

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name	Trihexyltetradecylphosphonium chloride
Product code	IN-0006
CAS	258864-54-9
EC-Number	684-206-1
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.

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

Identified uses	Laboratory chemicals, Manufacture of substances
-----------------	---

1.3 Details of the supplier of the safety data sheet

Supplier	IoLiTec Ionic Liquids Technologies GmbH Im Zukunftspark 9 D – 74076 Heilbronn Germany
Telephone	+49 (0)7131-89839-0
Fax	+49 (0)7131-89839-109
Email	msds@iolitec.de



1.4 Emergency telephone number

Emergency telephone	+49 (0)151-41255671
---------------------	---------------------

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Oral (Category 4)

Skin Corrosion (Category 1B)

Skin Sensitisation (Category 1A)

Eye Damage (Category 1)

Aquatic Acute (Category 1)

Aquatic Chronic (Category 1)

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)



Signal word

Danger

H-phrases

H302

Harmful if swallowed.

H314

Causes severe skin burn and eye damage.

H317

May cause an allergic skin reaction.

H410

Very toxic to aquatic life with long lasting effects.

P-phrases

P260

Do not breathe mist/ spray.

P264

Wash skin thoroughly after handling.

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P310	Immediately call a POISON CENTER/ doctor.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor/... if you feel unwell.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P405	Store locked up.

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

Reduced labelling (<125 mL) (REGULATION (EC) No 1272/2008 Art. 29)



Signal word

Danger

H-phrases

H314 Causes severe skin burn and eye damage.
H317 May cause an allergic skin reaction.

P-phrases

P260 Do not breathe mist/ spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P310 Immediately call a POISON CENTER/ doctor.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405

Store locked up.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Trihexyltetradecylphosphonium chloride

CAS: 258864-54-9

EC-Number : 684-206-1

Ingredient name	Contents	Classification
Trihexyltetradecylphosphonium chloride	>95%	Acute Tox. 4, Skin Corr. 1B, Skin Sens. 1A, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

4 FIRST AID MEASURES

4.1 Description of first aid measures

General

Contaminated clothing should be removed and washed before being reused.

Contaminated clothing should not be allowed out of the workspace.

Inhalation

Move the exposed person to fresh air at once. If respiratory problems, provide artificial respiration/oxygen.

Ingestion

Immediately rinse mouth and provide fresh air. Do not induce vomiting. Get medical attention.

Skin

Wash the skin immediately with soap and water. Get medical attention if skin irritation or rash occurs.

Eyes

Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention. Continue to rinse.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (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 FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use: Water spray, fog or mist. Carbon dioxides (CO₂). Dry chemicals, sand, dolomite etc.

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

5.2. Special hazards arising from the substance or mixture

Avoid water in straight hose stream, will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control. Fire causes formation of toxic gases.

5.3. Advice for firefighters

Wear self-contained breathing apparatus as combustion may produce hazardous fumes.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing and avoid inhalation of vapor, skin or eye contact.

6.2 Environmental precautions

Avoid washing into water courses. Avoid contaminating public drains or water supply.

[Avoid release to environment. Collect spillage.](#)

6.3 Methods and materials for containment and cleaning up

Avoid contact with skin or inhalation of spillage, dust or vapor. Avoid dust formation. Collect and reclaim or dispose in sealed containers in license waste. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.

6.4 Reference to other sections

For disposal see section 13.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep away from heat, sparks and open flame. Do not use in confined spaces without adequate ventilation and/or respirator.

7.2 Conditions for safe storage, including any incompatibilities

Store at moderate temperatures in dry, well-ventilated area. Chemical storage.

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

Storage class (TRGS 510): LGK 8B

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Eye/face protection

Safety glasses with side-shields conforming to EN166 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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Liquid.
b) Color	Colorless to yellow.
c) Odor/taste	No characteristic odor.
d) Melting point/freezing point	-70 °C
e) Initial boiling point	no data available
f) Flammability	no data available
g) Upper/lower explosive limits	no data available
h) Flash point	no data available
i) Autoignition temperature	no data available
j) Decomposition temperature	no data available
k) pH	no data available
l) Viscosity, kinematic	2073 mm ² /s
m) Water solubility	no data available
n) Partition coefficient	no data available
o) Vapor pressure	no data available
p) Density	0,88 g/cm ³
q) Relative vapor density	no data available
r) Particle characteristics	not relevant
s) Explosive properties	not relevant
t) Oxidizing properties	not relevant

9.2 Other safety information

No data available

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

10 STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

No particular stability concerns.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Avoid contact to strong oxidizers and bases.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

High temperatures generate: Corrosive gases/ vapor/ fumes of: Carbon dioxide (CO₂).
Carbon monoxide (CO). Phosphorous oxides (POx).

11 TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes

Acute toxicity

May be harmful if swallowed.

Skin corrosion/irritation

Causes severe skin burn and eye damage.

Serious eye damage/eye irritation

Causes severe skin burn and eye damage.

Respiratory or skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

no data available

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Inhalation no data available

Ingestion May be harmful if swallowed.

Skin Causes skin irritation.

Eyes Causes serious severe skin burn and eye damage.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

11.2 Information on other hazards

Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU)2018/605 at levels of 0.1% or higher.

Additional Information

RTECS: Not available.

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Aquatic acute – Very toxic to aquatic life.

Aquatic chronic – Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU)2018/605 at levels of 0.1% or higher.

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Contact specialist disposal companies. Dispose of in accordance with Local Authority requirements. Recover and reclaim or recycle, if practical. **Do not dispose in communal waste water.**

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

14 TRANSPORT INFORMATION

14.1 UN number

UN1760

14.2 UN proper shipping name

CORROSIVE LIQUID, N.O.S. (Trihexyltetradecylphosphonium chloride)

14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: yes

14.6 Special precautions for user

No data available

15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This safety datasheet complies with the requirements of Regulation (EC) No.1907/2006.

15.2 Chemical safety assessment

no data available

Country specific information

Germany

Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV):

WGK: 3 (Self-Classification)

Safety Data Sheet

according to Regulation (EC) No 1907/2006
Trihexyltetradecylphosphonium chloride

Revision Date: 9/10/2024

Version: 3

16 OTHER INFORMATION

DISCLAIMER

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPOSED TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. IOLITEC SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT. THIS INFORMATION RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR ANY PROCESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE SUITABILITY OF SUCH INFORMATION FOR HIS OWN PARTICULAR USE.

IN NO WAY SHALL IOLITEC BE LIABLE FOR ANY CLAIMS, LOSSES OR DAMAGES OF ANY THIRD PARTY OR FOR THE LOST PROFITS OR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES, HOWSOEVER ARISING, EVEN IF THE COMPANY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.