/kg (rat) (IUCLID)
Dermal	LD50.	> 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: no irritation)
Irritation of eyes	OECD 405	(rabbit: no irritation)

- **Respiratory or skin sensitisation**
May cause an allergic skin reaction.

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

- **CMR effects (carcinogenicity, 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.
- **Carcinogenicity** 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 cell 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	(fish)
LC50 (static)	41 mg/l/96h	(bluegill) (US-EPA)

- **Bacterial toxicity:**
sulphates toxic > 2.5 g/l

CAS: 100-97-0 methenamine		
EC50 (static)	> 5000 mg/l	(Bacterial toxicity) (DIN 38412) (Merck, Vibrio fischeri)

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Other information:

Toxic for fish:

Magnesium compounds: 100 - 400 mg/l

12.2 Persistence and degradability

CAS 100-97-0: not easily biodegradable

CAS: 100-97-0 methenamine

OECD 302 C 39-47% / 28d (.) (Modified MITI Test (II))

12.3 Bioaccumulative potential

Pow = n-octanol/wasser partition coefficient

log Pow < 1 = Does not accumulate in organisms.

CAS: 100-97-0 methenaminelog Pow -2.84 (.) (experimental)
(IUCLED)**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 into the environment.**Water hazard:**

Mixture (Self-assessment acc. VwVwS Annex 4, German regulation):

Water hazard class 1: slightly hazardous for water.

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 unneutralised.

SECTION 13: Disposal considerations

13.1 Waste treatment methods**Recommendation**

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 hazardous substances, including mixtures of laboratory chemicals

Uncleaned packagings:**Recommendation:** Disposal must be made according to official regulations.**Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

14.1 UN-Number**ADR, RID, IMDG, IATA**

UN1328

14.2 UN proper shipping name**ADR/RID****IMDG****IATA**1328 HEXAMETHYLENETETRAMINE
HEXAMETHYLENETETRAMINE
Hexamethylenetetramine**14.3 Transport hazard class(es)****ADR/RID****Class**

4.1 (F1) Flammable solids, self-reactive substances and solid desensitised explosives.

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· Label	4.1
· IMDG, IATA	
	
· Class	4.1 Flammable solids, self-reactive substances and solid desensitised explosives.
· Label	4.1
· 14.4 Packing group · ADR, RID, IMDG, IATA	III
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Flammable solids, self-reactive substances and solid desensitised 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
· Excepted 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
· Excepted 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 and environmental regulations/legislation specific for the substance or mixture**

· **Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals:**

None of the ingredients is listed.

· **Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:**

None of the ingredients is listed.

· **Directive 2012/18/EU (SEVESO III):**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **Information about limitation of use:** Employment restrictions concerning young persons 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 phrases**

H228 Flammable solid.

H317 May cause an allergic skin reaction.

· **Training hints** Provide adequate information, instruction and training for operators.

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• Abbreviations and acronyms:

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Sol. 2: Flammable solids, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

• Sources

Data arise from safety data sheets, reference works and literature.

IUCLID (International Uniform Chemical Information Database)

• * Data compared to the previous version altered.

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