

# Material Safety Data Sheet

## According to 91/155 EEC

Reviewed on 23.02.2005

### \* 1 Identification of substance:

· **Product details:** Reagent for water analysis

· **Product name:** Vario Hexamine F20

· **Catalog number:** 251 400      **Model:** AI-1 TP

· **Supplier:**

WTW Wissenschaftlich-Technische Werkstätten GmbH

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· **Emergency information:**

Poison Center Berlin, Germany

Tel.: +49(0)30 19240

### \* 2 Composition/Data on components:

· **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**

|                         |             |                                                                                                                                                                                               |         |
|-------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| CAS: 100-97-0           | methenamine |  Xn,  F; R 11-42/43 | 90-100% |
| EINECS: 202-905-8       |             |                                                                                                                                                                                               |         |
| EC Number: 612-101-00-2 |             |                                                                                                                                                                                               |         |

· **Additional information** For the wording of the listed risk phrases refer to section 16.

### \* 3 Hazards identification

· **Hazard designation:**



Xn Harmful

F Highly flammable

· **Information pertaining to particular dangers for man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 11 Highly flammable.

R 42/43 May cause sensitisation by inhalation and skin contact.

· **Classification system**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

### \* 4 First aid measures

· **After inhalation**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness bring patient into stable side position for transport.

· **After skin contact**

Seek medical treatment.

Instantly rinse with water.

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- **After eye contact**  
Rinse opened eye for several minutes under running water.  
Call a doctor immediately.
  - **After swallowing**  
Rinse out mouth and then drink plenty of water.  
Induce vomiting.
  - **The following symptoms may occur:**  
after inhalation:  
breathing difficulty  
coughing  
after swallowing:  
sickness  
vomiting  
cramps  
mucous membrane irritation  
gastric or intestinal trouble
  - **Danger**  
risk of airways sensitization  
risk of skin sensitization
- 

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### \* 5 Fire fighting measures

- **Suitable extinguishing agents**  
Use fire fighting measures that suit the environment.  
Foam  
Alcohol-resistant foam  
Fire-extinguishing powder  
Carbon dioxide
  - **Special hazards caused by the material, its products of combustion or resulting gases:**  
Can form explosive gas-air mixtures.  
Formation of toxic gases is possible during heating or in case of fire.  
Nitrogen oxides (NO<sub>x</sub>)  
Hydrogen cyanide (HCN)  
nitrous gases  
ammonia
  - **Protective equipment:** Wear self-contained breathing apparatus.
  - **Additional information**  
Cool endangered containers with water spray jet.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.  
Collect contaminated fire fighting water separately. It must not enter drains.
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### \* 6 Accidental release measures

- **Person-related safety precautions:**  
Wear protective equipment. Keep unprotected persons away.  
Avoid causing dust.  
Use breathing protection against the effects of fumes/dust/aerosol.
  - **Measures for environmental protection:**  
Do not allow product to reach sewage system or water bodies.  
Damp down gases/fumes/haze with water spray jet.
  - **Measures for cleaning/collecting:**  
Dispose of contaminated material as waste according to item 13.  
Ensure adequate ventilation.
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### \* 7 Handling and storage

- **Handling**
- **Information for safe handling:**
  - Work only in fume cupboard.
  - Use only in well ventilated areas.
- **Information about protection against explosions and fires:**
  - Keep ignition sources away - Do not smoke.
  - Protect from heat.
  - Protect against electrostatic charges.
- **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:**
  - Keep container tightly sealed.
  - Store in cool, dry conditions in well sealed containers.
  - Store under dry conditions.
  - Protect from humidity and keep away from water.
  - Protect from the effects of light.
- **Storage class** Not required.

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### \* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
  - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
  - Keep away from foodstuffs, beverages and food.
  - Take off immediately all contaminated clothing
  - Wash hands during breaks and at the end of the work.
  - Do not eat, drink or smoke while working.
- **Breathing equipment:**
  - In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.
- **Recommended filter device for short term use:** Filter P2
- **Protection of hands:**
  - Only use chemical-protective gloves with CE-labelling of category III.
  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - After use of gloves apply skin-cleaning agents and skin cosmetics.
- **Material of gloves**
  - Nitrile
  - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
  - Recommended thickness of the material:  $\geq 0.11$  mm
- **Penetration time of glove material**
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - Value for the permeation: Level  $\geq 6$  (480 min)
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing.

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### \* 9 Physical and chemical properties:

|                                                          |                              |
|----------------------------------------------------------|------------------------------|
| · <b>Form:</b>                                           | Powder                       |
| · <b>Colour:</b>                                         | White                        |
| · <b>Odour:</b>                                          | Amine-like                   |
| · <b>Melting point/Melting range:</b>                    | 280, Subl. °C                |
| · <b>Boiling point/Boiling range:</b>                    | Not determined               |
| · <b>Flash point:</b>                                    | > 100°C                      |
| · <b>Inflammability (solid, gaseous)</b>                 | Highly flammable.            |
| · <b>Ignition temperature:</b>                           | 390°C                        |
| · <b>Self-inflammability:</b>                            | Product is not selfigniting. |
| · <b>Critical values for explosion:</b>                  |                              |
| <b>Lower:</b>                                            | 20 g/m <sup>3</sup>          |
| · <b>Density at 20°C</b>                                 | 1.34 g/cm <sup>3</sup>       |
| · <b>Settled apparent density at 20°C</b>                | 600 kg/m <sup>3</sup>        |
| · <b>Solubility in / Miscibility with Water at 20°C:</b> | 895 g/l                      |
| · <b>pH-value (20 g/l) at 20°C:</b>                      | 8.5                          |
| · <b>Solvent content:</b>                                |                              |
| <b>Organic solvents:</b>                                 | 0.0 %                        |
| · <b>Solids content:</b>                                 | 100.0 %                      |

### \* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
  - oxidizing agents
  - acids
  - peroxides
  - Halogenated hydrocarbons
  - iodide
- **Dangerous reactions**
  - with nitric acid, acetic anhydride
  - > Explosive
  - Reacts with metals forming hydrogen
  - Strong exothermic reaction with acids
  - Reacts with halogenated compounds
  - Corrodes aluminium
- **Dangerous products of decomposition:**
  - Hydrogen cyanide (prussic acid)
  - formaldehyde
  - see chapter 5

### \* 11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

|                                                               |      |                   |
|---------------------------------------------------------------|------|-------------------|
| · <b>LD/LC50 values that are relevant for classification:</b> |      |                   |
| <b>100-97-0 methenamine</b>                                   |      |                   |
| Oral                                                          | LD50 | 569 mg/kg (mouse) |
|                                                               | LD50 | 9200 mg/kg (rat)  |

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- **Primary irritant effect:**
- **on the eye:** Irritant effect.
- **Sensitization:**  
Sensitization possible by inhalation.  
Sensitization possible by skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:  
Harmful

### \* 12 Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:** Quantitative data on the ecological effect of this product are not available.

#### · Behaviour in environmental systems:

##### 100-97-0 methenamine

log P(o/w) -2.84 (.)

#### · Ecotoxical effects:

#### · Aquatic toxicity:

##### 100-97-0 methenamine

|               |                                     |
|---------------|-------------------------------------|
| EC50          | 36 mg/l/48h (Daphnia magna)         |
| LC50          | 49.8 mg/l/96h (Pimephales promelas) |
| Toxicity EC10 | 5 g/l (fish)                        |
| Toxicity ECo  | 10 g/l/48h (Daphnia magna)          |

#### · Remark:

Toxic for fish:  
Magnesium compounds: 100 - 400 mg/l

#### · General notes:

Water hazard class 1 (German Regulation) (Self-assessment): 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 unneutralized.

### \* 13 Disposal considerations

- **Product:**
- **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

#### · European waste catalogue

16 05 06 laboratory chemicals, consisting of or containing dangerous 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.

### \* 14 Transport information

· **ADR/GGVSE:** UN 3316 CHEMIE-TESTSATZ, 9, II

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|                                  |                              |
|----------------------------------|------------------------------|
| · <b>IMDG/GGVSee:</b>            | UN 3316 CHEMICAL KIT, 9, II  |
| · <b>EMS-number</b>              | F-A S-P                      |
| · <b>Designation of goods:</b>   | HEXAMETHYLENETETRAMINE       |
| · <b>ICAO/IATA:</b>              | CHEMICAL KIT, 9, UN 3316, II |
| · <b>Correct technical name:</b> | HEXAMETHYLENETETRAMINE       |

### \* 15 Regulatory information

**· Designation according to EC guidelines:**

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

**· Code letter and hazard designation of product:**

Xn Harmful

F Highly flammable

**· Hazard-determining components of labelling:**

methenamine

**· Risk phrases:**

11 Highly flammable.

42/43 May cause sensitisation by inhalation and skin contact.

**· Safety phrases:**

16 Keep away from sources of ignition - No smoking.

22 Do not breathe dust.

24 Avoid contact with skin.

37 Wear suitable gloves.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

60 This material and its container must be disposed of as hazardous waste.

### 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.

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· **Relevant R-phrases**

- 11 Highly flammable.
- 42/43 May cause sensitisation by inhalation and skin contact.

· **Department issuing data specification sheet:** Department TSS, Dr. Manfred Kaul

· **Data compared to the previous version altered.**

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