

SECTION 1: Identification

1.1. Product identifier

Trade name	: TRICHLOROETHYLENE
IUPAC name	: trichloroethylene
EC-No.	: 201-167-4
CAS-No.	: 79-01-6
UN-No. (ADR)	: 1710
Product code	: 120090xxx
Formula	: C ₂ HCl ₃

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

Recommended uses and restrictions	: For laboratory use only
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1.3. Supplier's details

Labchem (Pty)Ltd
 6 Wakefield Road
 Founders Hill
 1609 Johannesburg - South Africa
 T +27 11 452 1116 - F +27 86 588 0293
techlab@labchem.co.za - www.labchem.co.za

1.4. Emergency telephone number

Emergency number	: +27 11 452 1116
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Skin corrosion/irritation, Category 2	H315
Germ cell mutagenicity, Category 2	H341
Carcinogenicity, Category 1B	H350
Specific target organ toxicity — Single exposure, Category 3, Narcosis	H336
Specific target organ toxicity — Repeated exposure, Category 2	H373
Hazardous to the aquatic environment — Acute Hazard, Category 3	H402
Hazardous to the aquatic environment - Chronic Hazard Not classified	
Full text of H statements : see section 16	

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS-ZA) :



GHS07

GHS08

Signal word (GHS-ZA) : Danger

Hazard statements (GHS-ZA) : H315 - Causes skin irritation.
 H336 - May cause drowsiness or dizziness.
 H341 - Suspected of causing genetic defects.
 H350 - May cause cancer.
 H373 - May cause damage to organs through prolonged or repeated exposure.
 H402 - Harmful to aquatic life

Precautionary statements (GHS-ZA) : P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
 P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
 P264 - Wash hands, forearms and face thoroughly after handling.
 P271 - Use only outdoors or in a well-ventilated area.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 - IF ON SKIN: Wash with plenty of water.
 P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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According to SANS 10234:2019 and SANS 11014:2010

P308+P313 - IF exposed or concerned: Get medical advice/attention.
P312 - Call a POISON CENTER or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
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

Adverse physicochemical, human health and environmental effects : May cause cancer,Suspected of causing genetic defects,May cause damage to organs through prolonged or repeated exposure,May cause drowsiness or dizziness,Causes skin irritation,Harmful to aquatic life

SECTION 3: Composition/information on ingredients

3.1. Substances

IUPAC name : trichloroethylene

Substance identification codes: See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
trichloroethylene (Main constituent)	(CAS-No.) 79-01-6	≥ 99.5	Skin Irrit. 2, H315 Muta. 2, H341 Carc. 1B, H350 STOT SE 3, H336 STOT RE 2, H373 Aquatic Acute 3, H402 Aquatic Chronic Not classified

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects : May cause drowsiness or dizziness.
Symptoms/effects after skin contact : Irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.

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According to SANS 10234:2019 and SANS 11014:2010

6.1.2. For emergency responders

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

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 : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

TRICHLOROETHYLENE (79-01-6)	
South Africa - Occupational Exposure Limits (Control Limits)	
Local name	Trichloroethylene
OEL TWA (mg/m ³)	535 mg/m ³
OEL TWA (ppm)	100 ppm
OEL STEL (mg/m ³)	802 mg/m ³
OEL STEL (ppm)	150 ppm
Remark	Skin
Regulatory reference	Government Notice. R: 1179

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection : Protective gloves

Eye protection : Safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : Full face mask with filter type A at conc. in air > exposure limit

Personal protective equipment symbol(s):



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : No data available

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According to SANS 10234:2019 and SANS 11014:2010

Molecular mass	: 131.38 g/mol
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: -84.8 °C Atm. press.: 101,3 kPa Decomposition: 'no'
Freezing point	: No data available
Boiling point	: 87 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 9.9 kPa Temp.: 25 °C
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Relative density of saturated gas/air mixture	: No data available
Density	: No data available
Relative gas density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.58 mPa·s Temp.: '20°C' Parameter: 'dynamic viscosity (in mPa s)'
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available
Lower explosive limit (LEL)	: No data available
Upper explosive limit (UEL)	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

TRICHLOROETHYLENE (79-01-6)

LC50 inhalation rat (ppm)	12500 ppm. Animal: rat, Animal sex: male
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According to SANS 10234:2019 and SANS 11014:2010

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Suspected of causing genetic defects.
Carcinogenicity	: May cause cancer.

TRICHLOROETHYLENE (79-01-6)	
NOAEL (chronic, oral, animal/male, 2 years)	1000 mg/kg bodyweight Animal: mouse, Animal sex: male, Remarks on results: not determinable
NOAEL (chronic, oral, animal/female, 2 years)	1000 mg/kg bodyweight Animal: mouse, Animal sex: female, Remarks on results: not determinable

Reproductive toxicity	: Not classified
STOT-single exposure	: May cause drowsiness or dizziness.
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.

TRICHLOROETHYLENE (79-01-6)	
NOAEL (oral, rat, 90 days)	50 mg/kg bodyweight Animal: rat, Animal sex: male
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Harmful to aquatic life.
Hazardous to the aquatic environment, short-term (acute)	: Harmful to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Not classified.

TRICHLOROETHYLENE (79-01-6)	
LC50 fish 1	28.3 mg/l Test organisms (species): <i>Jordanella floridae</i>
EC50 72h algae (1)	36.5 mg/l Test organisms (species): <i>Chlamydomonas reinhardtii</i>
NOEC chronic fish	5.76 mg/l Test organisms (species): <i>Jordanella floridae</i> Duration: '10 d'

12.2. Persistence and degradability

TRICHLOROETHYLENE (79-01-6)	
Persistence and degradability	No additional information available

12.3. Bioaccumulative potential

TRICHLOROETHYLENE (79-01-6)	
Bioaccumulative potential	No additional information available

12.4. Mobility in soil

TRICHLOROETHYLENE (79-01-6)	
Mobility in soil	No additional information available

12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
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SECTION 14: Transport information




In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
1710	1710	1710
14.2. Proper Shipping Name		
TRICHLOROETHYLENE	TRICHLOROETHYLENE	Trichloroethylene
14.3. Transport hazard class(es)		
6.1	6.1	6.1

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According to SANS 10234:2019 and SANS 11014:2010

SANS	IMDG	IATA
		 Not applicable
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No :	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

- SANS

Limited quantities (SANS)	: 5 L
Limited quantities (SANS)	: 5 L
Packagings, large packagings and IBCs	: P001, IBC03, LP01
Packing instructions (SANS)	
Portable tank and bulk containers instructions (SANS)	: T4
Portable tank and bulk container special provisions (SANS)	: TP1

- IMDG

Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-A - SPILLAGE SCHEDULE Alfa - TOXIC SUBSTANCES
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Colourless liquid with a chloroform-like odour. When involved in a fire, evolves extremely toxic fumes (phosgene). Toxic if swallowed, by skin contact or by inhalation.

- IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y642
PCA limited quantity max net quantity (IATA)	: 2L
PCA packing instructions (IATA)	: 655
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 663
CAO max net quantity (IATA)	: 220L
ERG code (IATA)	: 6A

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

Regulatory reference	: SANS 10234:2008; SANS 11014:2010; SANS 10228:2012; SANS 10229:2010; SANS 10232(1,2,4), SANS 10231:2018; Occupational Health and Safety Act 85 of 1993; National Road Traffic Act 93 of 1996.
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SECTION 16: Other information

Issue date	: 23/07/2020
Revision date	: 23/07/2025

Full text of H-statements:

H315

Causes skin irritation.

TRICHLOROETHYLENE

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According to SANS 10234:2019 and SANS 11014:2010

H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H402	Harmful to aquatic life

SDS South Africa

The data provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge. The data relates to the specific product as named and is intended as a guide to the safe handling of the product in all its facets. The data may no longer be valid if the product is used in any process or in combination with other products. This SDS is not a quality specification nor any form of guarantee.