

OXFORD LAB FINE CHEM LLP

ISO 9001-2008 Certified Company

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MATERIAL SAFETY DATA SHEET

HEXAMINE 99% Extra Pure (Hexamethylene Tetramine) MSDS CAS: 100-97-0

Section 1: Chemical Product and Company Identification

Section 1: Chemical Product

Product Name: HEXAMINE

CAS#: 100-97-0

Synonym:

Chemical Name: Not available.

Chemical Formula:

Molecular Weight:

Brand: OXFORD

Details Of The Supplier Of The Safety Data Sheet:

Company identification: OXFORD LAB FINE CHEM LLP
Unit. No. 12, 1st Floor, Neminath Industrial Estate No. 6,
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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
HEXAMINE	100-97-0	100

Toxicological Data on Ingredients: Not available.

Section 3: Hazards Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable solids (Category 2), H228

Skin sensitisation (Category 1), H317

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

Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher

Section 4: First Aid Measures

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of any immediate medical attention and special treatment needed

No data available

Section 5: Fire and Explosion Data

Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid)

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

Use water spray to cool unopened containers

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

Reference to other sections

For disposal see section 13.

Section 7: Handling and Storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition

- No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Hygroscopic Storage class (TRGS 510): Flammable solid hazardous materials

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8: Exposure Controls/Personal Protection

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Section 8: Exposure Controls/Personal Protection (continued)

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de,
test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains

Section 9: Physical and Chemical Properties

Information on basic physical and chemical properties

- a) **Appearance Form:** crystalline
- Colour:** colourless
- b) **Odour ammoniacal**
- c) **Odour Threshold** No data available
- d) **pH** No data available
- e) **Melting point/freezing point** 280 °C
- f) **Initial boiling point and boiling range:** No data available
- g) **Flash point** 250 °C - closed cup
- h) **Evaporation rate** No data available
- i) **Flammability (solid, gas)** The substance or mixture is a flammable solid with the category 2.
- j) **Upper/lower flammability or explosive limits:** No data available
- k) **Vapour pressure** < 0,01 hPa at 20 °C
- l) **Vapour density** No data available
- m) **Relative density** 1,331 g/cm³
- n) **Water solubility** soluble
- o) **Partition coefficient: noctanol/ water log Pow:** -2,179 at 20 °C
- p) **Auto-ignition temperature :** No data available
- q) **Decomposition temperature:** No data available
- r) **Viscosity** No data available
- s) **Explosive properties** No data available
- t) **Oxidizing properties** No data available

Other safety information

Surface tension 70,4 mN/m at 20 °C

Section 10: Stability and Reactivity Data

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Exposure to moisture

Heat, flames and sparks.

Incompatible materials

Strong acids, Acids, Strong oxidizing agents

Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

Section 11: Toxicological Information

Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - > 20.000 mg/kg

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

Section 11: Toxicological Information (continued)

Respiratory or skin sensitisation

Maximization Test (GPMT) - Guinea pig

Result: May cause sensitization by skin contact.

(OECD Test Guideline 406)

Germ cell mutagenicity

Salmonella typhimurium

Result: negative

Mouse - male

Result: negative

Carcinogenicity

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

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

Repeated dose toxicity

Rat - male - Oral - NOAEL : ≥ 80 mg/kg

Rat - female - Oral - NOAEL : ≥ 100 mg/kg

RTECS: MN4725000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Liver - Irregularities - Based on Human Evidence

Section 12: Ecological Information

Toxicity

Toxicity to fish static test LC50 - Cyprinodon variegatus (sheepshead minnow) - 49.000 mg/l - 96 h

(OECD Test Guideline 203)

**Toxicity to daphnia and
other aquatic
invertebrates**

static test EC50 - Daphnia magna (Water flea) - 36.000 mg/l - 48 h

Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 35 % - According to the results of tests of biodegradability this product is not readily biodegradable.

(OECD Test Guideline 301D)

Bio accumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects

No data available

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Section 13: Disposal Considerations

Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

Section 14: Transport Information

UN number

ADR/RID: 1328 IMDG: 1328 IATA: 1328

UN proper shipping name

ADR/RID: HEXAMETHYLENETETRAMINE

IMDG: HEXAMETHYLENETETRAMINE

IATA: Hexamethylenetetramine

Special Provisions: "Keep away from heat" label required.

Transport hazard class(es)

ADR/RID: 4.1 IMDG: 4.1 IATA: 4.1

Packaging group

ADR/RID: III IMDG: III IATA: III

Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

Special precautions for user

No data available

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Section 15: Other Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

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

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

Section 16 - Additional Information

References: Not available.

Other Special Considerations: Not available

Disclaimer:

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