

## 1. Identification of the substance/preparation and of the company/undertaking

### Identification of the product

Hexamethylenetetramine

### Manufacturer/supplier identification

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## 2. Hazards identification

### Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flammable solids (Category 2)

Skin sensitisation (Category 1)

Short-term (acute) aquatic hazard (Category 2)

### Label elements

Pictogram



Signal word Warning

### Hazard statement(s)

H228 Flammable solid.

H317 May cause an allergic skin reaction.

H401 Toxic to aquatic life.

### Precautionary statement(s)

P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P261 Avoid breathing dust.

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection.

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

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P405 Store locked up.

P501 Dispose of contents/ container to an approved waste disposal plant.

### Supplemental Hazard Statements

none

## 3. Composition/information on ingredients

## *Synonyms*

Hexamethylenetetramine

CAS-No.: 100-97-0

*M*: 140.19 g/mol

Molecular formula: C<sub>6</sub>H<sub>12</sub>N<sub>4</sub>

## **4. First aid measures**

### **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.

## **5. Fire-fighting measures**

### **Suitable extinguishing media**

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

### **Advice for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

## **6. Accidental release measures**

### **Personal precautions**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

### **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**

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).

## **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.

### **Conditions for safe storage**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

## **8. Exposure controls and personal protection**

### **Appropriate engineering controls**

General industrial hygiene practice.

### **Personal protective equipment**

#### **Eye/face protection**

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.

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

## **Body Protection**

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

## **Respiratory protection**

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

## **9. Physical and chemical properties**

**Form:** crystalline

**Colour:** colourless

**Odour:** not available

**pH value:** not available

**Melting point:** 280°C

**Boiling point:** 263°C

**Ignition temperature:** not available

**Flash point:** 250°C

**Autoignition temperature:** not available

### **Explosion limits**

**lower:** not available

**upper:** not available

**Density :** 1.33 g/cm<sup>3</sup>

**Bulk density:** not available

### **Solubility in**

**water (20 °C) :** Soluble in water

**diluted acids (20 °C) :** not available

**Thermal decomposition:** not available

## **10. Stability and reactivity**

### **Chemical stability**

Stable under recommended storage conditions.

### **Conditions to avoid**

Exposure to moisture

Heat, flames and sparks.

### **Materials to avoid**

Strong acids, Strong oxidizing agents

**Hazardous decomposition products**

Other decomposition products - no data available

**11. Toxicological information****Acute toxicity**

LD50 Oral - Rat - > 20.000 mg/kg

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

**Skin corrosion or irritation**

Skin - Rabbit

Result: No skin irritation - 4 h

(OECD Test Guideline 404)

**Serious eye damage or eye irritation**

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

**Respiratory or skin sensitization**

Maximisation Test (GPMT) - Guinea pig

Result: May cause sensitisation 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.

**Specific target organ toxicity - single exposure**

no data available

**Specific target organ toxicity - repeated exposure**

no data available

**Aspiration hazard**

no data available

**12. Ecological information****Toxicity**

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

**Persistence and degradability**

no data available

**Bioaccumulative potential**

no data available

**Mobility in soil**

no data available

**13. Disposal considerations****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

## **14. Transport information**

### **ADR/RID**

UN-Number: 1328 Class: 4.1 Packing group: III  
Proper shipping name: HEXAMETHYLENETETRAMINE

### **IMDG**

UN-Number: 1328 Class: 4.1 Packing group: III  
Proper shipping name: HEXAMETHYLENETETRAMINE  
Marine pollutant: no

### **IATA**

UN-Number: 1328 Class: 4.1 Packing group: III  
Proper shipping name: Hexamethylenetetramine

## **15. Regulatory information**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

## **16. Other information**

General update.

*Regional representation:*

This information is given on the authorised Safety Data Sheet for your country.