

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

Printing date 18.07.2018

Version number 10

Revision: 17.07.2018

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

· 1.1 Product identifier

· Product name: **T-CAL Standards 800 NTU / 200 NTU / 20 NTU / < 0.1 NTU**

· Catalog number: Set: 194150, 4194150

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

· Application of the substance / the preparation: Standard Solution for calibration purposes

· 1.3 Details of the supplier of the safety data sheet

· Supplier:

Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com

phone: +49 231 94510-0
e-mail: sales@tintometer.de

Tintometer GmbH
Division AQUALYTIC®
Schleefstr. 12
44287 Dortmund
Made in Germany
www.aqualytic.de

phone: +49 231 94510-755
e-mail: sales@aqualytic.de

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom

phone : +44 1980 664800
e-mail: SDS@tintometer.com

· Informing department:

e-mail: sds@tintometer.de
Product Safety Department

· 1.4 Emergency telephone number:

+44 1235 239670
Languages: English

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008



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



GHS07

· Signal word Warning

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Hazard-determining components of labelling:

methenamine

Hazard statements

H317 May cause an allergic skin reaction.

Precautionary statements

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.

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: aqueous solution

Dangerous components:

CAS: 100-97-0	methenamine	⚠ Flam. Sol. 2, H228; ⚠ Skin Sens. 1, H317	2.5-5%
EINECS: 202-905-8			
Index No: 612-101-00-2			
Reg.nr.: 01-2119474895-20-XXXX			

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.

In case of persistent symptoms consult doctor.

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

allergic reactions

after swallowing:

gastric or intestinal trouble

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 Use fire fighting measures that suit the environment.

5.2 Special hazards arising from the substance or mixture

The product is not combustible.

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

Can be released in case of fire:

Nitrogen oxides (NOx)

Ammonia (NH₃)

hydrogen cyanide (prussic acid HCN)

5.3 Advice for firefighters
Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

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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.
- Dilute with much water.

6.3 Methods and material for containment and cleaning up:

- Ensure adequate ventilation.
- Absorb with liquid-binding material (sand, diatomite, universal binders).
- 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: Prevent formation of aerosols.

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.
- Store only in unopened original containers.

Information about storage in one common storage facility: Store away from oxidising agents.

Further information about storage conditions:

- Protect from heat and direct sunlight.
- Protect from the effects of light.
- Protect from humidity and keep away from water.

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

7.3 Specific end use(s) No further relevant information available.

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, V
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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)

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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)

• **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:

Wear gloves in case of breakage / leakage.

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:** Wear safety glasses in case of breakage / leakage.

• **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:

Form / Physical state:	Suspension
Colour:	milky

• **Odour:** Fish-like

• **Odour threshold:** Not determined.

• **pH-value at 20°C:** 7.5

• **Melting point/Freezing point:** Not determined

• **Initial boiling point and boiling range:** 100°C

• **Flash point:** Not applicable

• **Flammability (solid, gas):** Not applicable.

• **Decomposition temperature:** Not determined.

• **Auto-ignition temperature:** Product is not self-igniting.

• **Explosive properties:** Product is not explosive.

Flammability or explosive limits:

Lower:	Not applicable
Upper:	Not applicable

• **Oxidising properties:** none

• **Vapour pressure:** Not determined.

• **Density at 20°C:** 1.02 g/cm³

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· Relative density:	Not determined.
· Vapour density:	Not determined.
· Evaporation rate:	Not determined.
· Solubility(ies):	
Water:	Fully miscible
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
Water:	< 95 %
Solids content:	< 6 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** see section 10.3
- **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)!
Reacts with peroxides
Reacts with oxidizing agents
- **10.4 Conditions to avoid** Strong heating (decomposition)
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
Small quantities of formaldehyde may be formed
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	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.

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- **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, 487: 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.

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:
CAS: 100-97-0 methenamine

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

OECD 302 C	39–47 % / 28 d (not readily biodegradable) (Modified MITI Test (II))
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12.3 Bioaccumulative potential

Pow = n-octanol/wasser partition coefficient
 log Pow < 1 = Does not accumulate in organisms.

CAS: 100-97-0 methenamine

log Pow	-2.84 (.) (experimental) (IUCLID)
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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:

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

SECTION 14: Transport information

<ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA 	Void
<ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR, IMDG, IATA 	Void
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG, IATA · Class 	Void
<ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA 	Void
<ul style="list-style-type: none"> · 14.5 Environmental hazards: 	Not applicable.
<ul style="list-style-type: none"> · 14.6 Special precautions for user 	Not applicable.
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	Not dangerous according to the above specifications.

SECTION 15: Regulatory information

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

- **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.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

- **Regulation (EU) No 649/2012**

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.

- **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

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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 – Category 2
Skin Sens. 1: Skin sensitisation – Category 1

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

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