Trichloroacetic Acid

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: **Trichloroacetic Acid**

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: **S25614**

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education
Emergency Telephone No.: 800-535-5053

SECTION 2: Hazards identification

Classification of the substance or mixture:

Corrosive
Skin corrosion, category 1B
Serious eye damage, category 1

Environmentally Damaging
Acute hazards to the aquatic environment, category 1
Chronic hazards to the aquatic environment, category 1

Skin. Corr. 1A.
Eye. Damage 1.
Aq. ChrTox. 1.
Aq. AcTox. 1.

Signal word: Danger

Hazard statements:

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

Precautionary statements:

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash skin thoroughly after handling.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

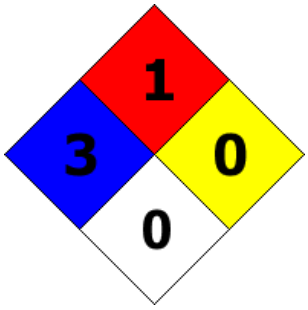
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
Collect spillage.
Store locked up.
Dispose of contents and container as instructed in Section 13.

Other Non-GHS Classification:

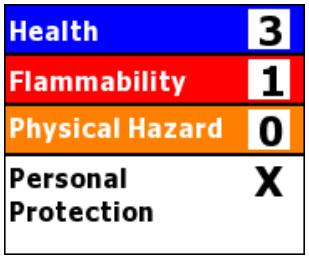
WHMIS

E 

NFPA/HMIS



NFPA SCALE (0-4)



HMIS RATINGS (0-4)

SECTION 3: Composition/information on ingredients

Ingredients:		
CAS 76-03-9	Trichloroacetic acid	0 %
		Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Seek medical attention. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Loosen clothing and place exposed in a comfortable position.

After skin contact:

Continue rinsing while removing contaminated clothing and shoes. Wash hands and exposed skin with soap and plenty of water. Immediately seek medical attention.

After eye contact:

Continue rinsing eyes during transport to hospital. Take victim immediately to hospital. Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing.

After swallowing:

Seek medical attention. Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Irritation. Shortness of breath. Headache. Nausea. Dizziness. Eye & Upper Respiratory Tract irritation Confirmed animal carcinogen with unknown relevance to humans. Burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Stomach - Irregularities - Based on Human Evidence.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam. Use water to keep surrounding containers cool and flush non-ignited spills away from fire.

Unsuitable extinguishing agents:

No information available.

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors. Vapors accumulate in low areas. Vapors may travel to a source of ignition and flash back.

Advice for firefighters:

Protective equipment:

Wear protective eyeware, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing. Avoid dust generation. Remove heat, sparks, and all sources of ignition.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Wear protective eyeware, gloves, and clothing. Refer to Section 8. Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal. Keep people upwind and away from spill.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Avoid dust generation. Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances. Remove heat, sparks, and all sources of ignition. Use explosion-proof equipment.

Conditions for safe storage, including any incompatibilities:

Store under nitrogen. Recommended storage temperature: 2 - 8 °C. Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection

Control Parameters: 76-03-9, Trichloroacetic acid, TWA 1 ppm USA. ACGIH.
76-03-9, Trichloroacetic acid, TWA 1 ppm 7 mg/m3 USA. OSHA.
76-03-9, Trichloroacetic acid, TWA 1 ppm 7 mg/m3 USA. NIOSH.

Appropriate Engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment. Use only under a chemical fume hood.

Protection of skin: Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection: Face shield and safety glasses are appropriate eye protection. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

General hygienic measures: Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before rewearing wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	white flakes	**Explosion limit lower**: **Explosion limit upper**:	Not Determined Not Determined
Odor:	Slight Chlorine	**Vapor pressure at 20°C**:	1.2 mbar @ 50C
Odor threshold:	Not Determined	**Vapor density**:	5.64 - (Air = 1.0)
pH-value:	1.2	**Relative density**:	1.62 g/cm3 at 25 °C
Melting/Freezing point:	2-58C / 125.6-136.4F	**Solubilities**:	Soluble in water: Completely 81.7 g/l at 20 °C.
Boiling point/Boiling range:	196 °C	**Partition coefficient (n-octanol/water)**:	log Pow: 1.645
Flash point (closed cup):	> 113 °C	**Auto/Self-ignition temperature**:	Not Determined
Evaporation rate:	Not Determined	**Decomposition temperature**:	Not Determined

Flammability (solid, gaseous):	Not Determined	**Viscosity**:	a. Kinematic: Not Determined b. Dynamic: Not Determined
Density at 20°C:	Not Determined		

SECTION 10: Stability and reactivity

Reactivity:

Hygroscopic.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

None under normal processing.

Conditions to avoid:

Dust generation. Heat. Exposure to moisture. Incompatible materials.

Incompatible materials:

Strong oxidizing agents, Strong bases, Amines. Heat. Alkaline.

Hazardous decomposition products:

Carbon oxides, Hydrogen chloride gas.

SECTION 11: Toxicological information

Acute Toxicity:

Oral:

3310mg/kg LD50 rat

Chronic Toxicity: No additional information.

Corrosion Irritation:

Ocular:

76-03-9 Eyes - rabbit Result: Severe eye irritation - 5 s

Sensitization:

Causes severe burns by all exposure routes.

Numerical Measures: No additional information.

Carcinogenicity:

Trichloroacetic Acid: Listed as an animal carcinogen by ACGIH. Not listed by IARC, NPT, OSHA or Mexico

Mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

76-03-9: LC50 - Pimephales promelas (fathead minnow) - 2.000 mg/l - 96.0 h

76-03-9: EC50 - Daphnia magna (Water flea) - 1,460 - 2,000 mg/l - 48 h

Persistence and degradability:

Zahn-Wellens Test - Exposure time 27 dSigma-Aldrich - T6399 Page 7 of 8 Result: 5 % - Not readily biodegradable.

Bioaccumulative potential: No additional information.
Mobility in soil: No additional information.
Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed together with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). 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. Ensure complete and accurate classification. Remove heat, sparks, and all sources of ignition. Have fire extinguishing agent available in case of fire.

SECTION 14: Transport information

US DOT

UN Number:
ADR, ADN, DOT, IMDG, IATA 1839

Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: Trichloroacetic acid.
Hazard Class: 8
Packing Group: II.
Marine Pollutant (if applicable): No additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: Trichloroacetic acid.
Hazard Class: 8
Packing Group: II.
Marine Pollutant (if applicable): No additional information.
Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Chronic

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

76-03-9 Trichloroacetic acid.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases: None

Abbreviations and Acronyms: None

Effective date: 02.11.2015
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