



PIPES, Sod Salt (Piperazine-N,N'-Bis[2-Etahnesulfonic acid])

Safety Data Sheet

Version 1.1

Revision date 01/09/2012/JK-IA

SECTION 1. Product and company identification

Chemical type	: Substance
Substance name	: PIPES, Sod Salt (Piperazine-N,N'-Bis[2-Etahnesulfonic acid])
CAS No.	: 5625-37-6
Product code	: RC-079
Formula	: C ₈ H ₁₈ N ₂ O ₆ S ₂
Synonyms	: 1,4-piperazinebis(ethanesulfonic acid) / 2,2'-(piperazine-1,4-diyl)bis(ethanesulphonic)acid / piperazine-1,4-bis(2-ethanesulfonic acid) / piperazine-N,N'-bis(2-ethanesulfonic acid) / PIPES (=1,4-piperazinediethanesulfonic acid)
Company identification	: G-Biosciences/ Geno Technology, Inc. 9800 Page Avenue St. Louis, MO 63312-1429, USA Tel.1-800-628-7730 http://www.GBiosciences.com
Emergency number	: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION: 2. Hazards identification

2.1. Emergency Overview

Physical state	: Solid
Appearance	: Crystalline solid. Powder
Colour	: Colourless to white
Odour	: No data available

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2.2. OSHA Regulatory Status

No additional information available

2.3. Potential health effects

Symptoms/injuries : No data available.

2.4. Potential environmental effects

No additional information available

SECTION: 3. Composition/information on ingredients

Name	CAS No.	%
PIPES, Sod Salt (Piperazine-N,N'-Bis[2-Etahnesulfonic acid])	5625-37-6	100

4.1. First aid procedures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse with water. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

4.2. Note to physicians

No additional information available

SECTION: 5. Firefighting measures

5.1. Flammable properties

Fire hazard	: DIRECT FIRE HAZARD. No data available on direct fire hazard. INDIRECT FIRE HAZARD. No data available on indirect fire hazard.
Explosion hazard	: DIRECT EXPLOSION HAZARD. No data available on direct explosion hazard. INDIRECT EXPLOSION HAZARD. No data available on indirect explosion hazard.

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Reactivity : On burning: release of toxic and corrosive gases/vapours e.g.: (nitrous vapours, sulphur oxides, carbon monoxide - carbon dioxide).

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Polyvalent foam. ABC powder. Carbon dioxide.

5.3. Protection for firefighters

Firefighting instructions : Dilute toxic gases with water spray.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

SECTION: 6. Accidental release measures

6.1. Personal precautions

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.

Emergency procedures : Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No additional information available

6.3. Methods for containment

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.

6.4. Methods for clean up

Methods for cleaning up : Stop dust cloud by humidifying. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.5. Other information

No additional information available

6.6. Spill or leak statements by type of chemical

No additional information available

SECTION: 7. Handling and storage

7.1. Handling

Precautions for safe handling : Comply with the legal requirements. Clean contaminated clothing. Avoid raising dust. Keep away from naked flames/heat. Reduce/avoid exposure and/or contact. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

7.2. Storage

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents.

Storage area : Store in a dry area. Keep container in a well-ventilated place. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: plastics.

SECTION: 8. Exposure controls/personal protection

8.1. Exposure guidelines

No additional information available

8.2. Engineering controls

No additional information available

8.3. Personal protective equipment (PPE)

Materials for protective clothing : GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: No data available. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: No data available.

Hand protection : Gloves.

Eye protection : Safety glasses. In case of dust production: protective goggles.

Skin and body protection : Protective clothing.

Respiratory protection : Dust production: dust mask with filter type P1.

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SECTION: 9. Physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline solid. Powder.
Molecular mass	: 302.37 g/mol
Colour	: Colourless to white.
Odour	: No data available.
Odour threshold	: No data available
pH	: 2.5 - 3.0
pH solution	: 1 %
Melting point	: > 300 °C
Solidification point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: No data available
Explosive limits	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Moderately soluble in water. Water: 1 - 10 g/100ml
Log Pow	: -3.61 (est.)
Self ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
VOC content	: 0 %
Other properties	: Substance has acid reaction.

SECTION: 10. Stability and reactivity

10.1. Chemical stability

On burning: release of toxic and corrosive gases/vapours e.g.: (nitrous vapours, sulphur oxides, carbon monoxide - carbon dioxide).

Stable under normal conditions.

10.2. Conditions to avoid

No additional information available

10.3. Incompatible materials

No additional information available

10.4. Hazardous decomposition products

No additional information available

10.5. Possibility of hazardous reactions

No additional information available

SECTION: 11. Toxicological information

Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified pH: 2.5 - 3.0
Serious eye damage/irritation	: Not classified pH: 2.5 - 3.0
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

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Aspiration hazard : Not classified

SECTION: 12. Ecological information

12.1 Ecotoxicity

Ecology - air : Not dangerous for the ozone layer (Council Regulation (EC) no 1005/2009).

12.2. 12.2. Persistence and degradability

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Persistence and degradability	Biodegradability in water: no data available.
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12.3. Bioaccumulation/Accumulation

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Log Pow	-3.61 (est.)
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in environmental media

No additional information available

12.6. Other adverse effects

No additional information available

SECTION: 13. Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Remove to an authorized waste treatment plant.

SECTION: 14. Transport information

14.1. Basic shipping description

No additional information available

14.2 Additional information

Other information : No supplementary information available.

State during transport (ADR-RID) : No data available.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION: 15. Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

No additional information available

15.3. US State regulations

No additional information available

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SECTION: 16. Other information

HMIS III Rating

No additional information available

SDS US (ANSI) GBiosciences