Safety Data Sheet
HEPES

Section 1: Chemical Product and Company Identification

1.1 Product Identifiers

Product Name: HEPES
CAS#: 7365-45-9
RTECS#: TL6809000
REACH Number: 01-2120054645-54-0011

1.2 Recommended Use of the Chemical and restrictions of Use

Chemical manufacturing

1.3 Supplier Details

BioSpectra, Inc.
100 Majestic Way
Bangor, PA 18013
610-599-3400

1.4 Emergency Numbers

US & Canada: 1-800-424-9300
Outside the US & Canada: +1 703-527-3887

Section 2: Hazards Identification

2.1 Classification of the Substance or Mixture

Non-hazardous

2.2 GHS Classification in accordance with 29 CFR 1910 and Regulation (EC) No 1272/2008 CLP Label Elements Including Hazard Statement and Precautionary Statements:

Non-hazardous

2.3 Hazards not Classified or not Covered by the GHS/CLP

Not Applicable

Section 3: Composition, Information on Ingredients

3.1 Substances

Synonyms: N-(2-Hydroxyethyl)piperazine-N'-2-ethanesulfonic acid, 4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid
Formula: $C_8H_{18}N_2O_4S$
Molecular Weight: 238.30 g/mol
CAS#: 7365-45-9
EC#: 230-907-9

No hazardous ingredients present according to the criteria of OSHA

According to applicable regulations no components need to be disclosed.

Section 4: First Aid Measures

4.1 Description of necessary first aid measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes.

Skin: Wash with soap and plenty of water.

Ingestion: Do not induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person. If person is conscious, rinse mouth out with water.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.

4.2 Most Important Symptoms/Effects, Acute and Delayed

Not Applicable.

4.3 Indication of Immediate Medical Attention and Special Treatment

No information available

Section 5: Firefighting Measures

5.1 Extinguishing Media

In case of fire, use water, dry chemical, alcohol-resistant foam, or carbon dioxide.

5.2 Specific Hazards Associated with this Chemical

Carbon oxides, nitrogen oxides (NOx), Sulphur oxides

5.3 Special Equipment/Precautions for Firefighters

As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source. In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Explosion will appear as fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

5.4 Other Information

None available

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Use proper personal protective equipment as indicated in Section 8. Avoid dust and aerosol formation. Avoid breathing dust, vapours, mist or gas.

6.2 Environmental Precautions

Do not allow to enter drains or be released to the environment.

6.3 Methods and Materials for Containment and Cleaning Up

Remove all sources of ignition. Ventilate area of leak or spill. Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

6.4 Other Information

None available

Section 7: Handling and Storage

7.1 Precautions for Safe Handling

Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for Storage Including any Incompatibilities

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

7.3 Other Information

None available

Section 8: Exposure Controls, Personal Protection

8.1 Control Parameters

Chemical does not contain any substances with occupational exposure limits.

8.2 Engineering Controls

Use adequate ventilation to keep airborne concentrations low.

8.3 Personal Protective Measures

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure. Wear impervious gloves. Nitrile rubber with layer thickness of 0.11mm. 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

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9: Physical and Chemical Properties

9.1 Chemical Property Information

Physical and Chemical Property Information		
(a)	Appearance	White / Crystal
(b)	Odour	Odorless
(c)	Odour threshold	Not Applicable
(d)	pH	5.0 - 6.5 at 238 g/l at 25°C (77 °F)
(e)	Melting point/freezing point	234 °C (453 °F)
(f)	Initial boiling point and boiling range	No Data Available
(g)	Flash point	116 °C
(h)	Evaporation rate	No Data Available
(i)	Flammability	No Data Available
(j)	Upper/lower flammability or explosive limits	No Data Available
(k)	Vapour pressure	No Data Available
(l)	Vapour density	No Data Available
(m)	Relative density	No Data Available
(n)	Water Solubility	No Data Available
(o)	Partition coefficient: n-octanol/water	No Data Available
(p)	Auto ignition temperature	No Data Available
(q)	Decomposition temperature	No Data Available
(r)	Viscosity	No Data Available
(s)	Explosive properties	No Data Available
(t)	Oxidizing properties	No Data Available

9.2 Other Information

Formula: $C_8H_{18}N_2O_4S$

Molecular Weight: 238.30 g/mol

CAS#: 7365-45-9

EC#: 230-907-9

Section 10: Stability and Reactivity

10.1 Chemical Stability

Stable under normal temperatures and pressures.

10.2 Conditions to Avoid

Incompatible materials, dust generation, excess heat.

10.3 Incompatibilities with Other Materials

Strong oxidizing agents

10.4 Hazardous Decomposition Products

May form carbon oxides, nitrogen oxides, and sulfur oxides when heated to decomposition.

10.5 Hazardous Polymerization

Will not occur.

Section 11: Toxicological Information

11.1 Toxicological effects

Epidemiology: Not available
Reproductive: Not available
Teratogenicity: Not available
Mutagenicity: Not available
Neurotoxicity: Not available
Other Studies: Not available
Carcinogenicity: 7365-45-9 is not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Additional Information:
RTECS#: TL6809000
CAS# 7365-45-9
LD50/LC50: LD50 >2000 mg/kg (Oral, Rat).
To the best of our knowledge the associated physical, chemical and toxicological properties of this chemical have not undergone thorough investigation, all known information is contained in this SDS.

Section 12: Ecological Information

12.1 Ecotoxicity

No information available.

12.2 Persistence and Degradability

Soluble in water, persistence is unlikely, based on information available.

12.3 Bioaccumulative Potential

Bioaccumulation is unlikely.

12.4 Mobility in Soil

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils.

12.5 Results of PBT and vPvB

Not Data Available.

12.6 Other Adverse Effects

Not Data Available.

Section 13: Disposal Considerations

13.1 Disposal Methods

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14: Transport Information

14.1 Transportation Regulations

UN Number:

ADR/RID: Not Applicable, IATA: Not Applicable, IMDG: Not Applicable, USDOT: Not Applicable.

UN Proper Shipping Name:

ADR/RID: Not Dangerous Goods, IATA: Not Dangerous Goods, IMDG: Not Dangerous Goods, USDOT: Not Dangerous Goods.

Transport Hazard Class(es):

ADR/RID: Not Applicable, IATA: Not Applicable, IMDG: Not Applicable, USDOT: Not Applicable.

Packaging Group:

ADR/RID: Not Applicable, IATA: Not Applicable, IMDG: Not Applicable, USDOT: Not Applicable.

Environmental Hazards:

No hazards identified.

Special Precautions for User:

Not Data Available.

Section 15: Regulatory Information

15.1 EHS Chemical Specific Regulations

OSHA Hazards: No known OSHA hazards

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: No SARA Hazards

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components:

4-(2-Hydroxyethyl)piperazin-1-ylethanesulphonic acid
CAS-No. 7365-45-9

New Jersey Right To Know Components:

4-(2-Hydroxyethyl)piperazin-1-ylethanesulphonic acid
CAS-No. 7365-45-9

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

EINECS: 230-907-9

TSCA: Listed

DSL: Listed

PICCS: Listed

IECSC: Listed

AICS: Listed

REACH Number: 01-2120054645-54-001

15.2 Chemical Safety Assessment:

No Data Available.

Section 16: Additional Information

16.1 Hazard Ratings

HMIS Rating

Health hazard: 0
Flammability: 0
Physical Hazard: 0
Personal Protection: E

NFPA Rating

Health hazard: 0
Fire Hazard: 0
Reactivity Hazard: 0