

OTTO CHEMIE PVT LTD

An ISO 9001 : 2015 & GMP Certified Company
101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate,
Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841
Email : info@ottokemi.com Web : www.ottokemi.com

Creation Date: 01-02-2025

Revision Date: 11-09-2030

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Trichloroethylene, electronic grade, 99%+
Product Code: T 2046
CAS No : 79-01-6

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification
OTTO CHEMIE PVT LTD
101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate,
Chinchpada, Vasai East, Waliv, Maharashtra 401208.
Email info@ottokemi.com

1.4. Emergency telephone number

Phone no. : + 91 22 2207 0099 (9:00am - 6:00 pm).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin irritation, (Category 2)

Eye irritation, (Category 2)

Skin sensitization, (Sub-category 1B)

Germ cell mutagenicity, (Category 2)

Carcinogenicity, (Category 1B)

Specific target organ toxicity -

single exposure, (Category 3),

Central nervous system

Long-term (chronic) aquatic

hazard, (Category 3)

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Hazard Statements

H315

H317

H319

H336

H341

H350

H412

Precautionary Statements

P202

P273

P280

P302 + P352

P305 + P351 + P338

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H317: May cause an allergic skin reaction.

H341: Suspected of causing genetic defects.

H350: May cause cancer.

H336: May cause drowsiness or dizziness.

H412: Harmful to aquatic life with long lasting effects.

Danger

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

May cause drowsiness or dizziness.

Suspected of causing genetic defects.

May cause cancer.

Harmful to aquatic life with long lasting effects.

Do not handle until all safety precautions have been read and understood.

Avoid release to the environment.

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

IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue

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P308 + P313
Supplemental Hazard
Statements
Restricted to professional users.
Reduced Labeling (<= 125 ml)
Pictogram
Signal Word
Hazard Statements
H317
H341
H350
H412
Precautionary Statements
P202

rinsing.
IF exposed or concerned: Get medical advice/ attention.
none

Danger

May cause an allergic skin reaction.
Suspected of causing genetic defects.
May cause cancer.
Harmful to aquatic life with long lasting effects.

Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
IF ON SKIN: Wash with plenty of water.
IF exposed or concerned: Get medical advice/ attention.
none

P280

P302 + P352
P308 + P313
Supplemental Hazard
Statements
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.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : TCE
Trichloroethene
Formula : C₂HCl₃
Molecular weight : 131,39 g/mol
CAS-No. : 79-01-6
EC-No. : 201-167-4

Component	Classification	Concentration
trichloroethylene Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
CAS-No. 79-01-6 EC-No. 201-167-4	Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1B; Muta. 2; Carc. 1B; STOT SE 3; Aquatic Chronic 3; H315, H319, H317, H341, H350, H336, H412 Concentration limits: >= 20 %: STOT SE 3, H336;	<= 100 %

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

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

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If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). 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 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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water Foam Carbon dioxide (CO₂) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Hydrogen chloride gas

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemisorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Keep in a well-ventilated place. Keep locked up or in an area accessible only

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to qualified or authorized persons.

Light sensitive. Handle and store under inert gas.

Storage class

Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Derived No Effect Level (DNEL)

Application Area	Routes of exposure	Health effect	Value
Worker DNEL, acute	inhalation	Systemic effects	164,1 mg/m3
Worker DNEL, acute	inhalation	Local effects	164,1 mg/m3
Worker DNEL, longterm	dermal	Systemic effects	
Worker DNEL, longterm	inhalation	Systemic effects	54,7 mg/m3

Predicted No Effect Concentration (PNEC)

Compartment	Value
Fresh water	0,115 mg/l
Sea water	0,0115 mg/l
Aquatic intermittent release	0,208 mg/l
Sewage treatment plant	2,6 mg/l
Fresh water sediment	2,04 mg/kg
Sea sediment	0,204 mg/kg
Soil	0,344 mg/kg
oral	13,8 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please

Full contact

Material: Viton®

Minimum layer thickness: 0,7 mm

Break through time: 480 min

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm

Break through time: 10 min

Body Protection

protective clothing

Respiratory protection

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

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Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state	liquid, clear
b) Color	colorless
c) Odor	characteristic
d) Melting point/freezing point	Melting point/range: -84,8 °C - lit.
e) Initial boiling point and boiling range	86,7 °C - lit.
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	Upper explosion limit: > 99 %(V) - (Saturation - at high volume fractions, explosion turns into a decomposition reaction) Lower explosion limit: 7,9 %(V)
h) Flash point	- closed cup does not flash
i) Autoignition temperature	410,0 °C
j) Decomposition temperature	No data available
k) pH	No data available
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: 0,58 mPa.s at 20 °C
m) Water solubility	1,1 g/l at 20 °C
n) Partition coefficient: n-octanol/water	log Pow: 2,53 at 20 °C - Bioaccumulation is not expected.
o) Vapor pressure	81,3 hPa at 20,0 °C
p) Density	1,463 g/mL at 25 °C - lit.
q) Relative vapor density	1,46 at 20 °C
r) Particle characteristics	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Oxygen

(as liquefied gas)

Alkaline earth metals

alkali amides

semimetallic hydrogen compounds

perchloric acid

Light metals

aluminium chloride

Strong oxidizing agents

potassium nitrate

Risk of explosion with:

Alkali metals

Aluminum

Barium

alkali hydroxides

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Lithium
magnesium
Powdered metals
sodium amide
Strong oxidizing agents
nitrogen dioxide
Boranes
Oxygen
with
alkali hydroxides
Oxygen
with
Pressure
Risk of ignition or formation of inflammable gases or vapours with:
Titanium
Beryllium
Epoxy constituents
10.4 Conditions to avoid
no information available
10.5 Incompatible materials
No data available
10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg

Inhalation LC50 Rat: > 50mg/L.

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).

Special Remarks on Toxicity

to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish flow-through test LC50 - *Jordanella floridae* - 28,3 mg/l - 96 h
(US-EPA)

Toxicity to algae ErC50 - *Chlamydomonas reinhardtii* (green algae) - 36,5 mg/l - 72 h

Remarks: (ECHA)

(trichloroethylene)

Toxicity to bacteria

Toxicity to

fish(Chronic toxicity)

flow-through test NOEC - *Jordanella floridae* (flagfish) - 5,76 mg/l -
10 d

Remarks: (ECHA)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 19 % - Not readily biodegradable.

(OECD Test Guideline 301D)

12.3 Bioaccumulative potential

Bioaccumulation *Lepomis macrochirus* - 14 d

(trichloroethylene)

Bioconcentration factor (BCF): 17

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,

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bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : 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.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 1710

14.2 UN proper shipping name

ADR/RID : TRICHLOROETHYLENE

IMDG : TRICHLOROETHYLENE

IATA : Trichloroethylene

14.3 Transport hazard class(es)

ADR/RID: 6.1

14.4 Packaging group

ADR/RID: III

14.5 Environmental hazards

ADR/RID: no

14.6 Special precautions for user

Tunnel restriction code : (E)

Further information : No data available

IMDG: 1710

IATA: 1710

IMDG: 6.1

IATA: 6.1

IMDG: III

IATA: III

IMDG Marine pollutant: no

IATA: no

SECTION 15: Regulatory information

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

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

Authorisations and/or restrictions on use

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

: trichloroethylene

This product contains a substance listed on Annex XIV of the REACH Regulation (EC) Nr. 1907/2006.

Listed substance / Sunset Date : trichloroethylene / 21.04.2016

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

: trichloroethylene

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this substance.

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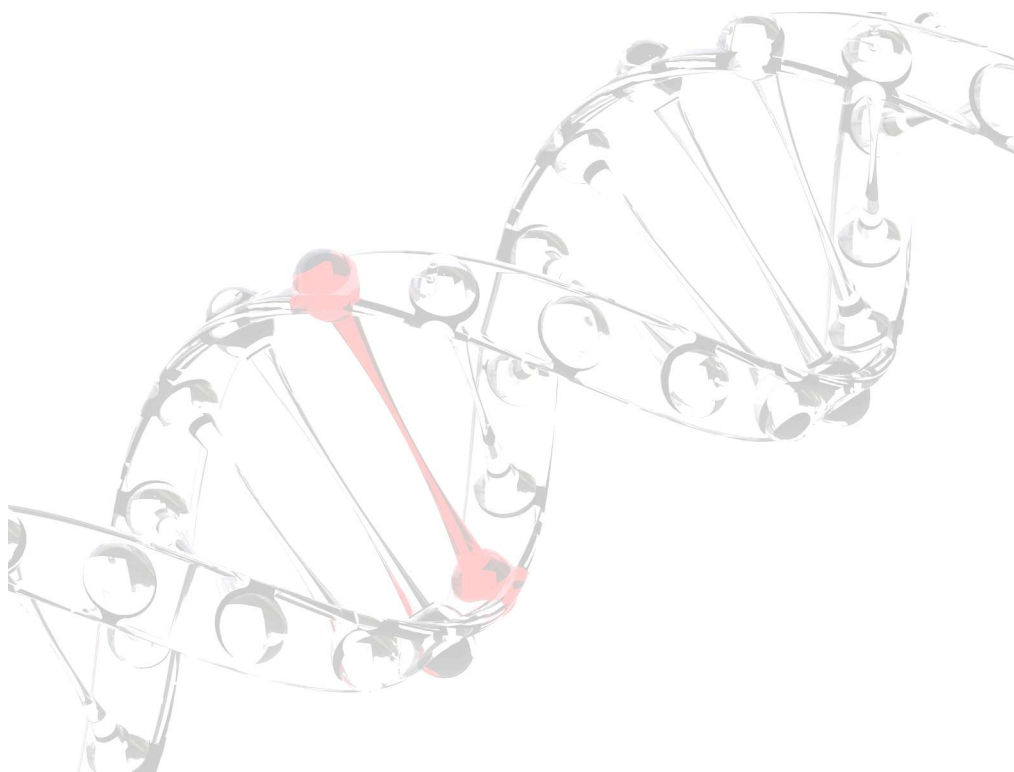
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SECTION 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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