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## Material Safety Data Sheet

### SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: HEPES-Na  
Company: Suzhou YACOO Science Co., Ltd.  
Address: No.128, FangZhou Road, Suzhou Industrial Park, China  
Tel: 0512-87182055  
Fax: 0512-87182056

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

#### 2.2 Label elements

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

#### 2.3 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 3: Composition/information on ingredients

#### 3.1 Substances

Synonyms: 4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid sodium salt

Formula:  $C_8H_{17}N_2NaO_4S$

Molecular weight: 260,29 g/mol

CAS-No.: 75277-39-3

EC-No.: 278-169-7

No components need to be disclosed according to the applicable regulations.

### SECTION 4: First aid measures

#### 4.1 Description of first-aid measures If inhaled

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

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact



Flush eyes with water as a precaution.

If swallowed

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

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: Firefighting measures**

5.1 Extinguishing media Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulfur oxides, Sodium oxides Combustible.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

## **SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing vapors, mist or gas.

For personal protection see section 8.

6.2 Environmental precautions

No special environmental precautions required.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

## **SECTION 7: Handling and storage**

7.1 Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 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**

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

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 Regulation (EU) 2016/425 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

No special environmental precautions required.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance Form: powder Color: white

b) Odor No data available

c) Odor Threshold No data available

d) pH No data available

e) Melting point/freezing point

Melting point: ca.274,9 ° C at ca.1.013 hPa - Regulation (EC) No. 440/2008, Annex, A.1

f) Initial boiling point and boiling range No data available

g) Flash point Not applicable

h) Evaporation rate No data available

i) Flammability (solid, gas) The product is not flammable. - Flammability (solids)

j) Upper/lower flammability or explosive limits No data available

k) Vapor pressure No data available

l) Vapor density No data available

m) Relative density ca.1,51 g/cm<sup>3</sup> at 20 ° C

n) Water solubility ca.758,7 g/l at 20 ° C - OECD Test Guideline 105

o) Partition coefficient: n-octanol/water

log Pow: < -3,88 at 20 ° C - Bioaccumulation is not expected.

p) Autoignition temperature

> 400 ° C

at 1.013 hPa - Relative self-ignition temperature for solids does not ignite

- q) Decomposition temperature 274,9 ° C -
  - r) Viscosity No data available
  - s) Explosive properties No data available
  - t) Oxidizing properties No data available
- 9.2 Other safety information
- Surface tension ca. 63,3 mN/m at 1g/l at 20 ° C
- OECD Test Guideline 115

## **SECTION 10: Stability and reactivity**

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Exposure to moisture.

### 10.5 Incompatible materials

Strong oxidizing agents

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Sulfur oxides, Sodium oxides

Other decomposition products - No data available In the event of fire: see section 5

## **SECTION 11: Toxicological information**

### 11.1 Information on toxicological effects Acute toxicity

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

(OECD Test Guideline 423)

#### Skin corrosion/irritation

Skin - EPISKIN Human Skin Model Test

Result: No skin irritation - 15 min

(OECD Test Guideline 439)

#### Serious eye damage/eye irritation

Eyes - Chicken eye

Result: No eye irritation - 10 s

(OECD Test Guideline 438)

#### Respiratory or skin sensitization Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

#### Germ cell mutagenicity

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

#### Carcinogenicity

IARC: No ingredient 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

RTECS: Not available

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

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Handle in accordance with good industrial hygiene and safety practice.

## SECTION 12: Ecological information

12.1 Toxicity

No data available

Toxicity to daphnia and other aquatic invertebrates

static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algaestatic test NOEC - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 0 % - Not readily biodegradable. (OECD Test Guideline 301D)

Remarks: (refers to pure substance)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

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.

12.6 Other adverse effects

No data available

## SECTION 13: Disposal considerations

13.1 Waste treatment methods Product

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

Contaminated packaging  
Dispose of as unused product.

#### **SECTION 14: Transport information**

14.1 UN number

ADR/RID: -IMDG: -IATA: -

14.2 UN proper shipping name ADR/RID: Not dangerous goods IMDG: Not dangerous goods IATA:  
Not dangerous goods

14.3 Transport hazard class(es)

ADR/RID: -IMDG: -IATA: -

14.4 Packaging group

ADR/RID: -IMDG: -IATA: -

14.5 Environmental hazards

ADR/RID: noIMDG Marine pollutant: noIATA: no

14.6 Special precautions for user

No data available

#### **SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

#### **SECTION 16: OTHER INFORMATION**

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.