

## SECTION 1 – IDENTIFICATION

**Product Identifier:** 1M HEPES-KOH Buffer, pH 7.5  
Ultra Pure Grade

**Catalogue Number:** 1820

**Other means of identification:** 4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid  
N-(2-Hydroxyethyl)piperazine-N'-(2-ethanesulfonic acid)

**Recommended use of the chemical and restrictions on use:**  
For R&D use only. Not for pharmaceutical, household or other uses.

### Supplier Information:

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## SECTION 2 – HAZARDS IDENTIFICATION

### GHS Classification

Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

**Other hazards** - None

## SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS

**Chemical Identity:** HEPES  
**Synonyms:** 4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid  
N-(2-Hydroxyethyl)piperazine-N'-(2-ethanesulfonic acid)

**Molecular Formula:** C<sub>8</sub>H<sub>18</sub>N<sub>2</sub>O<sub>4</sub>S  
**Molecular Weight:** 238.3 g/mol  
**CAS No.:** 7365-45-9  
**EC No.:** 230-907-9

## SECTION 4 – FIRST-AID MEASURES

### Eye Contact

Flush eyes with water as a precaution.

### Skin Contact

Immediately wash skin thoroughly with soap and copious amounts of water.

### **Inhalation**

Remove to fresh air. If not breathing, give artificial respiration or if breathing is difficult, give oxygen.

### **Ingestion**

Never give anything by mouth to an unconscious person. Rinse mouth with water.

### **Most important symptoms and effects, both acute and delayed**

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

### **Indication of immediate medical attention and special treatment needed**

Data not available.

## **SECTION 5 – FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

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

### **Special Exposure Hazards**

Carbon oxides, nitrogen oxides, Sulphur oxides.

### **Special Fire-fighting Procedures**

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

## **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions**

Prevent skin/eye contact. Use personal protective equipment. Ensure adequate ventilation.

### **Environmental Precautions**

Do not allow material into sewers and drainage systems.

### **Methods for Cleaning Up**

Clean up spills immediately, observing precautions in the safety data sheet and label. Dispose into a chemical waste container.

## **SECTION 7 – HANDLING AND STORAGE**

### **Precautions for safe handling**

Prevent skin/eye contact. Use personal protective equipment. Ensure adequate ventilation. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse.

### **Conditions for safe storage, including any incompatibilities**

Store in tightly closed container in a cool, dry and well-ventilated area.

## **SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION**

### **Occupational Exposure Limits**

We are not aware of any national exposure limit.

### **Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice.

### Eye/ Face Protection

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

### 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 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).

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

a)	<b>Appearance</b>	Clear liquid
b)	<b>Odour</b>	Odourless
c)	<b>Odour Threshold</b>	Not available
d)	<b>pH (Neat, 25 °C)</b>	7.3 – 7.7
e)	<b>Melting/freezing point</b>	Not available
f)	<b>Initial boiling point and boiling range</b>	Not available
g)	<b>Flash point</b>	Not available
h)	<b>Evaporation rate</b>	Not available
i)	<b>Flammability (solid, gas)</b>	Not available
j)	<b>Upper/lower flammability or explosive limits</b>	Not available
k)	<b>Vapour pressure (mm Hg)</b>	Not available
l)	<b>Vapour density</b>	Not available
m)	<b>Relative density</b>	1,070 g/cm <sup>3</sup>

n)	<b>Solubility (ies)</b>	Not available
o)	<b>Partition coefficient: n-octanol/water</b>	Not available
p)	<b>Autoignition temperature</b>	Not available
q)	<b>Decomposition temperature</b>	Not available
r)	<b>Viscosity</b>	Not available

## SECTION 10 – STABILITY AND REACTIVITY

### Reactivity

Data not available.

### Chemical stability

Stable.

### Possibility of hazardous reactions

Data not available.

### Conditions to avoid

Data not available.

### Incompatible material

Strong oxidizing agents.

### Hazardous decomposition products

Data not available.

## SECTION 11 – TOXICOLOGICAL INFORMATION

### Acute toxicity

Data not available.

### Skin corrosion/irritation

Data not available.

### Serious eye damage/eye irritation

Data not available.

### Respiratory or skin sensitization

Data not available.

### Germ cell mutagenicity

Data not available.

### 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**

Data not available.

**Specific target organ toxicity – single exposure**

Data not available.

**Specific target organ toxicity – repeated exposure**

Data not available.

**Aspiration hazard**

Data not available.

**Likely routes of exposure**

Eye contact. Inhalation. Health effects not known.

**Symptoms related to physical, chemical and toxicological characteristics**

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion: May be harmful if swallowed.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

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

**Numerical measures of toxicity**

Data not available.

**Interactive effects**

Data not available.

**SECTION 12 – ECOLOGICAL INFORMATION****Toxicity**

Data not available.

**Persistence and degradability**

Data not available.

**Bioaccumulative potential**

Data not available.

**Mobility in soil**

Data not available.

**Other adverse effect**

Data not available.

**SECTION 13 – DISPOSAL CONSIDERATIONS****Product**

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

### Contaminated packaging

Dispose off as unused product.

## SECTION 14 – TRANSPORT INFORMATION

### UN Number

ADR/RID: -

IMDG: -

IATA-DGR: -

### UN Proper Shipping Name:

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA-DGR: Not dangerous goods

### Transport Hazard Class(es)

ADR/RID: -

IMDG: -

IATA-DGR: -

### Packing Group

ADR/RID: -

IMDG: -

IATA-DGR: -

### Environmental Hazards

ADR/RID: no

IMDG: marine pollutant: no

IATA-DGR: no

### Special Precaution for Users

Data not available

## SECTION 15 – REGULATORY INFORMATION

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

#### Notification status

**AICS:** On the inventory, or in compliance with the inventory

**DSL:** All components of this product are on the Canadian DSL list.

**ENCS:** Not in compliance with the inventory – HEPES

**IECSC:** On the inventory, or in compliance with the inventory

**ISHL:** Not in compliance with the inventory – HEPES

**KECI:** Not in compliance with the inventory – HEPES

**NZIoC:** Not in compliance with the inventory – HEPES

**PICCS:** On the inventory, or in compliance with the inventory

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**SECTION 16 – OTHER INFORMATION**

**Date of Issue:** SEPTEMBER 18, 2014

**Date of Revision:** FEBRUARY 23, 2022

*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. Axil Scientific Pte Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.*