Issue Date: May 2022

SDS No: 711
Version: V.0.0.4

TelChem Tri-Chlor Tabs

Telford Industries
Safety Data Sheet according to WHS and ADG requirements

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	TelChem Tri-Chlor Tabs
Chemical Name	Trichloroisocyanuric Acid
Synonyms	TICA, Stabilised pool chlorine tablets, Trichloroisocyanuric acid tablets, Trichlor, Trichloro-s-triazine trione, Trichloro-1,3,5-triazine trione
Proper shipping name	TRICHLOROISOCYANURIC ACID, DRY
Chemical formula	$C_3Cl_3N_3O_3$
Other means of identification	Not Available

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

Relevant Identified Uses	Swimming pool sanitiser, Treatment of municipal wastes

Details of the supplier of the safety data sheet

Company Name	**Telford Industries**
Address	**7 Valentine Street Kewdale WA 6105 Australia**
Telephone	**+61 8 9353 2053**
Website	**https://www.telfordindustries.com.au/**
Email	**info@telfordindustries.com.au**

Emergency telephone number

Association/Organisation	**Not Available**
Emergency telephone numbers	**1800 429 628**
Other Emergency telephone numbers	**1800 HAZMAT**

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule	**S6**
Classification	Oxidizing Solid Category 2, Acute Toxicity (Oral) Category 4, Acute Toxicity (Inhalation) Category 4, Eye Irritation Category 2A, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Acute Aquatic Toxicity Category 1, Chronic Aquatic Toxicity Category 1

Label Elements

GHS label elements	
SIGNAL WORD	**DANGER**

Hazard statement(s)

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

P210	Keep away from heat. No smoking.
P220	Keep and store away from clothing, incompatible materials and combustible materials.
P260	Do not breathe dust or mist.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
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.
P285	In case of inadequate ventilation wear respiratory protection.

Precautionary statement(s) Response

P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P310	Immediately call a POISON CENTER or doctor/physician.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P330	Rinse mouth.
P370 + P378	In case of fire: Use dry chemical alcohol resistant foam or dry sand for extinction.
P391	Collect spillage.

Precautionary statement(s) Storage

P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

CAS No	% [weight]	Name
87-90-1	>99	Trichloroisocyanuric acid
		Min 89% Available Chlorine

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: ➢ Immediately hold eyelids apart and flush the eye continuously with running water. ➢ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ➢ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. ➢ Transport to hospital or doctor without delay. ➢ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: ➢ Immediately flush body and clothes with large amounts of water, using safety shower if available. ➢ Quickly remove all contaminated clothing, including footwear. ➢ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. ➢ Transport to hospital, or doctor.
Inhalation	➢ If fumes or combustion products are inhaled remove from contaminated area. ➢ Lay patient down. Keep warm and rested. ➢ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. ➢ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. ➢ Transport to hospital, or doctor, without delay.
Ingestion	➢ For advice, contact a Poisons Information Centre or a doctor at once. ➢ Urgent hospital treatment is likely to be needed. ➢ If swallowed do NOT induce vomiting. ➢ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. ➢ Observe the patient carefully. ➢ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. ➢ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. ➢ Transport to hospital or doctor without delay.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Delayed effects from exposure to chlorine (decomposition product) can include shortness of breath, severe headache, pulmonary oedema and pneumonia.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing Media

FOR SMALL FIRE:

- USE FLOODING QUANTITIES OF WATER
- DO NOT use dry chemical, CO_2, foam or halogenated-type extinguishers.

FOR LARGE FIRE:

- Flood fire area with water from a protected position

Special hazards arising from the substrate or mixture

Fire Incompatibility	Non combustible, but will support combustion of other materials. Oxidizing substance. Decomposes on heating emitting toxic fumes including those of chlorine and hydrogen chloride. ➢ Avoid storage with reducing agents. ➢ Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous.

Advice for firefighters

Fire Fighting	➢ Alert Fire Brigade and tell them location and nature of hazard. ➢ May be violently or explosively reactive. ➢ Wear full body protective clothing with breathing apparatus. ➢ Prevent, by any means available, spillage from entering drains or water course. ➢ Consider evacuation (or protect in place). ➢ Use water to control fire and cool adjacent area. ➢ Do not approach containers suspected to be hot. ➢ Cool fire exposed containers with water spray from a protected location. ➢ If safe to do so, remove containers from path of fire.
Fire/Explosion Hazard	➢ Dry dust can be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport. ➢ Build-up of electrostatic charge may be prevented by bonding and grounding. ➢ Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting. ➢ All movable parts coming in contact with this material should have a speed of less than 1-meter/sec. Combustion products include: ➢ carbon monoxide (CO) ➢ carbon dioxide (CO_2) ➢ hydrogen chloride ➢ phosgene ➢ nitrogen oxides (NO_x) ➢ Other pyrolysis products typical of burning organic material. ➢ **Contains low boiling substance:** Closed containers may rupture due to pressure buildup under fire conditions.
HAZCHEM	1W

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	➢ No smoking, naked lights, ignition sources. ➢ Avoid all contact with any organic material including fuel, solvents, sawdust, paper or cloth and other incompatible materials, as ignition may result. ➢ Avoid breathing dust or vapours and all contact with skin and eyes. ➢ Control personal contact with the substance, by using protective equipment. ➢ Scoop up solid residues and seal in labelled drums for disposal. ➢ Neutralise/decontaminate area. ➢ Clean up all spills immediately. ➢ Wipe up. ➢ Place in a suitable, labelled container for waste disposal.
Major Spills	➢ Clear area of personnel and move upwind. ➢ Alert Fire Brigade and tell them location and nature of hazard. ➢ May be violently or explosively reactive. ➢ Consider evacuation. ➢ Increase ventilation. ➢ Wear full body protective clothing with breathing apparatus. ➢ NEVER use organic absorbents such as sawdust, paper and clothes; as fire may result. ➢ Prevent, by any means available, spillage from entering drains or water course. ➢ Collect recoverable product into labelled containers for recycling. ➢ Collect solid residues and seal in labelled drums for disposal. ➢ DO NOT mix fresh with recovered material.

	➢ Wash area and prevent runoff into drains. ➢ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. ➢ If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	➢ Avoid all personal contact, including inhalation. ➢ Provide adequate ventilation. ➢ Keep material away from light, heat, flammables or combustibles. ➢ Keep cool, dry and away from incompatible materials. ➢ Wear protective clothing when risk of exposure occurs. ➢ Avoid smoking, naked lights or ignition sources. ➢ Avoid contact with incompatible materials. ➢ When handling, DO NOT eat, drink or smoke. ➢ Keep containers securely sealed when not in use. ➢ Avoid physical damage to containers. ➢ Always wash hands with soap and water after handling. ➢ Work clothes should be laundered separately. Launder contaminated clothing before re-use. ➢ Use good occupational work practice. ➢ Observe manufacturer's storage and handling recommendations contained within this SDS. ➢ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. ➢ Ensure an eye bath and safety shower are available and ready for use.
Other Information	➢ Store in original containers. ➢ Keep containers securely sealed as supplied. ➢ Store in a cool, well ventilated area. ➢ Keep dry. ➢ Store under cover and away from sunlight. ➢ Store away from flammable or combustible materials, debris and waste. Contact may cause fire or violent reaction. ➢ Store away from incompatible materials and foodstuff containers. ➢ Protect containers against physical damage and check regularly for leaks.

Conditions for safe storage, including any incompatibilities

Suitable Container	➢ Glass container is suitable for laboratory quantities. ➢ DO NOT use aluminium, galvanised or tin-plated containers. ➢ DO NOT use unlined steel containers. ➢ DO NOT repack. Use containers supplied by manufacturer only. ➢ Plastic pail. ➢ Packing as recommended by manufacturer. ➢ Check all containers are clearly labelled and free from leaks.
Storage Incompatibility	➢ Contact with acids produces toxic fumes of Chlorine. ➢ Reacts explosively with acetylene, boron, diborane, or other boron hydrides at ordinary temperatures ➢ Forms explosive mixtures with gasoline and petroleum products, such as mineral oil, , greases, phosphorus, silicones, turpentine, finely divided metals, organic compounds ➢ Avoid storage of dichloroisocyanurate with ammonia, urea or similar nitrogen containing compounds, inorganic reducing compounds, calcium hypochlorite, alkalis and water. ➢ Corrosive to most metals in the presence of moisture. ➢ Segregate from alcohol, water. ➢ Avoid strong bases.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Not Available

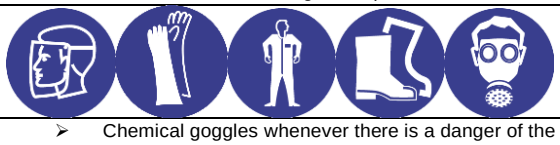
EMERGENCY LIMITS

Ingredient	Material Name	TEEL-1	TEEL-2	TEEL-3
Trichloroisocyanuric acid	Trichloroisocyanuric acid	38 mg/m3	420 mg/m3	2,500 mg/m3

Ingredient	Original IDLH	Revised IDLH
Trichloroisocyanuric acid	Not Available	Not Available

MATERIAL DATA

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction. Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.
Personal Protection	
Eye and Face protection	➢ Chemical goggles whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted. ➢ Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes. ➢ Alternatively a gas mask may replace splash goggles and face shields.
Skin protection	See Hand protection below
Hands/feet protection	➢ Elbow length PVC gloves ➢ Wear chemical protective gloves, e.g. PVC. ➢ Wear safety footwear or safety gumboots, e.g. Rubber ➢ When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots. ➢ Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).
Body protection	See Other protection below
Other protection	➢ Overalls. ➢ PVC Apron. ➢ PVC protective suit may be required if exposure severe. ➢ Eyewash unit. ➢ Ensure there is ready access to a safety shower.
Thermal hazards	Not Available

Respiratory protection

Type B-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Round white tablet (200g, 75mm D, 25mm H) with a strong chlorine odour; miscible with water

Physical state	Solid	**Molecular weight (g/mole)**	232
Odour	Chlorine	**Evaporation rate**	Not Available
Odour threshold	Not Available	**Flammability**	Not Applicable
Relative density (water=1)	>1	**Upper Explosive Limit (%)**	Not Applicable
Colour	White	**Lower Explosive Limit (%)**	Not Applicable
pH (as supplied)	2.8 – 3.5 (1% Solution)	**Vapour pressure (kPa)**	Not Available
Melting point/Freezing point (°C)	230 – 250	**Solubility in water (g/L)**	12 @ 25° C
Initial boiling point and boiling range (°C)	Not Available	**Vapour density (Air = 1)**	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	➢ Unstable in the presence of incompatible materials. ➢ Product is considered stable under normal handling conditions. ➢ Prolonged exposure to heat is not recommended. ➢ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Inhalation of dusts, generated by the material, during the course of normal handling, may be harmful. Chlorine vapour is extremely irritating to the upper respiratory tract and lungs. The vapour may displace and replace air in breathing zone. Inhalation of the vapour is hazardous and may even be fatal.
Ingestion	Accidental ingestion of the material may be harmful. Ingestion of dichloroisocyanurate will give rise to corrosive attack on the mouth, oesophagus and internal organs and may result in weakness, lethargy, tremors, salivation, lachrymation and possible coma.
Skin Contact	The material produces severe skin irritation. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration. Open cuts, abraded or irritated skin should not be exposed to this material. Solution of material in moisture on the skin, or perspiration, may increase irritant effects Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by a temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.
Chronic	Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing

	and related systemic problems. Long term exposure to high dust concentrations may cause changes in lung function (i.e. Pneumoconiosis) caused by particles less than 0.5 micron penetrating and remaining in the lung. Reduced respiratory capacity may result from chronic low level exposure to chlorine gas. Chronic poisoning may result in coughing, severe chest pains, sore throat and haemoptysis (bloody sputum). The chlorinated isocyanurate have low acute oral and dermal toxicity but are very irritating to the eyes, They are very mild skin irritants and are not considered to be skin sensitizers.

Product Name	TOXICITY	IRRITATION
Trichloroisocyanuric acid	Oral (rat) LD50: 406 mg/kg[2]	Eye (rabbit): 3125 mg - moderate
		Eye (rabbit): 50 ug/24h SEVERE
		Skin (rabbit): 500 mg - SEVERE
		Skin (rabbit): 500 mg/24h-moderate

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

sodium dichloroisocyanurate	The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (non allergic). Histologically there may be intercellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.

Acute Toxicity	✓	Carcinogenicity	⊘
Skin Irritation/Corrosion	✓	Reproductivity	⊘
Serious Eye Damage/Irritation	✓	STOT – single exposure	✓
Respiratory or Skin sensitisation	⊘	STOT – repeated exposure	⊘
Mutagenicity	⊘	Aspiration Hazard	⊘

Legend: ✗ *– Data available but does not fill the criteria for classification*
✓ *– Data required to make classification available*
⊘ *– Data Not Available to make classification*

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
Trichloroisocyanuric acid	LC50	96	Fish	0.08mg/L	4
Trichloroisocyanuric acid	EC50	48	Crustacean	0.17mg/L	4
Trichloroisocyanuric acid	EC50	48	Crustacean	=0.21mg/L	1
Legend:	*Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*				

Ecotoxicity

Chlorine has high acute toxicity to aquatic organisms;

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Trichloroisocyanuric acid	HIGH	HIGH

Bio accumulative potential

Ingredient	Bioaccumulation
Trichloroisocyanuric acid	LOW (BCF = 0.5)

Mobility in Soil

Ingredient	Mobility
Trichloroisocyanuric acid	LOW (KOC = 48.36)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product/Packaging disposal	➢ Containers may still present a chemical hazard/ danger when empty. ➢ Return to supplier for reuse/ recycling if possible. Otherwise: ➢ If container can't be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product then puncture containers, to prevent re-use, and bury at an authorised landfill. ➢ Where possible retain label warnings and SDS and observe all notices pertaining to the product. ➢ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. ➢ Treat and neutralise at an approved treatment plant. ➢ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 TRANSPORT INFORMATION

Labels Required

	
Marine Pollutant	
HAZCHEM	1W

Land transport (ADG)

UN Number	2468	
UN proper shipping name	TRICHLOROISOCYANURIC ACID, DRY	
Transport Hazard class(es)	Class	5.1
	Sub Risk	Not Applicable
Packing group	II	
Environmental Hazard	Not Applicable	
Special precautions for user	Special provisions	Not Applicable
	Limited quantity	1 kg

Air transport (ICAO-IATA / DGR)

UN Number	2468	
UN proper shipping name	TRICHLOROISOCYANURIC ACID, DRY	
Transport Hazard class(es)	ICAO/IATA Class	5.1
	ICAO/IATA Sub Risk	Not Applicable
Packing group	II	
Environmental Hazard	Not Applicable	
Special precautions for user	Not Available	

Sea transport (IMDG-Code / GGVSee)

UN Number	2468	
UN proper shipping name	TRICHLOROISOCYANURIC ACID, DRY	
Transport Hazard class(es)	IMDG Class	5.1
	IMDG Sub Risk	Not Applicable
Packing group	II	
Environmental Hazard	Marine Pollutant	
Special precautions for user	EMS, Fire	F-H
	EMS, Spillage	S-Q

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

TRICHLOROISOCYANURIC ACID (87-90-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)
Australia Hazardous Substances Information System - Consolidated Lists

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
Legend:	*Y = All ingredients are on the inventory* *N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)*

SECTION 16 OTHER INFORMATION

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

Name	CAS No		
PC—TWA	Permissible Concentration-Time Weighted Average	**PC—STEL**	Permissible Concentration-Short Term Exposure Limit
IARC	International Agency for Research on Cancer	**ACGIH**	American Conference of Governmental Industrial Hygienists
STEL	Short Term Exposure Limit	**TEEL**	Temporary Emergency Exposure Limit
IDLH	Immediately Dangerous to Life or Health Concentrations	**OSF**	Odour Safety Factor
NOAEL	No Observed Adverse Effect Level	**LOAEL**	Lowest Observed Adverse Effect Level
TLV	Threshold Limit Value	**LOD**	Limit Of Detection
OTV	Odour Threshold Value	**BCF**	BioConcentration Factors
BEI	Biological Exposure Index		

END OF SDS