

	<h1>SAFETY DATA SHEET</h1>	Page : 1
		Revised edition no : 0
		Date : 13 / 04 / 2018
		Supersedes : 31 / 7 / 2014
<h2>HEPES</h2>		<h2>HEPES</h2>

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 : C₈H₁₈N₂O₄S
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.**
 Unit 1B Hunstanton Commercial Park
 Norfolk PE365JQ
 Tel: +44(0)1485 609069
 Fax: +44(0)1485 600510
 E-mail: 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 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.

	<h1>SAFETY DATA SHEET</h1>	Page : 2
		Revised edition no : 0
		Date : 13 / 04 / 2018
		Supersedes : 31 / 7 / 2014
<h2>HEPES</h2>		<h2>HEPES</h2>

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_x, NO_x, CO_x 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.

	<h1>SAFETY DATA SHEET</h1>	Page : 3
		Revised edition no : 0
		Date : 13 / 04 / 2018
		Supersedes : 31 / 7 / 2014
<h2>HEPES</h2>		<h2>HEPES</h2>

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.

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	<h1>SAFETY DATA SHEET</h1>	Page : 4
		Revised edition no : 0
		Date : 13 / 04 / 2018
		Supersedes : 31 / 7 / 2014
<h2>HEPES</h2>		<h2>HEPES</h2>

SECTION 9 Physical and chemical properties

9.1. Information on basic physical and chemical properties

Safety data

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

9.2. Other information

No additional information available

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	<h1>SAFETY DATA SHEET</h1>	Page : 5
		Revised edition no : 0
		Date : 13 / 04 / 2018
		Supersedes : 31 / 7 / 2014
<h2>HEPES</h2>		<h2>HEPES</h2>

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

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

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.

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	<h1>SAFETY DATA SHEET</h1>	Page : 6
		Revised edition no : 0
		Date : 13 / 04 / 2018
		Supersedes : 31 / 7 / 2014
<h2>HEPES</h2>		<h2>HEPES</h2>

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.

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