

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

1.1 Product identifier

Product name	TRICHLOROACETIC ACID
CAS-No.	76-03-9
Product code	AR1317

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

Identified uses	Chemical for analysis and production.
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1.3 Details of the supplier of the safety data sheet

Company	RCI LABSCAN LIMITED. 24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand
Telephone number	(662) 613-7911-4
Fax number	(662) 613-7915

1.4 Emergency Telephone Number

Emergency phone	(662) 613-7911-4
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Skin corrosion (Category 1A), H314

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H314

Causes severe skin burns and eye damage.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P260

Do not breathe dust.

P264

Wash hand thoroughly after handling.

P273

Avoid release to the environment.

P280

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

P301 + P330 + P331

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P302 + P361 + P354

IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Immediately rinse with water for several minutes.

P304 + P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P354 + P338

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

P316	Get emergency medical help immediately.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P405	Store locked up.

2.3 Other hazards

None

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms Trichloroethanoic Acid, TCA.

CAS-No	EC-No	EC-Index-No	Formula	Molecular Weight	Weight %
76-03-9	200-927-2	607-004-00-7	CCl ₃ CO ₂ H	163.38 g/mol	>99.5

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Concentration	Classification
Trichloroacetic acid		
CAS-No 76-03-9	>99.5%	Skin corrosion (Category 1A), H314
EC-No 200-927-2		Acute aquatic toxicity (Category 1), H400
EC-Index-No 607-004-00-7		Chronic aquatic toxicity (Category 1), H410

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 safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air in case of accidental inhalation of dust. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus.
Skin contact	Remove contaminated clothing and wash affected skin with soap and water. Dab with polyethylene glycol 400. Obtain medical attention.
Eye contact	If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. After swallowing make victim drink water (two glasses at the most), call in physician. Do not attempt to neutralize.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 and section 11.

4.3 Indication of any immediate medical attention and special treatment needed

Not Available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

In adaption to materials stored in the immediate neighborhood.

5.2 Special hazards arising from the substance or mixture

Non-combustible. Ambient fire may liberate hazardous vapors. The following may develop in event of fire: hydrogen chloride gas, phosgene, carbon oxides.

5.3 Advice for firefighters

Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

5.4 Further information

Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or ground water.

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

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Shut off leaks if without risk. Keep people away from and upwind of spill/leak. For personal protective equipment see **Section 8**.

6.2 Environmental precautions

Do not allow to enter drinking water and sewerage system.

6.3 Methods and materials for containment and cleaning up

Carefully sweep up, gather and remove. Avoid generation of dusts. Keep in suitable, closed containers for disposal. 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**

Provision of good ventilation in the working area. Do not leave container open. Avoid spillage. Avoid rising dust.

7.2 Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry, cool and well-ventilated place. Keep out of direct sunlight and away from heat, water, moisture and incompatible materials.

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****Derived No Effect Level (DNEL)**

Application Area	Health Effects	Exposure	Value
Worker	Acute Systemic effects	Inhalation	124 mg/m ³
Worker	Acute Systemic effects	Skin contact	1.4 mg/kg Body weight
Worker	Long-term Systemic effects	Inhalation	124 mg/m ³
Worker	Long-term Systemic effects	Skin contact	1.4 mg/kg Body weight
Consumer	Acute Systemic effects	Ingestion	0.7 mg/kg Body weight
Consumer	Acute Systemic effects	Inhalation	61 mg/m ³
Consumer	Acute Systemic effects	Skin contact	0.7 mg/kg Body weight
Consumer	Long-term Systemic effects	Ingestion	0.7 mg/kg Body weight
Consumer	Long-term Systemic effects	Inhalation	61 mg/m ³
Consumer	Long-term Systemic effects	Skin contact	0.7 mg/kg Body weight

Predicted No Effect Concentration (PNEC)

Compartment	Value
Aquatic intermittent release	0.0027 mg/l
Fresh water	0.00017 mg/l
Fresh water sediment	0.00014 mg/kg
Marine sediment	0.000014 mg/l
Marine water	0.000017 mg/l
Sewage treatment plant	100 mg/l
Soil	0.0046 mg/kg

8.2 Exposure controls**Appropriate engineering controls**

The product should only be used in ventilation hoods and fans.

Individual protection measures (Personal protective equipment, PPE)**Eye/face protection**

Goggles giving complete protection to eyes.

Skin protection

Chemical resistant apron / corrosive protective clothing, heavy duty work shoes.

Handle with gloves

- Full contact wears gloves from nitrile rubber material.
- Splash contact wears gloves from nitrile rubber material.

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

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Required when dusts are generated filter P3 (EN 143) or use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls

Prevent liquid entering sewers, basements and workpits.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Appearance: Form	Crystals
: Color	Colorless
Odour	Pungent
Odour Threshold	Not Available
pH	<1 at 50 g/l H ₂ O at 20°C
Melting point/range	54-56 °C
Boiling point/range	197 °C at 1013 hPa
Flash point	>110°C
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Explosion limits: lower	Not Available
upper	Not Available
Vapor Pressure	1 hPa at 20°C
Relative Vapor Density	5.64
Density	1.63 g/cm ³ at 20°C
Bulk density:	~900 kg/m ³
Water solubility	1600 g/l at 20°C
Partition coefficient (n-octanol/water)	log Pow: 1.33
Auto-Ignition temperature	711 °C

Decomposition Temperature	Not Available
Viscosity	Not Available
Explosive properties	Not Explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

SECTION 10: Stability and reactivity

10.1 Reactivity

Hygroscopic

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Risk of explosion in contact with silver salts.

The substance can react dangerously with alkali hydroxide, amines, dimethylsulfoxide / copper splinters heat.

10.4 Conditions to avoid

Heating, exposure to moisture.

10.5 Incompatible materials

Silver salts, alkali hydroxide, amines, dimethylsulfoxide / copper splinters.

Unsuitable working materials: Stainless steel and other metals.

10.6 Hazardous decomposition products

Hydrogen chloride, phosgene, Carbon oxides (Hazardous decomposition products from under fire condition).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD₅₀ (oral, rat): 3320 mg/kg.

Acute oral toxicity

Symptoms: corrosive of mucous membranes in the mouth, pharynx, esophagus and gastrointestinal tract and damage for liver and kidneys.

Acute inhalation toxicity

Symptoms: burns of mucous membranes, cough, shortness of breath.

Skin corrosion/irritation

Causes burns.

Serious eye damage/eye irritation

Causes serious eye damage. Risk of blindness.

Respiratory or skin sensitization

Sensitization test (guinea pig) is negative.

Germ cell mutagenicity

Bacterial mutagenicity: Ames test is negative.

Carcinogenicity

Not Available

Reproductive toxicity

Not Available

Teratogenicity

Not Available

Specific target organ toxicity (STOT) - single exposure

Not Available

Specific target organ toxicity (STOT) - repeated exposure

Not Available

Aspiration hazard

Not Available

Further information

The product should be handled with the care usual when dealing with chemicals.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish

LC₅₀ Leuciscus idus: >1 mg/l/48h.

Toxicity to daphnia

EC₅₀ Daphnia magna: 2 mg/l/48h.

and other aquatic invertebrates

Toxicity to bacteria

EC₅ Ps. Putida: 1 mg/l/16 h.**12.2 Persistence and degradability**

Biodegradability

Biodegradability 59%/2d. Not readily biodegradable.

12.3 Bioaccumulative potential

Partition coefficient (n-octanol/water)

log Pow: 1.33

No appreciable bioaccumulation potential is to be expected (log P o/w 1-3).

12.4 Mobility in soil

Not Available

12.5 Other adverse effects

Biological effects; Harmful effect on aquatic organisms. Harmful effect due to pH shift. Caustic even in diluted form.

Do not allow to enter waters, waste water or soil.

SECTION 13: Disposal considerations

13.1 Waste treatment methods**Product**

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Contaminated packaging

Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the

same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

SECTION 14: Transport information

Land Transport (ADR/RID)

UN Number	1839
UN proper shipping name	TRICHLOROACETIC ACID, SOLID
Transport hazard class(es)	8
Packing group	II
Environmental hazards	Yes
Special precautions for user	Yes

Sea transport (IMDG)

UN Number	1839
UN proper shipping name	TRICHLOROACETIC ACID, SOLID
Transport hazard class(es)	8
Packing group	II
Marine pollutant	Yes
Special precautions for user	Yes
EmS	F-A S-B

Air transport (IATA)

UN Number	1839
UN proper shipping name	TRICHLOROACETIC ACID, SOLID
Transport hazard class(es)	8
Packing group	II
Environmental hazards	Yes
Special precautions for user	No

River transport (AND/ADNR)

(Not examined)

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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

Not Available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3

H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Recommended restrictions

Take notice of labels and safety data sheets for the working.

Reference

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Labelling according to EC Directives 67/548 EEC and Regulation (EC) No 1272/2008.

Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.

Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany,
Source: IFA for Databases on hazardous substances (GESTIS).

Further information

Contact to RCI Labscan Limited.

Revision Date

01/09/2021

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.