

**HEPES****HEPES****SECTION 1 Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Identification of the product : Raw material  
Product code : HEPES  
Trade name : HEPES  
CAS number : 007365-45-9  
EC Number : 230-907-9  
Molecular Formula : C<sub>8</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>S  
Molecular Weight : 238.30 g/mol  
Synonym(s) : N-(2-Hydroxyethyl)piperazine-N'-(2-ethanesulfonic acid)

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

1.2.1 Relevant identified uses : For research purposes only  
1.2.2 Uses advised against : No additional information available

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

Company identification **Formedium Ltd.**  
King's Lynn, England PE31 6DJ  
Tel: +44(0)1485 609069  
Web: [www.formedium.com](http://www.formedium.com)  
E-mail: [info@formedium.com](mailto:info@formedium.com)

**1.4. Emergency telephone number**

Emergency telephone number Tel: +44(0)1485 609069 (local time : 9.00 to 17.00)  
National Poison Information Centre :Europe UK : +44 0845 4647 (this service is only available to health professionals)  
See [www.toxbase.org](http://www.toxbase.org) for a local poison centre

**SECTION 2 Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

Not regulated

**2.2. Label elements****Labelling according to Regulation (EC) No. 1272/2008**

Hazards pictograms code : None  
Precautionary statements : None

**2.3 Other hazards**

None under normal conditions.

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**SECTION 3 Composition/information on ingredients**

**Components** : This product is not classified as hazardous.

Substance name:	Contents	CAS No:	EC-No:
HEPES	>=99.0%	7365-45-9	230-907-9

**SECTION 4 First aid measures****4.1. Description of first aid measures**

- Inhalation** : Remove victim to fresh air.
- Skin contact** : Flush with plenty of water.
- Eye contact** : : Rinse immediately with plenty of water.
- Ingestion** : Seek medical attention if ill effect develops.  
Give water to drink.

**4.2. 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.

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

No data available.

**SECTION 5 Fire-fighting measures****5.1. Extinguishing media**

**Suitable extinguishing media** : Water spray, alcohol-resistant foam, dry powder or Carbon Dioxide.

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

**Specific hazards during fire-fighting** : Under fire conditions hazardous fumes SO<sub>x</sub>, NO<sub>x</sub>, CO<sub>x</sub> will be present.

**5.3. Advice for firefighters**

**Special protective equipment for fire-fighters** : Wear self-contained breathing apparatus, rubber boots and thick rubber gloves.  
Wear proper protective equipment.  
Prevent fire fighting water from entering the environment.

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## SECTION 6 Accidental release measures

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

**Technical measures** : Use good housekeeping practices to avoid rendering dust airborne.

### 6.2 . Environmental precautions

**Environmental precautions** : Prevent entry to sewers and public waters.

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

**Clean up methods** : Sweep up dry powder and dispose properly.  
Dispose in a safe manner in accordance with local / national regulations.

### 6.4. Reference to other sections

For disposal see section 13.

## SECTION 7 Handling and storage

### 7.1. Precautions for safe handling

**General** : Store in a dry, well-ventilated area.

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

**Storage conditions** : Store in a dry, cool area.  
Store at room temperature.

### 7.3. Specific end use(s)

**Specific end use(s)** : For research purposes only

## SECTION 8 Exposure controls/personal protection

### 8.1. Control parameters

No additional information available.

### 8.2. Exposure controls

General industrial hygiene practice.

#### **Personal protective equipment**

##### **Skin / hand 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 standards EN 374 derived from it.

##### **Body protection**

Choose body protection in relation to its type, the concentration and amount of dangerous substances, and to the specific workplace. 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 dust are desired, use type N95 (US) or type P1 (EN143) 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.

**HEPES****HEPES****SECTION 9 Physical and chemical properties****9.1. Information on basic physical and chemical properties****Safety data**

<b>Form</b>	: Crystals, Powder
<b>Colour</b>	: White.
<b>Odour</b>	: Not established
<b>Odour threshold</b>	: No data available
<b>Flash point (°C)</b>	: No data available
<b>Solubility in water</b>	: Good
<b>Relative Density</b>	: No data available
<b>Relative vapour density (at 20°C)</b>	: No data available
<b>Vapour pressure</b>	: No data available
<b>Melting point</b>	: 230 - 234°C
<b>Freezing point</b>	: No data available
<b>Boiling point (°C)</b>	: No data available.
<b>Partition coefficient: n-octanol / water at 20 °C</b>	: log Pow : -4/07not determined
<b>pH</b>	: 6.8 – 8.2
<b>Relative evaporation rate (butylacetate = 1)</b>	: No data available
<b>Flammability (solid, gas)</b>	: No data available
<b>Viscosity</b>	: No data available
<b>Auto ignition temperature (°C)</b>	: No data available
<b>Decomposition temperature</b>	: No data available
<b>Oxidising properties</b>	: Not classified as oxidizing
<b>Explosive properties</b>	: Not classified as explosive
<b>Explosive limits</b>	: No data available

**9.2. Other information**

No additional information available

**HEPES****HEPES****SECTION 10 Stability and reactivity****10.1. Reactivity**

Stable under recommended storage, handling and use conditions.

**10.2 Chemical stability**

Stable under recommended storage, handling and use conditions.

**10.3. Possibility of hazardous reactions**

No dangerous reaction known under conditions of normal use.

**10.4. Conditions to avoid**

No data available.

**10.5. Incompatible materials to avoid**

Strong oxidizers.

**10.6. Hazardous decomposition products**

When heated to decomposition emits dangerous fumes. COx. NOx, SOx.

**SECTION 11 Toxicological information****11.1. Information on toxicological effects**

<b>Rat oral LD50 [mg/kg]</b>	: 2000
<b>Skin corrosion / irritation</b>	: Not classified.
<b>Serious eye damage / eye irritation</b>	: Not classified
<b>Respiratory or skin sensitisation</b>	: Not classified
<b>Germ cell mutagenicity</b>	: Not classified
<b>Carcinogenicity</b>	: Not classified
<b>Reproductive toxicity</b>	: Not classified
<b>Specific target organ toxicity – single exposure</b>	: Not classified
<b>Specific target organ toxicity – repeated exposure</b>	: Not classified
<b>Aspiration hazard</b>	: Not classified

**11.2. Additional Information****Endocrine disrupting properties:**

The Substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**HEPES****HEPES****SECTION 12 Ecological information****12.1. Toxicity****48 Hour – EC50 – Daphnia magna [mg/l]** : > 100**12.2. Persistence and degradability**

Minimally biodegradable.

**12.3. Bioaccumulative potential**

No additional information available.

**12.4. Mobility in soil**

No additional information available.

**12.5. Results of PBT and vPvB assessment**

No additional information available.

**12.6. Other adverse effects**

No additional information available.

**12.7. Endocrine disrupting properties**

The Substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**SECTION 13 Disposal considerations****13.1. Waste treatment methods**

**Waste treatment methods:** Avoid release to the environment.  
Dispose in a safe manner in accordance with local / national regulations.

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## SECTION 14 Transport information

### 14.1. UN Number

Not applicable

**General information** : Not classified as dangerous in the meaning of transport regulations.

### 14.2. UN Proper shipping name

Not applicable.

### 14.3. Transport Hazard Class(es)

Not applicable.

### 14.4. Packing group

Not applicable.

### 14.5. Environmental hazards

Not applicable.

### 14.6. Special precautions for user

Not applicable.

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

## SECTION 15 Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EU) No. 2015/830.

### 15.2. Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

## SECTION 16 Other information

### **Further information**

: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Formedium Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.

### **Revision**

: Complete SDS revision

End of document