SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Trichloroacetic Acid, 25%
CAS number	76-03-9
Synonyms	TCA; Trichloroethanoic acid

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

Identified uses	Laboratory chemicals.

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin Corrosion/Irritation	Category 1A
Serious Eye Damage/Eye Irritation	Category 1
Carcinogenicity	Category 2
Specific Target Organ Toxicity (single exposure)	Category 3
Target Organ(s) - Respiratory system	
Short-term (Acute) Aquatic Hazard	Category 1

Long-term (Chronic) Aquatic Hazard	Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word: Danger

Hazard statements:
Causes severe skin burns and eye damage.
May cause respiratory irritation.
Suspected of causing cancer.
Very toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment.

Response: Immediately call a POISON CENTER or doctor/physician.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

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

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.

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

Disposal: Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Vesicant.
WARNING: Cancer - https://www.p65warnings.ca.gov/.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Trichloroacetic acid	TCA; Trichloroethanoic acid	76-03-9	24-26%
Water	Aqua; H2O	7732-18-5	74-76%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately. If not breathing, give artificial respiration.

In case of skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.

In case of eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.

If swallowed Do NOT induce vomiting. Immediate medical attention is required. Never give anything by mouth to an unconscious person. Drink plenty of water.

4.2 Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue, and danger of perforation.

4.3 Indication of any immediate medical attention and special treatment needed

Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media Extinguishing media that have basic properties (such as chemical powder) may react violently with TCA.

5.2 Specific hazards arising from the substance or mixture

The product causes burns of eyes, skin, and mucous membranes. Do not allow run-off from fire-fighting to enter drains or water courses.
Hazardous Combustion Products: Chloroform. Carbon dioxide (CO2). Phosgene. Hydrogen chloride gas.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No data available.
Lower No data available.

Sensitivity to Mechanical Impact No information available.
Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
3	0	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes, or clothing.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

Cover spill with Sodium Bicarbonate. Mix and scoop up into a large container of water. When the reaction is complete, pour down the drain with excess water. Always comply with local, state, and federal regulations.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling
Store in corrosive resistant container with a resistant inner liner. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep out of the reach of children. Keep in properly labeled containers. Corrosives area.

Incompatibilities
Strong oxidizing agents. Bases. Metals.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Trichloroacetic acid	(Vacated) TWA	1 ppm 7 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Trichloroacetic acid	TWA	0.5 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Trichloroacetic acid	TWA	1 ppm 7 mg/m3

Biological occupational exposure limits
No information available.

8.2 Exposure controls

Appropriate engineering controls
No specific controls are needed. Normal room ventilation is adequate.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tight sealing safety goggles.

Skin protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection
Normal room ventilation is adequate.

Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless to tan
Odor	No data available
Odor Threshold	No data available
pH	<2
Melting Point/Range	No data available
Boiling Point/Range	Approximately 100°C
Evaporation Rate	No data available
Flammability (solid)	No data available
Flammability or explosive limit	No data available
Upper	
Lower	
Vapor Pressure	No data available
Vapor Density	No data available
Density	No data available
Solubility	No data available
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No data available
Decomposition Temp	No data available
Viscosity	No data available
Molecular Formula	C2 H Cl3 O2
Molecular Weight	163.39 g/mol
VOC Content(%)	No data available
Oxidizing properties	No data available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Strong acids can react with metals to release Hydrogen gas.

10.2 Chemical stability
Stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions
None under normal processing.

10.4 Conditions to avoid
Incompatible products. Excess heat.

10.5 Incompatible materials
Strong oxidizing agents, Bases, Metals.

10.6 Hazardous decomposition products
Chloroform, Carbon dioxide (CO2), Phosgene, Hydrogen chloride gas.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Trichloroacetic acid	3320 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

Skin corrosion/irritation
Causes severe skin burns.

Serious eye damage/eye irritation
Causes severe eye damage.

Respiratory or skin sensitization
No information available.

Germ cell mutagenicity
No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Trichloroacetic acid	76-03-9	Group 2B	Not listed	A3	X	A3

Specific target organ toxicity - single exposure
Respiratory system.

Specific target organ toxicity - repeated exposure
None known.

Reproductive toxicity
No information available.

Chronic effects
Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue, and danger of perforation.

11.2 Additional Information
The toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1 Toxicity
Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment. Avoid release to the environment. Collect spillage. Dispose of contents in accordance with local, state, federal, and international regulations.

Product		Species	Test Results
Trichloroacetic acid	EC50	Freshwater Algae	0.27 mg/L
	LC50	Freshwater Fish	>277 mg/L
	EC50	Water Flea	110 mg/L

12.2 Persistence and degradability
Soluble in water. Persistence is unlikely based on information available.

12.3 Bio accumulative potential
No information available.

12.4 Mobility in soil
Will likely be mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment
No information available.

12.6 Endocrine disrupting properties
No information available.

12.7 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN-no	UN2564
Proper Shipping Name	Trichloroacetic Acid Solution
Hazard Class	8
Packing Group	II

IMDG

UN-no	UN2564
Proper Shipping Name	Trichloroacetic Acid Solution
Hazard Class	8
Packing Group	II

IATA

UN-no	UN2564
Proper Shipping Name	Trichloroacetic Acid Solution
Hazard Class	8
Packing Group	II

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not applicable.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Acute Health Hazard, Chronic Health Hazard.

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed, Trichloroacetic acid (CAS #76-03-9).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Trichloroacetic acid (CAS #76-03-9).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Trichloroacetic acid (CAS #76-03-9).

California Proposition 65

Listed, Trichloroacetic acid (CAS #76-03-9).

SECTION 16: Other information

Issue date: 12/26/2023
Revision 1: 11/13/2024

SECTION 17: Disclaimer

The information provided on 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 a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.