

Trichloro(2,4,4-trimethylpentyl)silane

Version number: GHS 2.0
Replaces version of: 2019-09-02 (GHS 1)

Revision: 2019-09-03

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

1.1 Product identifier

Identification of the substance **Trichloro(2,4,4-trimethylpentyl)silane**
 Registration number (REACH) this information is not available
 CAS number 18379-25-4
 Alternative name(s) trichloro(2,4,4-trimethylpentyl)silane
 Article number A0100699

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

Relevant identified uses General use
 Uses advised against Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin.

1.3 Details of the supplier of the safety data sheet

Chemos GmbH & Co. KG
 Sonnenring 7
 84032 Altdorf
 Germany

 Telephone: +49 871-966346-0
 Telefax: +49 871-966346-13
 e-mail: chemos@chemos.de
 Website: <http://www.chemos.de/>

e-mail (competent person) chemos@chemos.de

1.4 Emergency telephone number

Emergency information service +49 89 1 92 40

Poison centre				
Country	Name	Postal code/ city	Telephone	Telefax
United Kingdom	National Poison Information Centre Medical Toxicology Unit	SE14 5ER London	+44 171 635 91 91	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.10	acute toxicity (oral)	3	Acute Tox. 3	H301
3.2	skin corrosion/irritation	1A	Skin Corr. 1A	H314
3.3	serious eye damage/eye irritation	1	Eye Dam. 1	H318

For full text of abbreviations: see SECTION 16.

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The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- Signal word danger

- Pictograms

GHS05, GHS06



- Hazard statements

H301 Toxic if swallowed.

H314 Causes severe skin burns and eye damage.

- Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or 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.

P501 Dispose of contents/container to industrial combustion plant.

- Supplemental hazard information

EUH014 Reacts violently with water.

EUH071 Corrosive to the respiratory tract.

2.3 Other hazards

This material is combustible, but will not ignite readily.

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	Trichloro(2,4,4-trimethylpentyl)silane
Identifiers	
CAS No	18379-25-4
EC No	242-262-0
Molecular formula	C ₈ H ₁₇ Cl ₃ Si
Molar mass	247.7 g _{mol}

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SECTION 4: First aid measures**4.1 Description of first aid measures**

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media

BC-powder, Carbon dioxide (CO₂), Dry sand

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapours/dust/spray/gases.

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6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

This information is not available.

Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	18.1 mg/m ³	human, inhalatory	worker (industry)	chronic - local effects

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Environmental values

Relevant PNECs and other threshold levels				
Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	0.32 mg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	0.032 mg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	4 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	2.1 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0.21 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
PNEC	0.24 mg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Colour	various
Odour	characteristic

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Other safety parameters

pH (value)	not determined
Melting point/freezing point	-129 °C
Initial boiling point and boiling range	202 °C at 101.3 kPa
Flash point	84.5 °C
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	not determined
Vapour pressure	45 Pa
Density	not determined
Vapour density	this information is not available
Relative density	information on this property is not available
Solubility(ies)	not determined

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	390 °C at 101.3 kPa (ECHA) (auto-ignition temperature (liquids and gases))

Viscosity

- Kinematic viscosity	1.84 mm ² /s at 25 °C
Explosive properties	none
Oxidising properties	none

9.2 Other information

Solvent content	100 %
Temperature class (EU, acc. to ATEX)	T2 (maximum permissible surface temperature on the equipment: 300°C)

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SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

10.5 Incompatible materials

Oxidisers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Toxic if swallowed.

- Acute toxicity estimate (ATE)

Oral 100 mg/kg

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

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Other information
Corrosive to the respiratory tract.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Process of degradability		
Process	Degradation rate	Time
carbon dioxide generation	13 %	28 d

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

14.1 UN number	2922
14.2 UN proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S.
Technical name	Trichloro(2,4,4-trimethylpentyl)silane
14.3 Transport hazard class(es)	
Class	8 (corrosive substances)
Subsidiary risk(s)	6.1 (acute toxicity)
14.4 Packing group	I (substance presenting high danger)

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- 14.5 Environmental hazards** non-environmentally hazardous acc. to the dangerous goods regulations
- 14.6 Special precautions for user**
Provisions for dangerous goods (ADR) should be complied within the premises.
- 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code**
The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

UN number	2922
Proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S.
Class	8
Classification code	CT1
Packing group	I
Danger label(s)	8+6.1



Special provisions (SP)	274, 802(ADN)
Excepted quantities (EQ)	E0
Limited quantities (LQ)	0
Transport category (TC)	1
Tunnel restriction code (TRC)	C/D
Hazard identification No	886
Emergency Action Code	2X

International Maritime Dangerous Goods Code (IMDG)

UN number	2922
Proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S.
Class	8
Subsidiary risk(s)	6.1
Marine pollutant	-
Packing group	I
Danger label(s)	8+6.1



Special provisions (SP)	274
Excepted quantities (EQ)	E0
Limited quantities (LQ)	0
EmS	F-A, S-B
Stowage category	B

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International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	2922
Proper shipping name	Corrosive liquid, toxic, n.o.s.
Class	8
Subsidiary risk(s)	6.1
Packing group	I
Danger label(s)	8+6.1



Special provisions (SP)	A3
Excepted quantities (EQ)	E0

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Deco-Paint Directive (2004/42/EC)

VOC content	100 %
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Directive on industrial emissions (VOCs, 2010/75/EU)

VOC content	100 %
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15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
3.1		Molar mass: 247.7 g/mol	yes
9.2		Temperature class (EU, acc. to ATEX): T2 (maximum permissible surface temperature on the equipment: 300°C)	yes
14.1	UN number: not assigned	UN number: 2922	yes
14.2	UN proper shipping name: not assigned	UN proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S.	yes
14.2		Technical name: Trichloro(2,4,4-trimethylpentyl)silane	yes
14.3	Transport hazard class(es): not assigned	Transport hazard class(es)	yes
14.3		Class: 8 (corrosive substances)	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.3		Subsidiary risk(s): 6.1 (acute toxicity)	yes
14.4	Packing group: not assigned to a packing group	Packing group: I (substance presenting high danger)	yes
14.7	Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN): not assigned	Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)	yes
14.7		UN number: 2922	yes
14.7		Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S.	yes
14.7		Class: 8	yes
14.7		Classification code: CT1	yes
14.7		Packing group: I	yes
14.7		Danger label(s): 8+6.1	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7		Special provisions (SP): 274, 802(ADN)	yes
14.7		Excepted quantities (EQ): E0	yes
14.7		Limited quantities (LQ): 0	yes
14.7		Transport category (TC): 1	yes
14.7		Tunnel restriction code (TRC): C/D	yes
14.7		Hazard identification No: 886	yes
14.7		Emergency Action Code: 2X	yes
14.7	International Maritime Dangerous Goods Code (IMDG): not assigned	International Maritime Dangerous Goods Code (IMDG)	yes
14.7		UN number: 2922	yes
14.7		Proper shipping name: CORROSIVE LIQUID, TOXIC, N.O.S.	yes
14.7		Class: 8	yes
14.7		Subsidiary risk(s): 6.1	yes
14.7		Marine pollutant: -	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
14.7		Packing group: I	yes
14.7		Danger label(s): 8+6.1	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7		Special provisions (SP): 274	yes
14.7		Excepted quantities (EQ): E0	yes
14.7		Limited quantities (LQ): 0	yes
14.7		EmS: F-A, S-B	yes
14.7		Stowage category: B	yes
14.7	International Civil Aviation Organization (ICAO-IATA/DGR): not assigned	International Civil Aviation Organization (ICAO-IATA/DGR)	yes
14.7		UN number: 2922	yes
14.7		Proper shipping name: Corrosive liquid, toxic, n.o.s.	yes
14.7		Class: 8	yes
14.7		Subsidiary risk(s): 6.1	yes
14.7		Packing group: I	yes
14.7		Danger label(s): 8+6.1	yes
14.7		Danger label(s): change in the listing (table)	yes
14.7		Special provisions (SP): A3	yes
14.7		Excepted quantities (EQ): E0	yes
16		Abbreviations and acronyms: change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)

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Abbr.	Descriptions of used abbreviations
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.