



TETRADECYL(TRIHEXYL)PHOSPHONIUM CHLORIDE

Safety Data Sheet OMPH066

Date of issue: 08/20/2015

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	: Substance
Physical state	: Solid
Substance name	: TETRADECYL(TRIHEXYL)PHOSPHONIUM CHLORIDE
Product code	: OMPH066
Formula	: C32H68ClP
Synonyms	: TRIHEXYLTETRADECYLPHOSPHONIUM CHLORIDE; PHOSPHONIUM, TRIHEXYLTETRADECYL-, CHLORIDE
Chemical family	: PHOSPHORUS COMPOUND

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

Use of the substance/mixture	: Chemical intermediate For research use only
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1.3. Details of the supplier of the safety data sheet

GELEST, INC.

11 East Steel Road
Morrisville, PA 19067

USA

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

info@gelest.com - www.gelest.com

1.4. Emergency telephone number

Emergency number	: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Acute Tox. 4 (Oral) H302

Skin Corr. 1B H314

Eye Dam. 1 H318

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US)



GHS05

GHS07

Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS-US)

: P280 - Wear protective gloves/protective clothing/eye protection/face protection
P260 - Do not breathe dust
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P301+P312 - If swallowed: Call a doctor if you feel unwell
P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep 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
P321 - Specific treatment (see first aid instructions on this label)
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
P501 - Dispose of contents/container to licensed waste disposal facility.

TETRADECYL(TRIHEXYL)PHOSPHONIUM CHLORIDE

Safety Data Sheet

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type : Mono-constituent
Name : TETRADECYL(TRIHEXYL)PHOSPHONIUM CHLORIDE
CAS No : 258864-54-9

Name	Product identifier	%	Classification (GHS-US)
Tetradecyl(trihexyl)phosphonium chloride	(CAS No) 258864-54-9	> 95	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Call a POISON CENTER or doctor/physician.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of soap and water. Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

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

Symptoms/injuries : Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.

Symptoms/injuries after skin contact : Causes (severe) skin burns. Causes alkali burns.

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

Symptoms/injuries after ingestion : Harmful 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 : Not combustible.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : None known.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

TETRADECYL(TRIHEXYL)PHOSPHONIUM CHLORIDE

Safety Data Sheet

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe dust. Provide local exhaust or general room ventilation to minimize exposure to dust.

Hygiene measures : 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.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store locked up.

Incompatible materials : None known.

Storage area : Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.

Personal protective equipment : Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection : Rubbers. Neoprene or nitrile rubber gloves.

Eye protection : Chemical goggles. Contact lenses should not be worn.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (orange cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Resinous or crystalline solid.
Molecular mass	: 519.31 g/mol
Color	: Pale yellow-gray.
Odor	: No data available
Odor threshold	: No data available
Refractive index	: 1.4818
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: -40 °C
Freezing point	: No data available
Boiling point	: > 200 °C
Flash point	: 118 °C
Auto-ignition temperature	: 375 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 0.895
Solubility	: Slightly. Soluble in water.

TETRADECYL(TRIHEXYL)PHOSPHONIUM CHLORIDE

Safety Data Sheet

Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: 2250 cSt
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

Carbon dioxide. Phosphorus oxides. Tributylphosphine oxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

TETRADECYL(TRIHEXYL)PHOSPHONIUM CHLORIDE (258864-54-9)

ATE US (oral)	526.316 mg/kg body weight
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Tetradecyl(trihexyl)phosphonium chloride (258864-54-9)

LD50 oral rat	~ 500 - 2000 mg/kg
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ATE US (oral)	500.000 mg/kg body weight
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Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified
negative Ames test for mutagenicity reported.

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

Potential Adverse human health effects and symptoms : Signs of toxicity include staggered gait, loss of righting reflex and decrease in spontaneous activity and reactivity.

Symptoms/injuries after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Coughing. Headache. Nausea.

Symptoms/injuries after skin contact : Causes (severe) skin burns. Causes alkali burns.

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

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

Reason for classification : Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

No additional information available

TETRADECYL(TRIHEXYL)PHOSPHONIUM CHLORIDE

Safety Data Sheet

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.
Effect on ozone layer : No additional information available
Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.
Waste disposal recommendations : Landfill. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

UN-No.(DOT) : 1759
DOT NA no. : UN1759

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Corrosive solids, n.o.s.
(TETRADECYL(TRIHEXYL)PHOSPHONIUM CHLORIDE)
Department of Transportation (DOT) Hazard : 8 - Class 8 - Corrosive material 49 CFR 173.136
Classes
Hazard labels (DOT) : 8 - Corrosive



DOT Symbols : G - Identifies PSN requiring a technical name
Packing group (DOT) : III - Minor Danger
DOT Packaging Exceptions (49 CFR 173.xxx) : 154
DOT Packaging Non Bulk (49 CFR 173.xxx) : 213
DOT Packaging Bulk (49 CFR 173.xxx) : 240

14.3. Additional information

Other information : No supplementary information available.

Transport by sea

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Air transport

DOT Quantity Limitations Passenger aircraft/rail : 25 kg
(49 CFR 173.27)
DOT Quantity Limitations Cargo aircraft only (49 : 100 kg
CFR 175.75)

SECTION 15: Regulatory information

15.1. US Federal regulations

TETRADECYL(TRIHEXYL)PHOSPHONIUM CHLORIDE (258864-54-9)

TSCA Exemption/Exclusion	CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.
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TETRADECYL(TRIHEXYL)PHOSPHONIUM CHLORIDE

Safety Data Sheet

Tetradecyl(trihexyl)phosphonium chloride (258864-54-9)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

No additional information available

15.3. US State regulations

TETRADECYL(TRIHEXYL)PHOSPHONIUM CHLORIDE(258864-54-9)

U.S. - California - Proposition 65 - Carcinogens List	No
U.S. - California - Proposition 65 - Developmental Toxicity	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No

Tetradecyl(trihexyl)phosphonium chloride (258864-54-9)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	No	No	No	

SECTION 16: Other information

Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development.

Full text of H-phrases::

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Skin Corr. 1B	Skin corrosion/irritation Category 1B
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability : 1 Slight Hazard
Physical : 0 Minimal Hazard

Prepared by safety and environmental affairs.

Date of issue: 08/20/2015 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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