Safety Data Sheet TRIFLUOROACETIC ACID

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SECTION 1: Identification

GHS Product identifier

Product name	TRIFLUOROACETIC ACID

Recommended use of the chemical and restrictions on use

Strong non-oxidising acid, solvent, catalyst and laboratory reagent.

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Dangerous goods of Class 8 (Corrosive) are incompatible in a placard load with any of the following:
Class 1, Class 4.3, Class 5, Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids, Class 7; and are incompatible with food and food packaging in any quantity.

Classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Acute toxicity, inhalation, Cat. 4
- Serious eye damage/eye irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1A

- Corrosive to metals, Cat. 1
- Hazardous to the aquatic environment, long-term (chronic), Cat. 3

GHS label elements, including precautionary statements

Pictograms

Signal word **Danger**

Hazard statement(s)

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled
H412	Harmful to aquatic life with long lasting effects

Precautionary statement(s)

P234	Keep only in original packaging.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash hands 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.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor/physcian
P312	Call a POISON CENTER/doctor/physcian if you feel unwell.
P321	Specific treatment (see … on this label).
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material-damage.
P405	Store locked up.
P406	Store in a corrosive resistant/… container with a resistant inner liner.
P501	Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 114.02

Components

Component	CAS no.	Concentration
Trifluoroacetic acid (EC no.: 200-929-3; Index no.: 607-091-00-1)	**76-05-1**	**98 - 100 % (weight)**
CLASSIFICATIONS: Acute toxicity, inhalation, Cat. 4; Skin corrosion/irritation, Cat. 1A; Hazardous to the aquatic environment, long-term (chronic), Cat. 3. HAZARDS: H314 - Causes severe skin burns and eye damage; H332 - Harmful if inhaled; H412 - Harmful to aquatic life with long lasting effects. [SCLs/M-factors/ATEs]: *		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice	First Aid Facilities: Maintain eyewash fountain and drench facilities in work area.
If inhaled	f inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately medical attention is required
In case of skin contact	Remove contaminated clothing and shoes immediately. Wash affected areas with copious quantities of water and soap. Seek medical attention.
In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.

Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary
For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Use alcohol-resistant foam, water spray, dry chemical or carbon dioxide.

Specific hazards arising from the chemical
Hazards from Combustion Products: Carbon monoxide (CO) Carbon dioxide (CO2) Hydrogen fluoride

Special protective actions for fire-fighters
Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation. Avoid breathing vapours, mist or gas. Use personal protective equipment.

Environmental precautions
Do NOT let product enter drains.

Methods and materials for containment and cleaning up
bsorb or contain liquid with sand, earth or spill control material. Shovel up using non sparking tools and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled

drum or overdrum.
Seek expert advice on handling and disposal.

SECTION 7: Handling and storage

Precautions for safe handling
Use local exhaust extraction. Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented. Take off contaminated clothing and wash it before reuse. Wash promptly with soap and water if skin becomes contaminated.
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for safe storage, including any incompatibilities
Store in a cool,dry place. Store in well ventilated area. Keep containers securely sealed and protected against physical damage. Keep container upright.
Hygroscopic

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls
Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, gas, etc.) below recommended exposure limits.

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

Eye/face protection
The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection
Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Body protection
Footwear: Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection: Clean clothing or protective clothing should be worn, preferably with and apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection
If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/ mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements. Reference should be made to Australian Standards AS/ NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Colourless, hygroscopic liquid.

Color	No data available.
Odor	Pungent odour.
Odor threshold	No data available.
Melting point/freezing point	-15.4 °C
Boiling point or initial boiling point and boiling range	72.4 °C
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	> 100°C closed cup. (Tested to Annex V of Directive 67/548/EEC).
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	1.0 g/l @ 20°C
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Soluble.
Partition coefficient n-octanol/water (log value)	log pow: -2.10
Vapor pressure	130.0 hPa @20°C; 142.7 hPa @25°C
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: 1.489 g/cm3 @ 20°C.
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes
No data available.

Further safety characteristics (supplemental)
No data available.

SECTION 10: Stability and reactivity

Reactivity
Stable under normal conditions of storage and handling.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Will corrode metals. Will produce toxic gases on contact with cyanides, sulphides etc.

Hazardous Polymerization: Will not occur.

Conditions to avoid
Avoid storing in direct sunlight and avoid extremes of temperature.

Incompatible materials
Metals, Oxidizing agents, Strong bases, Epoxides, Alcohols, Steel (all types and surface treatements), Aluminium. Reacts violently with: Alkali metals. Exothermic in contact with water.

Hazardous decomposition products
Carbon monoxide (CO) Carbon dioxide (CO_2) Hydrogen fluoride.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Acute Toxicity - Oral: 200-400 mg/kg (rat)
Acute Toxicity - Inhalation: 10 mg/L/2h (rat)

Ingestion: Causes severe burns if swallowed.
Inhalation: Harmful by inhalation. Inflammation and edema of the larynx and bronchi, pneumonitis, burning sensation, cough, wheezing, shortness of breath, laryngitis, nausea, headache, vomiting.

Skin corrosion/irritation
Causes severe skin burns. Corrosive to skin. The symptoms may include redness, itching and swelling, irritation, severe pain and chemical burns with resultant skin/tissue destruction.

Serious eye damage/irritation
Causes serious eye damage. Eye contact will cause stinging, blurring,tearing, evere pain and chemical burns, resulting in possible blindness.

Respiratory or skin sensitization
Not classified based on available information.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity
Not identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
Not classified based on available information.

Specific target organ toxicity (STOT) - single exposure
Not classified based on available information.

Specific target organ toxicity (STOT) - repeated exposure
Not classified based on available information.

Aspiration hazard
Not classified based on available information.

Additional information
Other Information: Product is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin.

SECTION 12: Ecological information

Toxicity
Acute Toxicity - Fish: LC50 - Danio rerio (zebra fish) - > 1,000 mg/l, 96 h.
(OECD Test Guideline 203)

[8Y] Acute Toxicity - Daphnia: EC60 - Daphnia magna (water flea) - 55.00 mg/l, 24 h.

[8Z] Acute Toxicity - Algae: Desmodesmus subspicatus (Scenedesmus subspicatus) -> 100mg/l, 72h.

Persistence and degradability
Not readily biodegradable.
(OECD Test Guideline 301D)

Bioaccumulative potential
No bioaccumulation is to be expected (log P(o/w) -2.10).

Mobility in soil
The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces Will likely be mobile in the environment due to its volatility. Disperses rapidly in air.

Other adverse effects
Other Adverse Effects: Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Sewage disposal
No bioaccumulation is to be expected (log P(o/w) -2.10).

Other disposal recommendations
Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)
UN Number: 2699
Class: 8
Packing Group: I
Proper Shipping Name: TRIFLUOROACETIC ACID

Hazchem emergency action code (EAC)
2X

IMDG
UN Number: 2699
Class: 8
Packing Group: I
EMS Number:
Proper Shipping Name: TRIFLUOROACETIC ACID

IATA
UN Number: 2699
Class: 8
Packing Group: I
Proper Shipping Name: TRIFLUOROACETIC ACID

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP
Poison Schedule: S6

SECTION 16: Other information

Further information/disclaimer
ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'
Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.
Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.
Safe Work Australia, Workplace Exposure Standards for Airbourne Contaminants, December 2019
Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au
IATA, Dangerous Goods Regulations (DGR)
IMO, International Maritime Dangerous Goods Code (IMDG)