SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

Bis[tetrakis(hydroxymethyl)phosphonium] sulfate solution: sc-234091

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifiers

Product Name: Bis[tetrakis(hydroxymethyl)phosphonium] sulfate solution
Product Number: sc-234091

Supplier: Santa Cruz Biotechnology, Inc.
2145 Delaware Avenue
Santa Cruz, CA 95060
800.457.3801 or 831.457.3800

Emergency: ChemWatch
Within the US & Canada: 877-715-9305
Outside of US & Canada: +800 2436 2255 (1-800-CHEMCALL) or call +613 9573 3112

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 3), H331
Serious eye damage (Category 1), H318
Skin sensitization (Category 1), H317
Carcinogenicity (Category 2), H351
Acute aquatic toxicity (Category 1), H400

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word: Danger

Hazard statement(s)

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P321	Specific treatment (see supplemental first aid instructions on this label).
P330	Rinse mouth.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Synonyms : Tetrakis(hydroxymethyl)phosphonium sulfate
Formula : C8H24O12P2S
Molecular Weight : 406.28 g/mol
Hazardous components

Component		Classification	Concentration
tetrakis(hydroxymethyl)phosphonium sulphate(2:1)			
CAS-No. EC-No.	55566-30-8 259-709-0	Acute Tox. 3; Eye Dam. 1; Skin Sens. 1; Aquatic Acute 1; H301 + H331, H317, H318, H400	70 - 90 %
Formaldehyde			
CAS-No. EC-No. Index-No.	50-00-0 200-001-8 605-001-00-5	Flam. Liq. 4; Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Skin Sens. 1; Carc. 2; Aquatic Acute 3; H227, H301 + H311 + H331, H314, H317, H351, H402	0.1 - 1 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

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

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

no data available

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, Sulphur oxides, Oxides of phosphorus

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. 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. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store at room temperature.

7.3 Specific end use(s)

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
tetrakis(hydroxymethyl)phosphonium sulphate(2:1)	55566-30-8	TWA	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central nervous system Hepatic body weight effects Not classifiable as a human carcinogen Sensitizer		
Formaldehyde	50-00-0	C	0.3 ppm	USA. ACGIH Threshold Limit Values (TLV)
		Eye & Upper Respiratory Tract irritation Suspected human carcinogen Sensitizer		
		TWA	0.016 ppm	USA. NIOSH Recommended Exposure Limits

		Potential Occupational Carcinogen See Appendix A		
		C	0.1 ppm	USA. NIOSH Recommended Exposure Limits
		Potential Occupational Carcinogen See Appendix A 15 minute ceiling value		
		Substance listed; for more information see OSHA document 1910.1048		
		Substance listed; for more information see OSHA document 1910.1048		
		See 1910.1048		
		PEL	0.75 ppm	OSHA Specifically Regulated Chemicals/Carcinogens
		1910.1048 This standard applies to all occupational exposures to formaldehyde, i.e. from formaldehyde gas, its solutions, and materials that release formaldehyde OSHA specifically regulated carcinogen		
		STEL	2 ppm	OSHA Specifically Regulated Chemicals/Carcinogens
		1910.1048 This standard applies to all occupational exposures to formaldehyde, i.e. from formaldehyde gas, its solutions, and materials that release formaldehyde OSHA specifically regulated carcinogen		
		TWA	0.016 ppm	USA. NIOSH Recommended Exposure Limits
		Potential Occupational Carcinogen Formalin is an aqueous solution that is 37% formaldehyde by weight; inhibited solutions usually contain 6-12% methyl alcohol. Also see specific listings for Formaldehyde and Methyl alcohol. See Appendix A		
		C	0.1 ppm	USA. NIOSH Recommended Exposure Limits
		Potential Occupational Carcinogen Formalin is an aqueous solution that is 37% formaldehyde by weight; inhibited solutions usually contain 6-12% methyl alcohol. Also see specific listings for Formaldehyde and Methyl alcohol. See Appendix A 15 minute ceiling value		

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Face shield (8-inch minimum). 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.

Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	liquid	Odor	no data
Odor Threshold	no data	pH	no data
Melting point/freezing point	no data	Boiling point range	no data
Flash point	no data	Evaporation rate	no data
Flammability (solid, gas)	no data	Upper/lower explosive limits	no data
Vapor pressure	no data	Vapor density	no data
Relative density	no data	Water solubility	no data
Auto-ignition temperature	no data	Decomposition temperature	no data
Viscosity	no data	Explosive properties	no data
Partition coefficient: noctanol/water	no data	Oxidizing properties	no data

9.2 Other safety information

no data available

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

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - rat - 248 mg/kg (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))

LC50 Inhalation - rat - 4 h - 5.5 mg/l (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))

Dermal: no data available (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))

Skin corrosion/irritation

Skin - rabbit

Result: Mild skin irritation

Serious eye damage/eye irritation

Eyes - rabbit (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))

Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Buehler Test - guinea pig (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))

Result: May cause sensitization by skin contact.

Germ cell mutagenicity
Mutation in mammalian somatic cells. (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))
Result: Conflicting results have been seen in different studies.
S. typhimurium (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))
Result: Not mutagenic in Ames Test.
Dominant lethal test (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))
rat
Result: negative

Carcinogenicity

IARC:	1 - Group 1: Carcinogenic to humans (Formaldehyde).
IARC:	3 - Group 3: Not classifiable as to its carcinogenicity to humans (tetrakis(hydroxymethyl)phosphonium sulphate(2:1)).
NTP:	Known to be human carcinogen (Formaldehyde).
OSHA:	OSHA specifically regulated carcinogen (Formaldehyde).

Reproductive toxicity
no data available (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))
Specific target organ toxicity - single exposure
no data available (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))
Specific target organ toxicity - repeated exposure
no data available
Aspiration hazard
no data available (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))
Additional Information
RTECS: Not available
Liver - Irregularities - Based on Human Evidence (Formaldehyde)

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	mortality LC50 - Lepomis macrochirus (Bluegill) - 97.00 mg/l - 96 h (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))
	mortality LC50 - Oncorhynchus mykiss (rainbow trout) - 94.00 mg/l - 96 h (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))
Toxicity to daphnia and other aquatic invertebrates	LC50 - Daphnia - 15.00 mg/l - 48 h (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))
Toxicity to algae	EC50 - Algae - 0.2 mg/l - 96 h (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))

12.2 Persistence and degradability
Biodegradability Result: - Readily biodegradable.

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 2922 Class: 8 (6.1) Packing group: III

Proper shipping name: Corrosive liquids, toxic, n.o.s. (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))

Reportable Quantity (RQ): 12502 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 2922 Class: 8 (6.1) Packing group: III EMS-No: F-A, S-B

Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S. (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))

Marine pollutant: No

IATA

UN number: 2922 Class: 8 (6.1) Packing group: III

Proper shipping name: Corrosive liquid, toxic, n.o.s. (tetrakis(hydroxymethyl)phosphonium sulphate(2:1))

15. REGULATORY INFORMATION

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

Formaldehyde CAS-No. 50-00-0

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Formaldehyde CAS-No. 50-00-0

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Formaldehyde CAS-No. 50-00-0

Pennsylvania Right To Know Components

Water CAS-No. 7732-18-5

tetrakis(hydroxymethyl)phosphonium sulphate(2:1) CAS-No. 55566-30-8

Formaldehyde CAS-No. 50-00-0

New Jersey Right To Know Components

Water CAS-No. 7732-18-5

tetrakis(hydroxymethyl)phosphonium sulphate(2:1) CAS-No. 55566-30-8

Formaldehyde CAS-No. 50-00-0

California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

Formaldehyde CAS-No. 50-00-0

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Carc.	Carcinogenicity
Eye Dam.	Serious eye damage
Flam. Liq.	Flammable liquids
H227	Combustible liquid
H301 + H311 + H331	Toxic if swallowed, in contact with skin or if inhaled
H301 + H331	Toxic if swallowed or if inhaled
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H402	Harmful to aquatic life.
Skin Corr.	Skin corrosion
Skin Sens.	Skin sensitization

HMIS Rating

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	2
Fire Hazard:	0
Reactivity Hazard:	0

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

6/18/2014