



TEA6595

Safety Data Sheet

Date of issue: 06/01/2018

Supersedes: 01/22/2016

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : Tetrakis (Hydroxymethyl) Phosphonium Sulfate Solution (THPS, 75%)
CAS No : 55566-30-8
Formula : C₈H₂₄O₁₂P₂S
Synonyms : bis[tetra(hydroxymethyl)phosphonium]sulfate / bis[tetrakis(hydroxymethyl)phosphonium]sulfat / Corrosive solid, n.o.s. / octakis(hydroxymethyl)phosphonium sulfate / phosphonium, tetrakis(hydroxymethyl)-, sulfate (2:1) (salt) / tetra (hydroxymethyl)phosphonium sulphate / THPS (=tetrakis(hydroxymethyl)phosphonium sulphate (2:1))

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Industrial applications

Restrictions on use of the substance/mixture : None determined.

1.3. Details of the supplier of the safety data sheet

Team Supply
11474 Columbia Park Drive West
Jacksonville, Florida 32258
Ph: (904) 262-5253

1.4. Emergency telephone number

Emergency number : CHEMTEL - (800) 255-3924

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Acute toxicity (oral) Category 3	H301
Acute toxicity (inhalation:vapour) Category 3	H331
Serious eye damage/eye irritation Category 1	H318
Skin sensitization Category 1	H317
Reproductive toxicity Category 2	H361
Hazardous to the aquatic environment - Acute Hazard Category 1	H400

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H301+H331 - Toxic if swallowed or if inhaled
H317 - May cause an allergic skin reaction
H318 - Causes serious eye damage
H361 - Suspected of damaging fertility or the unborn child
H400 - Very toxic to aquatic life

Precautionary statements (GHS-US)

: P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P261 - Avoid breathing spray, vapors
P264 - Wash hands, forearms and face 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 must not be allowed out of the workplace
P273 - Avoid release to the environment
P280 - Wear eye protection, face protection, protective clothing, protective gloves
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

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P302+P352 - If on skin: Wash with plenty of 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
P311 - Call a doctor, a POISON CENTER
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 hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
tetrakis(hydroxymethyl)phosphonium sulphate (2:1)	(CAS No) 55566-30-8	75.0 min.	Acute Tox. 3 (Oral), H301
Water	(CAS No) 7732-18-5	25.0 max.	Not classified

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact	: Wash skin with plenty of water. Get medical advice/attention. Wash contaminated clothing before reuse. Take off contaminated clothing.
First-aid measures after eye contact	: Rinse immediately with plenty of water (for at least 15 minutes). Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries	: Causes severe skin burns and eye damage.
Symptoms/injuries after inhalation	: Corrosive to the respiratory tract.
Symptoms/injuries after skin contact	: Causes burns.
Symptoms/injuries after eye contact	: Causes serious eye damage.
Symptoms/injuries after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: In case of fire in the surroundings: all extinguishing agents allowed. Water spray. Foam. Carbon dioxide. Dry powder.
Unsuitable extinguishing media	: None to our knowledge. If there is a fire close by, use suitable extinguishing agents.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Combustible liquid.
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Explosion hazard	: On heating, there is a risk of bursting due to internal pressure build-up. Cool down the containers exposed to heat with a water spray. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
Reactivity	: Reacts with (strong) oxidizers. Heating may cause a fire. Reacts exothermically with (some) bases.
5.3. Advice for firefighters	
Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Exercise caution when fighting any chemical fire. Cool closed containers exposed to fire with water spray. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Complete protective clothing. Wear respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Evacuate area.
6.1.1. For non-emergency personnel	
Protective equipment	: Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles. Impervious protective suit with gloves, boots, and full head and face protection must be worn.
Emergency procedures	: Evacuate area. Mark the danger area. No flames, no sparks. Eliminate all sources of ignition. Keep upwind.
6.1.2. For emergency responders	
Protective equipment	: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection.
Emergency procedures	: Stop leak if safe to do so. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	: Contain leaking substance, pump over in suitable containers. Prevent entry to sewers and public waters. Collect all waste in suitable and labeled containers and dispose according to local legislation.
Methods for cleaning up	: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Dispose in a safe manner in accordance with local/national regulations. Collect spillage. Wash clothing and equipment after handling.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Keep container tightly closed. Always wash hands after handling the product. Do not eat, drink or smoke when using this product. Do not handle until all safety precautions have been read and understood. Carry out operations in the open/under local exhaust/ventilation or with respiratory protection. Do not breathe vapors. Do not get in eyes, on skin, or on clothing. Eliminate all ignition sources if safe to do so. Comply with applicable regulations.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Comply with applicable regulations.
Storage conditions	: Store in a well-ventilated place. Keep cool. Keep in fireproof place. Keep only in original container.
Incompatible products	: Strong bases. Strong acids. Oxidizing agent.
Incompatible materials	: Sources of ignition. Heat sources.
Heat-ignition	: Store in a cool, well-ventilated place. Store away from heat.
Storage area	: Keep container tightly closed and in a well-ventilated place.
Special rules on packaging	: Keep only in original container.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

tetrakis(hydroxymethyl)phosphonium sulphate (2:1) (55566-30-8)		
ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³ (Tetrakis (hydroxymethyl) phosphonium sulfate; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
Water (7732-18-5)		
Not applicable		

8.2. Exposure controls

Appropriate engineering controls	: Carry out operations in the open/under local exhaust/ventilation or with respiratory protection.
Personal protective equipment	: Avoid all unnecessary exposure.
Hand protection	: protective gloves.
Eye protection	: Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: In case of inadequate ventilation wear respiratory protection. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.
Environmental exposure controls	: Avoid release to the environment.
Other information	: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Clear to light straw
Odor	: characteristic
Odor threshold	: No data available
pH	: ≈ 3 - 5
pH solution	: 3 - 5
Melting point	: No data available
Freezing point	: ≈ -43 °C
Boiling point	: ≈ 109 °C
Flash point	: 96 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 1.7 kPa @ 25 °C
Relative vapor density at 20 °C	: > 1
Specific gravity / density	: 1.37 - 1.40 @ 25°C
Molecular mass	: 406.28 g/mol
Solubility	: Soluble in water.
Log Pow	: No data available
Auto-ignition temperature	: ≈ 279 °F
Decomposition temperature	: No data available
Viscosity	: 39.0 41.0 cPs @ 68 °F (20 °C)
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

VOC content	: 0 %
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with (strong) oxidizers. Heating may cause a fire. Reacts exothermically with (some) bases.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Thermal decomposition generates : fume. Carbon monoxide. Carbon dioxide. Corrosive vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Inhalation:vapour: Toxic if inhaled.

tetrakis(hydroxymethyl)phosphonium sulphate (2:1) (55566-30-8)	
LD50 oral rat	248 mg/kg (Rat)
LC50 inhalation rat (mg/l)	5.5 mg/l/4h (Rat)
ATE US (oral)	248.000 mg/kg body weight
ATE US (vapors)	5.500 mg/l/4h
ATE US (dust, mist)	5.500 mg/l/4h

Skin corrosion/irritation : Not classified
pH: ≈ 3 - 5

Serious eye damage/irritation : Causes serious eye damage.
pH: ≈ 3 - 5

Respiratory or skin sensitization : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified
Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

tetrakis(hydroxymethyl)phosphonium sulphate (2:1) (55566-30-8)	
IARC group	3 - Not classifiable

Reproductive toxicity : Suspected of damaging fertility or the unborn child.
Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Harmful if swallowed.

Symptoms/injuries after inhalation : Corrosive to the respiratory tract.

Symptoms/injuries after skin contact : Causes burns.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Water pollutant (surface water). No data available on ecotoxicity.

tetrakis(hydroxymethyl)phosphonium sulphate (2:1) (55566-30-8)	
LC50 fish 1	≈ 119 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 Daphnia 1	≈ 19.4 mg/l
LC50 fish 2	≈ 93 mg/l
ErC50 (algae)	≈ 0.16 mg/l

12.2. Persistence and degradability

tetrakis(hydroxymethyl)phosphonium sulphate (2:1) (55566-30-8)	
Persistence and degradability	Biodegradability in water: no data available.

12.3. Bioaccumulative potential

tetrakis(hydroxymethyl)phosphonium sulphate (2:1) (55566-30-8)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

GWPMix comment : No known effects from this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2810 Toxic, liquids, organic, n.o.s. (tetrakis(hydroxymethyl)phosphonium sulfate solution), 6.1, III

UN-No.(DOT) : UN2810

Proper Shipping Name (DOT) : Toxic, liquids, organic, n.o.s.
tetrakis(hydroxymethyl)phosphonium sulfate solution

Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 6.1 - Poison



Dangerous for the environment : Yes

Marine pollutant : Yes



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DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241
DOT Symbols	: G - Identifies PSN requiring a technical name
DOT Special Provisions (49 CFR 172.102)	: IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672) T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP
DOT Packaging Exceptions (49 CFR 173.xxx)	: 153
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 220 L
DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"
Other information	: No supplementary information available.

TDG

Transport document description	: UN2810 TOXIC LIQUID, ORGANIC, N.O.S. (TOXIC LIQUID, ORGANIC, N.O.S.), 6.1, III
UN-No. (TDG)	: UN2810
Proper Shipping Name (TDG)	: TOXIC LIQUID, ORGANIC, N.O.S.
TDG Primary Hazard Classes	: 6.1 - Class 6.1 - Toxic Substances
Packing group	: III - Minor Danger
TDG Special Provisions	: 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S.; (b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S.; (c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S.; (d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.; or (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. An example in Canada is the "Food and Drugs Act". (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS. SOR/2014-306
Explosive Limit and Limited Quantity Index	: 5
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 60

Transport by sea

UN-No. (IMDG)	: 2810
Proper Shipping Name (IMDG)	: TOXIC LIQUID, ORGANIC, N.O.S.
Class (IMDG)	: 6.1 - Toxic substances
Packing group (IMDG)	: III - substances presenting low danger
Limited quantities (IMDG)	: 5 L

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Air transport

UN-No. (IATA) : 2810
Proper Shipping Name (IATA) : Toxic liquid, organic, n.o.s.
Class (IATA) : 6.1 - Toxic Substances
Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

tetrakis(hydroxymethyl)phosphonium sulphate (2:1) (55566-30-8)	
CERCLA RQ	None to our knowledge
SARA Section 302 Threshold Planning Quantity (TPQ)	None to our knowledge
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard
SARA Section 313 - Emission Reporting	None to our knowledge

15.2. International regulations

CANADA

tetrakis(hydroxymethyl)phosphonium sulphate (2:1) (55566-30-8)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects Class E - Corrosive Material

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

tetrakis(hydroxymethyl)phosphonium sulphate (2:1) (55566-30-8)	
State or local regulations	U.S. - New Jersey - Right to Know Hazardous Substance List

tetrakis(hydroxymethyl)phosphonium sulphate (2:1) (55566-30-8)	
U.S. - New Jersey - Right to Know Hazardous Substance List	

SECTION 16: Other information

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H-phrases:

H301	Toxic if swallowed
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H331	Toxic if inhaled
H361	Suspected of damaging fertility or the unborn child
H400	Very toxic to aquatic life

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HMIS III Rating

Health	: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
Physical	: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
Personal Protection	: J J - Splash goggles, Gloves, Synthetic apron, Dust & vapor respirator

SDS US (GHS HazCom 2012)

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Made by Premier Water & Energy Technology, Inc. for Team Supply

