

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

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

#### 1.1. Product identifier

Product name : Hexamethylenetetramine

SDS-number : 000000021442

Type of product : Substance

Remarks : SDS according to Art. 31 of Regulation (EC) 1907/2006.

Chemical name : methenamine; hexamethylenetetramine

Index-No. : 612-101-00-2

REACH Registration Number : no data available

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

Use of the Substance/Mixture : Laboratory chemicals

Uses advised against : none

#### 1.3. Details of the supplier of the safety data sheet

Company	: Honeywell Specialty Chemicals Seelze GmbH Wunstorfer Straße 40 30926 Seelze Germany	Honeywell International, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
Telephone	: (49) 5137-999 0	
For further information, please contact:	: PMTEU Product Stewardship: SafetyDataSheet@Honeywell.com	

#### 1.4. Emergency telephone number

Emergency telephone number : +1-703-527-3887 (ChemTrec-Transport)  
+1-303-389-1414 (Medical)

Country based Poison Control Center : see chapter 15.1

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### REGULATION (EC) No 1272/2008

Flammable solids Category 2  
H228 Flammable solid.  
Skin sensitisation Category 1  
H317 May cause an allergic skin reaction.

#### 2.2. Label elements

##### REGULATION (EC) No 1272/2008

Hazard pictograms



Signal word : Warning

Hazard statements

: H228  
H317

Flammable solid.  
May cause an allergic skin reaction.

Precautionary statements

: P210

Keep away from heat, hot surfaces,  
sparks, open flames and other ignition  
sources. No smoking.

P280

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

P302 + P352

IF ON SKIN: Wash with plenty of water.

P308 + P313

IF exposed or concerned: Get medical  
advice/ attention.

#### 2.3. Other hazards

Dust may form explosive mixture in air.

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Chemical name	CAS-No. Index-No.	Classification 1272/2008	Concentration	Remarks
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## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

	REACH Registration Number EC-No.			
methenamine; hexamethylenetetramine	100-97-0 612-101-00-2 202-905-8	Flam. Sol. 2; H228 Skin Sens. 1; H317	100 %	

### 3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.  
For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### *General advice:*

First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

#### *Inhalation:*

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.

#### *Skin contact:*

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.

#### *Eye contact:*

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

#### *Ingestion:*

Rinse mouth with water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician immediately.

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

No data available

### 4.3. Indication of any immediate medical attention and special treatment needed

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

*Suitable extinguishing media:*

Foam  
Dry chemical  
Carbon dioxide (CO<sub>2</sub>)  
Water spray

*Extinguishing media which shall not be used for safety reasons:*

Do not use a solid water stream as it may scatter and spread fire.

#### 5.2. Special hazards arising from the substance or mixture

Flammable solid.

Dust can form an explosive mixture in air.

In case of fire hazardous decomposition products may be produced such as:  
carbon oxides (CO, CO<sub>2</sub> ).  
Nitrogen oxides (NO<sub>x</sub>)

#### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment. Unprotected persons must be kept away. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid breathing dust.

#### 6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system.

#### 6.3. Methods and materials for containment and cleaning up

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

Ventilate the area.  
Use explosion-proof equipment.  
Avoid dust formation and electrical charging (sparking) because dust explosion might occur.  
Take up mechanically and collect in suitable container for disposal.  
Dispose of in accordance with local regulations.

### 6.4. Reference to other sections

For personal protection see section 8.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

*Advice on safe handling:*

Wear personal protective equipment. Avoid dust formation. Avoid inhalation, ingestion and contact with skin and eyes.

*Advice on protection against fire and explosion:*

Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Keep away from heat and sources of ignition. Dust may form explosive mixture in air.

*Hygiene measures:*

Remove and wash contaminated clothing before re-use. When using do not eat, drink or smoke. Wash hands before breaks and at the end of workday.

### 7.2. Conditions for safe storage, including any incompatibilities

*Requirements for storage areas and containers:*

Store in original container. Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep away from direct sunlight.

### 7.3. Specific end use(s)

no additional data available

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

##### DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
methenamine; hexamethylenetetramine	Workers / Long-term systemic effects		31 mg/m3	Inhalation	
methenamine; hexamethylenetetramine	Workers / Acute systemic effects		1400 mg/m3	Inhalation	
methenamine; hexamethylenetetramine	Workers / Long-term systemic effects		8,8mg/kg bw/d	Skin contact	
methenamine; hexamethylenetetramine	Workers / Acute systemic effects		229mg/kg bw/d	Skin contact	
methenamine; hexamethylenetetramine	Consumers / Long-term systemic effects		6,7 mg/m3	Inhalation	
methenamine; hexamethylenetetramine	Consumers / Acute systemic effects		140 mg/m3	Inhalation	
methenamine; hexamethylenetetramine	Consumers / Long-term systemic effects		1,9mg/kg bw/d	Skin contact	
methenamine; hexamethylenetetramine	Consumers / Acute systemic effects		22,9mg/kg bw/d	Skin contact	

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

methenamine; hexamethylenetetramine	Consumers / Long-term systemic effects		0,95mg/kg bw/d	Ingestion	
methenamine; hexamethylenetetramine	Consumers / Acute systemic effects		20mg/kg bw/d	Ingestion	

Component	Environmental compartment / Value	Remarks
methenamine; hexamethylenetetramine	Fresh water sediment: 3 mg/l	Assessment factor: 1000
methenamine; hexamethylenetetramine	Marine water: 0,5 mg/l	Assessment factor: 10000
methenamine; hexamethylenetetramine	Sewage treatment plant: 100 mg/l	
methenamine; hexamethylenetetramine	Fresh water sediment: 11 mg/kg dw	
methenamine; hexamethylenetetramine	Marine sediment: 1,84 mg/kg dw	
methenamine; hexamethylenetetramine	Soil: 0,58 mg/kg dw	

### 8.2. Exposure controls

#### Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

#### Engineering measures

Provide exhaust ventilation if dust is formed.

#### Personal protective equipment

##### *Respiratory protection:*

In case of insufficient ventilation, wear suitable respiratory equipment.

##### *Hand protection:*

Glove material: Natural Latex

Break through time: 480 min

Glove thickness: 0,6 mm

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

Lapren®706

Gloves must be inspected prior to use.

Replace when worn.

Remarks: Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions ( e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer's directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

*Eye protection:*

Safety goggles

*Skin and body protection:*

Protective suit

### Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: solid
Colour	: colourless
Odour	: ammoniacal
molecular weight	: 140,19 g/mol
Melting point/range	: 280 °C
Boiling point/boiling range	: No data available
Flammability	: The substance or mixture is a flammable solid with the category 2.
Upper explosion limit	: No data available



## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

Lower explosion limit	:	No data available
Flash point	:	250 °C Method: closed cup
Ignition temperature	:	No data available
pH	:	No data available
Viscosity, kinematic	:	No data available
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	< 0,002 hPa at 20 °C
Density	:	1,33 g/cm <sup>3</sup>
Relative vapour density	:	No data available

### 9.2 Other Information

Evaporation rate	:	No data available
Viscosity, dynamic	:	Not applicable

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under recommended storage conditions.

### 10.2. Chemical stability

Stable under recommended storage conditions.

### 10.3. Possibility of hazardous reactions

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

No dangerous reaction known under conditions of normal use.

### 10.4. Conditions to avoid

Heat, flames and sparks.

Avoid dust formation and electrical charging (sparking) because dust explosion might occur.

### 10.5. Incompatible materials

Oxidizing agents

Acids

### 10.6. Hazardous decomposition products

Ammonia

Formaldehyde

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

*Acute oral toxicity:*

LD50

Species: Rat

Value: > 20.000 mg/kg

*Acute dermal toxicity:*

LD50

Species: Rat

Value: > 2.000 mg/kg

Method: OECD Test Guideline 402

No deaths

*Acute inhalation toxicity:*

No data available

*Skin irritation:*

Species: Rabbit

Result: No skin irritation

Exposure time: 4 h

Method: OECD Test Guideline 404

*Eye irritation:*

Species: Rabbit

Result: No eye irritation

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

Method: OECD Test Guideline 405

*Respiratory or skin sensitisation:*

Species: Guinea pig

Result: May cause sensitisation by skin contact.

Method: OECD Test Guideline 406

*Aspiration hazard:*

No data available

### 11.2. Information on other hazards

Endocrine disrupting properties

No data available

*Other information:*

No data available

## SECTION 12: Ecological information

### 12.1. Toxicity

*Toxicity to fish:*

LC50

static test

Species: *Lepomis macrochirus* (Bluegill sunfish)

Value: 41 g/l

Exposure time: 96 h

*Toxicity to aquatic plants:*

EC50

Growth rate

static test

Species: *Pseudokirchneriella subcapitata* (green algae)

Value: ca. 3 g/l

Exposure time: 14 h

*Toxicity to aquatic invertebrates:*

LC50

static test

Species: *Daphnia magna* (Water flea)

Value: 36 g/l

Exposure time: 48 h

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

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### 12.2. Persistence and degradability

*Biodegradability:*

Biodegradation: 35 %

Exposure time: 28 d

Method: OECD Test Guideline 301D

### 12.3. Bioaccumulative potential

No data available

### 12.4. Mobility in soil

No data available

### 12.5. Results of PBT and vPvB assessment

No data available

### 12.6. Endocrine disrupting properties

No data available

### 12.7. Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

*Product:*

Dispose according to legal requirements.

*Packaging:*

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

*Further information:*

Provisions relating to waste:

EC Directive 2006/12/EC; 2008/98/EEC

Regulation No. 1013/2006

For personal protection see section 8.

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## SECTION 14: Transport information

### 14.1 UN number

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

ADR/RID:1328

IMDG:1328

IATA:1328

### 14.2 UN proper shipping name

ADR/RID:HEXAMETHYLENETETRAMINE

IMDG:HEXAMETHYLENETETRAMINE

IATA:Hexamethylenetetramine

### 14.3 Transport hazard class(es)

ADR/RID: 4.1

IMDG: 4.1

IATA: 4.1

### 14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

### 14.5 Environmental hazards

ADR/RID:no

Marine pollutant: no

### 14.6 Special precautions for user

No data available

### 14.7 Maritime transport in bulk according to IMO instruments

No data available

## SECTION 15: Regulatory information

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

Basis	Value	Remarks
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors		Contains components listed in

### Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+)35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
	Munich : 089/19240
Latvia	+37167042473

Norway	22591300
Poland	+48 42 25 38 400
Portugal	808250143
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

### Other inventory information

US. Toxic Substances Control Act  
On TSCA Inventory

Australia. Industrial Chemical (Notification and Assessment) Act  
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)  
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List  
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)  
On the inventory, or in compliance with the inventory

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)  
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)  
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand  
On the inventory, or in compliance with the inventory

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

### Text of H-statements referred to under heading 3

methenamine;	:	H228	Flammable solid.
hexamethylenetetramine	:	H317	May cause an allergic skin reaction.

### Further information

All directives and regulations refer to amended versions.  
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

#### Abbreviations:

EC European Community  
CAS Chemical Abstracts Service  
DNEL Derived no effect level  
PNEC Predicted no effect level  
vPvB Very persistent and very bioaccumulative substance  
PBT Persistent, bioaccumulative and toxic substance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Final determination of suitability of any material is the sole responsibility of the user.

## Hexamethylenetetramine

33233H-100G

Version 1.1

Revision Date 24.01.2021

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This information should not constitute a guarantee for any specific product properties.

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