



SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 07/22/2014

Version 3.0

SECTION 1. Identification

Product identifier

Product number	104343
Product name	Methenamine GR for analysis Reag. Ph Eur
CAS-No.	100-97-0

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

Identified uses	Reagent for analysis
-----------------	----------------------

Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation 290 Concord Road, Billerica, MA 01821, United States of America General Inquiries: +1-978-715-4321 Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
---------	--

Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
---------------------	--

SECTION 2. Hazards identification

GHS Classification

Flammable solid, Category 2, H228
Skin sensitization, Category 1, H317

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms



Signal Word
Warning

Hazard Statements

H228 Flammable solid.
H317 May cause an allergic skin reaction.

Precautionary Statements

P210 Keep away from heat.
P280 Wear protective gloves.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number 104343
Product name Methenamine GR for analysis Reag. Ph Eur

Version 3.0

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

OSHA Hazards

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS and may deviate from the GHS information.

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Formula	C ₆ H ₁₂ N ₄ (Hill)
Molar mass	140.19 g/mol

Hazardous ingredients

Chemical Name (Concentration)

CAS-No.

Hexamethylenetetramine (>= 90 % - <= 100 %)

100-97-0

Exact percentages are being withheld as a trade secret.

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air.

Skin contact

After skin contact: wash off with plenty of water. Remove contaminated clothing. Consult a physician.

Eye contact

After eye contact: rinse out with plenty of water.

Ingestion

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Allergic reactions, irritant effects, Cough, Shortness of breath, pain, Nausea, Vomiting, Stomach/intestinal disorders

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Water, Carbon dioxide (CO₂), Foam, Dry powder

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

104343

Version 3.0

Product name

Methenamine GR for analysis Reag. Ph Eur

Unsuitable extinguishing media

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

Special hazards arising from the substance or mixture

Combustible.

Forms explosive mixtures with air on intense heating.

Risk of dust explosion.

Development of hazardous combustion gases or vapors possible in the event of fire.

Fire may cause evolution of:

nitrogen oxides, Ammonia, Hydrogen cyanide (hydrocyanic acid)

Advice for firefighters

Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system. Remove container from danger zone and cool with water.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Keep away from open flames, hot surfaces and sources of ignition. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions

Do not empty into drains. Risk of explosion.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7. Handling and storage

Precautions for safe handling

Observe label precautions.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Conditions for safe storage, including any incompatibilities

Dry. Tightly closed. Keep away from heat and sources of ignition.

Store at +15°C to +25°C (+59°F to +77°F).

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

104343

Version 3.0

Product name

Methenamine GR for analysis Reag. Ph Eur

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Contains no substances with occupational exposure limit values.

Engineering measures

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

Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Safety glasses

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other protective equipment:

protective clothing

Respiratory protection

required when dusts are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	solid
Color	white
Odor	amine-like
Odor Threshold	No information available.
pH	7.0 - 9.0 at 100 g/l 68 °F (20 °C)
Melting point	not applicable
Boiling point/boiling range	not applicable
Flash point	482 °F (250 °C) Method: open cup

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

104343

Version 3.0

Product name

Methenamine GR for analysis Reag. Ph Eur

Evaporation rate	No information available.
Flammability (solid, gas)	The substance or mixture is a flammable solid with the category 2.
Lower explosion limit	20,000 mg/m ³ Dust
Upper explosion limit	No information available.
Vapor pressure	< 0.01 hPa at 68 °F (20 °C) (External MSDS)
Relative vapor density	No information available.
Density	1.33 g/cm ³ at 68 °F (20 °C)
Relative density	No information available.
Water solubility	895 g/l at 68 °F (20 °C) soluble
Partition coefficient: n-octanol/water	log Pow: -2.84 (calculated) (IUCLID) Bioaccumulation is not expected.
Autoignition temperature	No information available.
Decomposition temperature	> 505 °F (> 263 °C)
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Sublimation point	505 °F (263 °C)
Ignition temperature	734 °F (390 °C)
Bulk density	ca. 600 kg/m ³

SECTION 10. Stability and reactivity**Reactivity**

Risk of dust explosion.

Forms explosive mixtures with air on intense heating.

A range from approx. 15 Kelvin below the flash point is to be rated as critical.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

104343

Version 3.0

Product name

Methenamine GR for analysis Reag. Ph Eur

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions

Caution! In contact with nitrites, nitrates, nitrous acid possible liberation of nitosamines!

Risk of explosion with:

Halogenated hydrocarbon, Nitric acid, Acetic anhydride, iodine, iodoform (triiodomethane)

Exothermic reaction with:

Oxidizing agents, peroxi compounds

A risk of explosion and/or of toxic gas formation exists with the following substances:

Acids

Conditions to avoid

Strong heating.

Incompatible materials

no information available

Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact, Ingestion

Acute oral toxicity

LD50 rat: 9,200 mg/kg (IUCLID)

Acute inhalation toxicity

Symptoms: Possible damages:, mucosal irritations, Cough, Shortness of breath

Acute dermal toxicity

LD50 Dermal rat: > 2,000 mg/kg

OECD Test Guideline 402

Skin irritation

rabbit

Result: No irritation

OECD Test Guideline 404

Eye irritation

rabbit

Result: No eye irritation

OECD Test Guideline 405

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

104343

Version 3.0

Product name

Methenamine GR for analysis Reag. Ph Eur

Sensitization

Maximization Test (GPMT) guinea pig

Result: positive

Method: OECD Test Guideline 406

Patch test: human

Result: positive

(IUCLID)

May cause an allergic skin reaction.

Genotoxicity in vitro

Ames test

Result: negative

(IUCLID)

Mutagenicity (mammal cell test): micronucleus.

Result: negative

(IUCLID)

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

After swallowing of large amounts:

Stomach/intestinal disorders, Nausea, Vomiting, pain

Damage to:

Kidney

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.

Handle in accordance with good industrial hygiene and safety practice.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

104343

Version 3.0

Product name

Methenamine GR for analysis Reag. Ph Eur

SECTION 12. Ecological information

Ecotoxicity

Toxicity to fish

static test LC50 *Lepomis macrochirus* (Bluegill sunfish): 41 mg/l; 96 h
US-EPA

Toxicity to daphnia and other aquatic invertebrates

EC50 *Daphnia magna* (Water flea): 36 g/l; 48 h (IUCLID)

Toxicity to algae

IC0 *Pseudokirchneriella subcapitata* (green algae): 1,500 mg/l; 14 d (IUCLID)

Toxicity to bacteria

static test EC50 *Vibrio fischeri*: > 5,000 mg/l; 90 min
DIN 38412

Persistence and degradability

Biodegradability

39 - 47 %; 28 d

MITI test

Not readily biodegradable.

Theoretical oxygen demand (ThOD)

2,054 mg/g

(IUCLID)

Ratio BOD/ThBOD

BOD5 2.02 %

(IUCLID)

Bioaccumulative potential

Partition coefficient: n-octanol/water

log Pow: -2.84

(calculated)

(IUCLID) Bioaccumulation is not expected.

Mobility in soil

No information available.

Additional ecological information

Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

104343

Version 3.0

Product name

Methenamine GR for analysis Reag. Ph Eur

SECTION 14. Transport information

Land transport (DOT)

UN number	UN 1328
Proper shipping name	HEXAMETHYLENETETRAMINE
Class	4.1
Packing group	III
Environmentally hazardous	--

Air transport (IATA)

UN number	UN 1328
Proper shipping name	HEXAMETHYLENETETRAMINE
Class	4.1
Packing group	III
Environmentally hazardous	--
Special precautions for user	no

Sea transport (IMDG)

UN number	UN 1328
Proper shipping name	HEXAMETHYLENETETRAMINE
Class	4.1
Packing group	III
Environmentally hazardous	--
Special precautions for user	yes
EmS	F-A S-G

SECTION 15. Regulatory information

United States of America

OSHA Hazards

Flammable Solid
Skin sensitizer

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

SARA 311/312 Hazards

Fire Hazard
Acute Health Hazard

SARA 313

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

104343

Version 3.0

Product name

Methenamine GR for analysis Reag. Ph Eur

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

DEA List I

Not listed

DEA List II

Not listed

US State Regulations

Massachusetts Right To Know

Remarks

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Ingredients

Hexamethylenetetramine

New Jersey Right To Know

Ingredients

Hexamethylenetetramine

California Prop 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

Notification status

TSCA: All components of the product are listed in the TSCA-inventory.

DSL: All components of this product are on the Canadian DSL.

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

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

H228 Flammable solid.

H317 May cause an allergic skin reaction.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Product number

104343

Version 3.0

Product name

Methenamine GR for analysis Reag. Ph Eur

Revision Date 07/22/2014

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

All rights reserved. Millipore and the "M" Mark are registered trademarks of Merck KGaA, Darmstadt, Germany.