

Chemtools Pty Ltd	Chemwatch Hazard Alert Code: 2
Chemwatch: 5589-98	Issue Date: 27/03/2023
Version No: 3.1	Print Date: 03/04/2023
Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements	S.GHS.AUS/NZ.EN.E
Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017	

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

Product Identifier

Product name	High Strength Tip Tinners
Chemical Name	Not Applicable
Synonyms	Not Available
Chemical formula	Not Applicable
Other means of identification	Not Available

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

Relevant identified uses	Use according to manufacturer's directions.
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Details of the manufacturer or supplier of the safety data sheet

Registered company name	Chemtools Pty Ltd	Chemtools Pty Ltd
Address	Unit 2, 14 - 16 Lee Holm Road St Marys NSW 2760 Australia	15/62 Factory Road Belfast Christchurch 8051 New Zealand
Telephone	1300 738 250, +61 2 9833 9766	+64 9 940 2745
Fax	+61 2 9623 3670	+61 2 9623 3670
Website	www.chemtools.com.au	www.chemtools.co.nz
Email	sales@chemtools.com.au	sales@chemtools.com.au

Emergency telephone number

Association / Organisation	Poisons Information Centre	National Poisons Centre
Emergency telephone numbers	13 11 26	0800 764 766
Other emergency telephone numbers	Not Available	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

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

Poisons Schedule	Not Applicable
Classification ^[1]	Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2A, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Hazardous to the Aquatic Environment Acute Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 4
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

Label elements



Hazard statement(s)

Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
Very toxic to aquatic life.
May cause long lasting harmful effects to aquatic life.

Precautionary statement(s) Prevention

P271	Use only outdoors or in a well-ventilated area.
P261	Avoid breathing dust/fumes.
P264	Wash all exposed external body areas thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing, eye protection and face protection.

Precautionary statement(s) Response

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P391	Collect spillage.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P330	Rinse mouth.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

Precautionary statement(s) Storage

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

Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Not regulated for transport of Dangerous Goods.

NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification ^[1]

Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Serious Eye Damage/Eye Irritation Category 2, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3, Hazardous to the Aquatic Environment Acute Hazard Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 1

Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI
Determined by Chemwatch using GHS/HSNO criteria	6.1D (oral), 6.3A, 6.4A, 9.1A, 6.1E (respiratory tract irritant)

Label elements



Signal word Warning

Hazard statement(s)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H410	Very toxic to aquatic life with long lasting effects.

Supplementary Phrases

Not Applicable

Precautionary statement(s) Prevention

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Precautionary statement(s) Disposal

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SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
7440-31-5	50-60	tin
7783-28-0	35-45	diammonium phosphate
Legend: 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available		

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	 If this product comes in contact with the eyes: Wash out immediately with fresh 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. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. DO NOT attempt to remove particles attached to or embedded in eye . Lay victim down, on stretcher if available and pad BOTH eyes, make sure dressing does not press on the injured eye by placing thick pads under dressing, above and below the eye. Seek urgent medical assistance, or transport to hospital.
Skin Contact	 If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
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	 IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY. For advice, contact a Poisons Information Centre or a doctor. Urgent hospital treatment is likely to be needed. In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition. If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist. If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS. Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise: INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. NOTE: Wear a protective glove when inducing vomiting by mechanical means.

Indication of any immediate medical attention and special treatment needed

for phosphate salts intoxication:

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
- Ingestion of large quantities of phosphate salts (over 1.0 grams for an adult) may cause an osmotic catharsis resulting in diarrhoea and probable abdominal cramps. Larger doses such as 4-8 grams will almost certainly cause these effects in everyone. In healthy individuals most of the ingested salt will be excreted in the faeces with the diarrhoea and, thus, not cause any systemic toxicity. Doses greater than 10 grams hypothetically may cause systemic toxicity.
- Treatment should take into consideration both anionic and cation portion of the molecule.
- All phosphate salts, except calcium salts, have a hypothetical risk of hypocalcaemia, so calcium levels should be monitored.

Treat symptomatically.

for irritant gas exposures:

- + the presence of the agent when it is inhaled is evanescent (of short duration) and therefore, cannot be washed away or otherwise removed
- arterial blood gases are of primary importance to aid in determination of the extent of damage. Never discharge a patient significantly exposed to an irritant gas without obtaining an arterial blood sample.
- supportive measures include suctioning (intubation may be required), volume cycle ventilator support (positive and expiratory pressure (PEEP), steroids and antibiotics, after a culture is taken

▶ If the eyes are involved, an ophthalmologic consultation is recommended

Occupational Medicine: Third Edition; Zenz, Dickerson, Horvath 1994 Pub: Mosby

Copper, magnesium, aluminium, antimony, iron, manganese, nickel, zinc (and their compounds) in welding, brazing, galvanising or smelting operations all give rise to thermally produced particulates of smaller dimension than may be produced if the metals are divided mechanically. Where insufficient ventilation or respiratory protection is available these particulates may produce "metal fume fever" in workers from an acute or long term exposure.

- Onset occurs in 4-6 hours generally on the evening following exposure. Tolerance develops in workers but may be lost over the weekend. (Monday Morning Fever)
- Pulmonary function tests may indicate reduced lung volumes, small airway obstruction and decreased carbon monoxide diffusing capacity but these abnormalities resolve after several months.
- Although mildly elevated urinary levels of heavy metal may occur they do not correlate with clinical effects.
- The general approach to treatment is recognition of the disease, supportive care and prevention of exposure.
- Seriously symptomatic patients should receive chest x-rays, have arterial blood gases determined and be observed for the development of tracheobronchitis and pulmonary edema.

[Ellenhorn and Barceloux: Medical Toxicology]

For acute or short term repeated exposures to ammonia and its solutions:

- Mild to moderate inhalation exposures produce headache, cough, bronchospasm, nausea, vomiting, pharyngeal and retrosternal pain and conjunctivitis. Severe inhalation produces laryngospasm, signs of upper airway obstruction (stridor, hoarseness, difficulty in speaking) and, in excessively, high doses, pulmonary oedema.
- Warm humidified air may soothe bronchial irritation.
- Test all patients with conjunctival irritation for corneal abrasion (fluorescein stain, slit lamp exam)
- Dyspneic patients should receive a chest X-ray and arterial blood gases to detect pulmonary oedema.

SECTION 5 Firefighting measures

Extinguishing media

DO NOT use halogenated fire extinguishing agents.

Metal dust fires need to be smothered with sand, inert dry powders.

DO NOT USE WATER, CO2 or FOAM.

- Use DRY sand, graphite powder, dry sodium chloride based extinguishers, G-1 or Met L-X to smother fire.
- Confining or smothering material is preferable to applying water as chemical reaction may produce flammable and explosive hydrogen gas.
- Chemical reaction with CO2 may produce flammable and explosive methane.
- If impossible to extinguish, withdraw, protect surroundings and allow fire to burn itself out.

Special hazards arising from the substrate or mixture

Fire Incompatibility	 Reacts with acids producing flammable / explosive hydrogen (H2) gas None known.

Advice for firefighters

Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water courses. Use fire fighting procedures suitable for surrounding 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. Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	 DO NOT disturb burning dust. Explosion may result if dust is stirred into a cloud, by providing oxygen to a large surface of hot metal. DO NOT use water or foam as generation of explosive hydrogen may result. With the exception of the metals that burn in contact with air or water (for example, sodium), masses of combustible metals do not represent unusual fire risks because they have the ability to conduct heat away from hot spots so efficiently that the heat of combustion cannot be maintained - this means that it will require a lot of heat to ignite a mass of combustible metal. Generally, metal fire risks exist when sawdust, machine shavings and other metal 'fines' are present. Metal powders, while generally regarded as non-combustible: May burn when metal is finely divided and energy input is high. May burn when metal is finely divided and energy input is high. May be ignited by friction, heat, sparks or flame. May be ignited by friction, heat, sparks or flame. Will burn with intense heat. Note: Metal dust fires are slow moving but intense and difficult to extinguish. Containers may explode on heating. Dusts or fumes may form explosive mixtures with air. Gases generated in fire may be poisonous, corrosive or irritating. Hot or burning metals may react violently upon contact with other materials, such as oxidising agents and extinguishing

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agents used on fires involving ordinary combustibles or flammable liquids.
Temperatures produced by burning metals can be higher than temperatures generated by burning flammable liquids
Some metals can continue to burn in carbon dioxide, nitrogen, water, or steam atmospheres in which ordinary combustibles
or flammable liquids would be incapable of burning.
Decomposition may produce toxic fumes of:
nitrogen oxides (NOx)
phosphorus oxides (POx)
metal oxides
May emit poisonous fumes.
May emit corrosive fumes.

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	 Remove all ignition sources. Clean up all spills immediately. Avoid contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Use dry clean up procedures and avoid generating dust. Place in a suitable, labelled container for waste disposal.
Major Spills	 Do not use compressed air to remove metal dusts from floors, beams or equipment Vacuum cleaners, of flame-proof design, should be used to minimise dust accumulation. Use non-sparking handling equipment, tools and natural bristle brushes. Provide grounding and bonding where necessary to prevent accumulation of static charges during metal dust handling and transfer operations Cover and reseal partially empty containers. Do not allow chips, fines or dusts to contact water, particularly in enclosed areas. If molten: Contain the flow using dry sand or salt flux as a dam. All tooling (e.g., shovels or hand tools) and containers which come in contact with molten metal must be preheated or specially coated, rust free and approved for such use. Allow the spill to cool before remelting scrap. Moderate hazard. CAUTION: Advise personnel in area. Alert Emergency Services and tell them location and nature of hazard. Control personal contact by wearing protective clothing. Prevent, by any means available, spillage from entering drains or water courses. Recover product wherever possible. IF DRY: Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal. IF WET: Vacuum/shovel up and place in labelled containers for disposal. ALWAYS: Wash area down with large amounts of water and prevent runoff into drains. 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	 For molten metals: Molten metal and water can be an explosive combination. The risk is greatest when there is sufficient molten metal to entrap or seal off water. Water and other forms of contamination on or contained in scrap or remelt ingot are known to have caused explosions in melting operations. While the products may have minimal surface roughness and internal voids, there remains the possibility of moisture contamination or entrapment. If confined, even a few drops can lead to violent explosions. All tooling, containers, molds and ladles, which come in contact with molten metal must be preheated or specially coated, rust free and approved for such use. Any surfaces that may contact molten metal (e.g. concrete) should be specially coated Drops of molten metal in water (e.g. from plasma arc cutting), while not normally an explosion hazard, can generate enough flammable hydrogen gas to present an explosion hazard. Vigorous circulation of the water and removal of the particles minimise the hazard. During melting operations, the following minimum guidelines should be observed: Inspect all materials prior to furnace charging and completely remove surface contamination such as water, ice, snow, deposits
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	of grease and oil or other surface contamination resulting from weather exposure, shipment, or storage. · Store materials in dry, heated areas with any cracks or cavities pointed downwards.
	Preheat and dry large objects adequately before charging in to a furnace containing molten metal. This is typically done by the use of a drying oven or homogenising furnace. The dry cycle should bring the metal temperature of the coldest item of the batch to 200 degree C (400 deg F) and then hold at that temperature for 6 hours.
	 Wear protective clothing when risk of exposure occurs.
	► Use in a well-ventilated area.
	Prevent concentration in hollows and sumps.
	DO NOT enter confined spaces until atmosphere has been checked.
	DO NOT allow material to contact humans, exposed food or food utensils.
	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 atter handling. Wash slatters should be low dependent of the undependent state of the state of the second state of the sec
	 Work clothes should be laundered separately. Launder contaminated clothing before re-use. Lice 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.
	Store in original containers. Keen containers securely sealed
	 Store in a cool, dry area protected from environmental extremes.
	 Store away from incompatible materials and foodstuff containers.
	Protect containers against physical damage and check regularly for leaks.
Other information	 Observe manufacturer's storage and handling recommendations contained within this SDS. For major quantities:
	 Consider storage in bunded areas - ensure storage areas are isolated from sources of community water (including stormwater, ground water, lakes and streams).
	Ensure that accidental discharge to air or water is the subject of a contingency disaster management plan; this may require consultation with local authorities.
Conditions for safe stora	ge, including any incompatibilities
	Bulk bags: Reinforced bags required for dense materials.
	CARE: Packing of high density product in light weight metal or plastic packages may result in container collapse with product release
	DO NOT use aluminium or galvanised containers
Suitable container	DO NOT use mild steel or galvanised containers

	 DO NOT use unlined steel containers Heavy gauge metal packages / Heavy gauge metal drums Polyethylene or polypropylene container. Check all containers are clearly labelled and free from leaks.
Storage incompatibility	The material is described as an electropositive metal. The activity or electromotive series of metals is a listing of the metals in decreasing order of their reactivity with hydrogen-ion sources such as water and acids. In the reaction with a hydrogen-ion source, the metal is oxidised to a metal ion, and the hydrogen ion is reduced to H2. The ordering of the activity series can be related to the standard reduction potential of a metal cation. The more positive the standard reduction potential of the cation, the more difficult it is to oxidise the metal to a hydrated metal cation and the later that metal falls in the series Three notable groups comprise the series • very electropositive metals • electronegative metals = electronegative metals = electronegative metals Electropositive metals.have electronegativities that fall between 1.4 and 1.9 Cations of these metals generally have standard reduction potentials between 0.0 and -1.6 V They: • do not react very readily with water to release hydrogen • react with H+ (acids) Electropositive metals do not burn in air as readily as do very electropositive metals. The surfaces of these metals will tarnish in the presence of oxygen forming a protective oxide coating. This coating protects the bulk of the metal against further oxidation (the metal is passivated). Reaction is reduced in the massive form (sheet, rod, or drop), compared with finely divided forms. The less active metals will not burn in air but: • can react exothermically with oxidising acids to form noxious gases. • catalyse polymerisation and other reactions, particularly when finely divided • react with halogenated hydrocarbons (for example, copper dissolves when heated in carbon tetrachloride), sometimes forming explosive compounds. • Elemental metals may react with azo/diazo compounds to form explosive products

- Finely divided metal powders develop pyrophoricity when a critical specific surface area is exceeded; this is ascribed to high heat of oxide formation on exposure to air.
- ▶ Safe handling is possible in relatively low concentrations of oxygen in an inert gas
- Several pyrophoric metals, stored in glass bottles have ignited when the container is broken on impact. Storage of these materials moist and in metal containers is recommended.
- The reaction residues from various metal syntheses (involving vacuum evaporation and co-deposition with a ligand) are often pyrophoric

If the surface of the metal is in contact with both oxygen and water, corrosion can occur. In corrosion, the metal acts as an anode and is oxidised.

Many metals may incandesce, react violently, ignite or react explosively upon addition of concentrated nitric acid. Some electropositive metals do not react with nitric acid because they are passivated.

http://www.wou.edu/las/physci/ch412/activity.htm

- Metals and their oxides or salts may react violently with chlorine trifluoride and bromine trifluoride.
- These trifluorides are hypergolic oxidisers. They ignite on contact (without external source of heat or ignition) with recognised fuels - contact with these materials, following an ambient or slightly elevated temperature, is often violent and may produce ignition.
- The state of subdivision may affect the results.
- Phosphates are incompatible with oxidising and reducing agents.
- Phosphates are susceptible to formation of highly toxic and flammable phosphine gas in the presence of strong reducing agents such as hydrides.
- ▶ Partial oxidation of phosphates by oxidizing agents may result in the release of toxic phosphorus oxides.
- Many metals may incandesce, react violently, ignite or react explosively upon addition of concentrated nitric acid.



X — Must not be stored together

0 — May be stored together with specific preventions

+ — May be stored together

Note: Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	tin	Tin, metal	2 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	tin	Tin, metal	2 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2		TEEL-3
tin	6 mg/m3	67 mg/m3		400 mg/m3
diammonium phosphate	20 mg/m3	210 mg/m3		1,300 mg/m3
Ingredient	Original IDLH		Revised IDLH	
tin	Not Available		Not Available	
diammonium phosphate	Not Available		Not Available	

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
diammonium phosphate	E	≤ 0.01 mg/m³	
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health		

Metal dusts must be collected at the source of generation as they are potentially explosive.

Exposure controls

Issue Date: Print Date:

Appropriate engineering controls	 Avoid ignition sources. Good housekeeping practices must be maintained. Dust accumulation on the floor, ledges and beams can prexplosions. Do not use compressed air to remove settled materials fr Vacuum cleaners, of flame-proof design, should be used Use non-sparking handling equipment, tools and natural grounding and bonding where necessary to prevent accu operations. Do not allow chips, fines or dusts to contact water, partice Metal spraying and blasting should, where possible, be c oxygen, in the form of metal oxides, to potentially reactive titanium. Work-shops designed for metal spraying should possess which dust accumulation is possible. Wet scrubbers are preferable to dry dust collectors. Bag or filter-type collectors should be sited outside the will cyclones should be protected against entry of moisture a humid or partially wetted states. Local exhaust systems must be designed to provide a mi 0.5 metre/sec. Local ventilation and vacuum systems must be designed precipitators must not be used, unless specifically approved and the workplace possess varying velocities" of fresh circulating air required to effectively removed. 	resent a risk of ignition, fl om floors, beams or equi to minimise dust accumu bristle brushes. Cover ar mulation of static charge ularly in enclosed areas. onducted in separate roo e finely divided metals su smooth walls and a mini orkrooms and be fitted w is reactive metal dusts ar nimum capture velocity a to handle explosive dust ved for use with flammabl g "escape" velocities whit ve the contaminant.	ame propagation and secondary ipment lation. Id reseal partially empty containers. Provide is during metal dust handling and transfer oms. This minimises the risk of supplying lich as aluminium, zinc, magnesium or mum of obstructions, such as ledges, on ith explosion relief doors. re capable of spontaneous combustion in at the fume source, away from the worker, of s. Dry vacuum and electrostatic le/ explosive dusts. ch, in turn, determine the "capture
	Type of Contaminant:		Air Speed:
	welding, brazing fumes (released at relatively low velocity i	nto moderately still air)	0.5-1.0 m/s (100-200 f/min.)
	Within each range the appropriate value depends on:		
	Lower end of the range	Upper end of the range	
	1: Room air currents minimal or favourable to capture	1: Disturbing room air o	
	2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high	h toxicity
	2: Intermittent, low production	2: High production, hos	
	3. Intermittent, low production.	3. High production, nea	
	4: Large hood or large air mass in motion	4: Small hood-local cor	ntrol only
	Simple theory shows that air velocity falls rapidly with distance generally decreases with the square of distance from the extraction point should be adjusted, accordingly, after referent extraction fan, for example, should be a minimum of 1-2.5 m/ distant from the extraction point. Other mechanical consideration apparatus, make it essential that theoretical air velocities are installed or used.	e away from the opening raction point (in simple ca nee to distance from the c 's (200-500 f/min.) for ext ations, producing perform multiplied by factors of 1	g of a simple extraction pipe. Velocity ases). Therefore the air speed at the contaminating source. The air velocity at the traction of gases discharged 2 meters ance deficits within the extraction 0 or more when extraction systems are
Individual protection measures, such as personal protective equipment		3	
Eye and face protection	 Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] 		
Skin protection	See Hand protection below		
	The selection of suitable gloves does not only depend on the manufacturer to manufacturer. Where the chemical is a prepa can not be calculated in advance and has therefore to be che	material, but also on fur aration of several substan ecked prior to the applica	ther marks of quality which vary from nces, the resistance of the glove material tion.

Hands/feet protection

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.
 Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands

	should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.
	Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:
	frequency and duration of contact,
	chemical resistance of glove material,
	· glove thickness and
	· dexterity
	Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).
	When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time
	greater than 240 minutes according to EN 374. AS/NZS 2161.10.1 or national equivalent) is recommended.
	when only brief contact is expected a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes
	according to EN 374, AS(NZS 2164, 10.1 or protocol or class of 5 or inglifer (breaktinough time greater than of minutes
	according to EN 374, ASIN252101.10.10 intrational equivalently is recommended.
	- Some give polymer types are less alrected by movement and this should be taken into account when considering gives for
	long-term use.
	· Contaminated gloves should be replaced.
	As defined in ASTM F-739-96 in any application, gloves are rated as:
	· Excellent when breakthrough time > 480 min
	Good when breakthrough time > 20 min
	· Fair when breakthrough time < 20 min
	Poor when glove material degrades
	For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.
	It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the
	permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection
	should also be based on consideration of the task requirements and knowledge of breakthrough times
	Close thickness may cleave used down of the task requirements and knowledge to be authority in miss.
	Give interview has vary depending on the give manuacturer, the give type and the give model. Therefore, the
	manufacturers technical data should always be taken into account to ensure selection of the most appropriate grove for the task.
	Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:
	I hinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these
	gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
	• Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there
	is abrasion or puncture potential
	Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a
	non-perfumed moisturiser is recommended.
	Protective gloves eq. Leather gloves or gloves with Leather facing
	Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids
	where abrasive naticles are not present
	build subbor
	butyi rubber.
	riuorocaoutenouc.
	polyvinyi chioride.
	Gloves should be examined for wear and/ or degradation constantly.
Body protection	See Other protection below
	· During repair or maintenance activities the potential exists for exposures to toxic metal particulate in excess of the occupational
	standards. Under these circumstances, protecting workers can require the use of specific work practices or procedures involving
	the combined use of ventilation, wet and vacuum cleaning methods, respiratory protection, decontamination, special protective
	clothing and when necessary restricted work zones
	. Protective over-gaments or work clothing must be worn by persons who may become contaminated with particulate during
	activities such as machining fumace of which are dealing and provide which are provided to the such as
Other protection	autivities such as machining, rumate reputiting, all cleaning equipment litter changes, maintenance, rumate tending, etc.
Uther protection	Contaminated work clothing and over-garments must be managed in a controlled manner to prevent secondary exposure to
	workers or third parties, to prevent the spread or particulate to other areas, and to prevent particulate from being taken home by
	workers.
	· Personnel who handle and work with molten metal should utilise primary protective clothing like polycarbonate face shields, fire
	resistant tapper's jackets, neck shades (snoods), leggings, spats and similar equipment to prevent burn injuries. In addition to
	primary protection, secondary or day-to-day work clothing that is fire resistant and sheds metal splash is recommended for use
	with molten metal. Synthetic materials should never be worn even as secondary clothing (undergarments).

Respiratory protection

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

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	P1 Air-line*	-	PAPR-P1 -
up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

* - Negative pressure demand ** - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

· Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.

• The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to

personal protective equipment (powered, positive flow, full face apparatus may be an option).

• Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.

Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.

• Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)

· Use approved positive flow mask if significant quantities of dust becomes airborne.

· Try to avoid creating dust conditions.

Class P2 particulate filters are used for protection against mechanically and thermally generated particulates or both.

P2 is a respiratory filter rating under various international standards, Filters at least 94% of airborne particles

Suitable for:

· Relatively small particles generated by mechanical processes eg. grinding, cutting, sanding, drilling, sawing.

· Sub-micron thermally generated particles e.g. welding fumes, fertilizer and bushfire smoke.

Biologically active airborne particles under specified infection control applications e.g. viruses, bacteria, COVID-19, SARS

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance Grey solid tablet with a mild odour; does not mix with water. Tin-Insoluble, Diammonium Phosphate-Water Soluble Massive form of the metal. Massive or bulk metals (as opposed to dispersed or divided metals) are characterised by having a well-ordered infinite lattice of metal atoms. Massive metals exist in various forms, including sheets, rods, ingots, foils, pellets, wire or on occasion, dusts.

Physical state	Solid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition temperature (°C)	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Applicable
Vapour pressure (kPa)	Negligible	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Available	VOC g/L	Not Applicable

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7

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Incompatible materials See section 7 Hazardous decomposition products See section 5 SECTION 11 Toxicological information Information on toxicological effects Information on toxicological effects The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual. The inhalation of small particles of metal oxide results in sudden thirst, a sweet, metallic foul taste, throat irritation, couph, dry

The inhalation of small particles of metal oxide results in sudden thirst, a sweet, metallic foul taste, throat irritation, cough, dry mucous membranes, tiredness and general unwellness. Headache, nausea and vomiting, fever or chills, restlessness, sweating, diarrhoea, excessive urination and prostration may also occur. The highly irritant properties of ammonia vapour result as the gas dissolves in mucous fluids and forms irritant, even corrosive solutions. Inhalation of the ammonia fumes causes coughing, vomiting, reddening of lips, mouth, nose, throat and conjunctiva while higher concentrations can cause temporary blindness, restlessness, tightness in the chest, pulmonary oedema (lung damage), weak pulse and cyanosis. Inhalation of high concentrations of vapour may cause breathing difficulty, tightness in chest, pulmonary oedema and lung damage. Brief exposure to high concentrations > 5000 ppm may cause death due to asphyxiation (suffocation) or fluid in the lungs. Prolonged or regular minor exposure to the vapour may cause persistent irritation of the eyes, nose and upper respiratory tract. Massive ammonia exposures may produce chronic airway hyperactivity and asthma with associated pulmonary function changes. The average nasal retention of ammonia by human subjects was found to be 83%.
Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Poorly absorbed from the gut, tin salts are most likely to cause poisoning if injected. Tin is highly toxic, producing diarrhoea, muscle paralysis, twitching and nervous damage. Tin salts are not very toxic. However, at high concentration, nausea, vomiting and diarrhoea can occur. As absorption of phosphates from the bowel is poor, poisoning this way is less likely. Effects can include vomiting, tiredness, fever, diarrhoea, low blood pressure, slow pulse, cyanosis, spasms of the wrist, coma and severe body spasms. Large doses of ammonia or injected ammonium salts may produce diarrhoea and may be sufficiently absorbed to produce increased production of urine and systemic poisoning. Symptoms include weakening of facial muscle, tremor, anxiety, reduced muscle and limb control.
This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions 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. Mild skin reaction is seen with contact of the vapour of this material on moist skin. High concentrations or direct contact with solutions produces severe pain, a stinging sensation, burns and blisters and possible brown stains. Death could result from extensive burning. Vapour exposure may rarely, produce an itchy rash.
This material can cause eye irritation and damage in some persons.
Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Chronic exposure to tin dusts and fume can result in substantial amounts being deposited in the lungs and result in reduced lung function and difficulty breathing. Sodium phosphate dibasic can cause stones in the kidney, loss of mineral from the bones and loss of thyroid gland function. Metallic dusts generated by the industrial process give rise to a number of potential health problems. The larger particles, above 5 micron, are nose and throat irritants.

High Strength Tip Tinners	TOXICITY Not Available	IRRITATION Not Available
tin	TOXICITY dermal (rat) LD50: >2000 mg/kg ^[1] Inhalation(Rat) LC50: >4.75 mg/l4h ^[1] Oral (Rat) LD50: >2000 mg/kg ^[1]	IRRITATION Eye: no adverse effect observed (not irritating) ^[1] Skin: no adverse effect observed (not irritating) ^[1]

	ΤΟΧΙΟΙΤΥ	IRRITATION		
diammonium phosphate	dermal (rat) LD50: >5000 mg/kg ^[1] Eye: no a		erse effect observed (not irritating) ^[1]	
	Inhalation(Rat) LC50: >5 mg/l4h ^[1]	alation(Rat) LC50: >5 mg/l4h ^[1] Skin: no adverse effect observed (not irritating		
	Oral (Rat) LD50: >2000 mg/kg ^[1]			
Legend:	 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 			
DIAMMONIUM PHOSPHATE	Asthma-like symptoms may continue for months of non-allergic condition known as reactive airways of highly irritating compound. Main criteria for diagno individual, with sudden onset of persistent asthma irritant. Other criteria for diagnosis of RADS include bronchial hyperreactivity on methacholine challen eosinophilia. RADS (or asthma) following an irrita	or even years after exposure to the dysfunction syndrome (RADS) when bosing RADS include the absence a-like symptoms within minutes to de a reversible airflow pattern on ge testing, and the lack of minima- ting inhalation is an infrequent dis	e material ends. This may be due to a nich can occur after exposure to high levels of of previous airways disease in a non-atopic hours of a documented exposure to the ung function tests, moderate to severe al lymphocytic inflammation, without order with rates related to the concentration of	
	and duration of exposure to the irritating substance exposure due to high concentrations of irritating s The disorder is characterized by difficulty breathin	e. On the other hand, industrial b ubstance (often particles) and is ng, cough and mucus production.	ronchitis is a disorder that occurs as a result o completely reversible after exposure ceases.	
TIN & DIAMMONIUM PHOSPHATE	and duration of exposure to the irritating substance exposure due to high concentrations of irritating s. The disorder is characterized by difficulty breathin No significant acute toxicological data identified in	e. On the other hand, industrial b ubstance (often particles) and is o ng, cough and mucus production.	ronchitis is a disorder that occurs as a result of completely reversible after exposure ceases.	
TIN & DIAMMONIUM PHOSPHATE	and duration of exposure to the irritating substance exposure due to high concentrations of irritating s. The disorder is characterized by difficulty breathin No significant acute toxicological data identified in	ce. On the other hand, industrial b ubstance (often particles) and is o ng, cough and mucus production. In literature search.	ronchitis is a disorder that occurs as a result of completely reversible after exposure ceases.	
TIN & DIAMMONIUM PHOSPHATE Acute Toxicity	and duration of exposure to the irritating substance exposure due to high concentrations of irritating s. The disorder is characterized by difficulty breathin No significant acute toxicological data identified in	e. On the other hand, industrial b ubstance (often particles) and is o ng, cough and mucus production. In literature search. Carcinogenicity	ronchitis is a disorder that occurs as a result of completely reversible after exposure ceases.	
TIN & DIAMMONIUM PHOSPHATE Acute Toxicity Skin Irritation/Corrosion	and duration of exposure to the irritating substance exposure due to high concentrations of irritating s. The disorder is characterized by difficulty breathin No significant acute toxicological data identified ir	e. On the other hand, industrial b ubstance (often particles) and is o ng, cough and mucus production. In literature search. Carcinogenicity Reproductivity	ronchitis is a disorder that occurs as a result of completely reversible after exposure ceases.	
TIN & DIAMMONIUM PHOSPHATE Acute Toxicity Skin Irritation/Corrosion Serious Eye Damage/Irritation	and duration of exposure to the irritating substance exposure due to high concentrations of irritating s. The disorder is characterized by difficulty breathin No significant acute toxicological data identified ir	e. On the other hand, industrial b ubstance (often particles) and is o ng, cough and mucus production. In literature search. Carcinogenicity Reproductivity STOT - Single Exposure	ronchitis is a disorder that occurs as a result of completely reversible after exposure ceases.	
TIN & DIAMMONIUM PHOSPHATE Acute Toxicity Skin Irritation/Corrosion Serious Eye Damage/Irritation Respiratory or Skin sensitisation	and duration of exposure to the irritating substance exposure due to high concentrations of irritating s. The disorder is characterized by difficulty breathin. No significant acute toxicological data identified ir	ee. On the other hand, industrial b ubstance (often particles) and is o ng, cough and mucus production. In literature search. Carcinogenicity Reproductivity STOT - Single Exposure STOT - Repeated Exposure	<pre>ronchitis is a disorder that occurs as a result of completely reversible after exposure ceases.</pre>	

👽 – Data available to make classification

SECTION 12 Ecological information

Toxicity

High Strength Tip Tinners	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
41	NOEC(ECx)	168h	Crustacea	<0.005mg/l	2
tin	EC50	72h	Algae or other aquatic plants	>0.0192mg/l	2
	LC50	96h	Fish	>0.0124mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	72h	Algae or other aquatic plants	Algae or other aquatic plants 100mg/l	
diammonium phosphate	EC50	72h	Algae or other aquatic plants	Algae or other aquatic plants >100mg/l	
diaminomum phosphate			/ igue er etiter aquaite plaine	· · · · · · · · · · · · · · · · · · ·	
	LC50	96h	Fish	1.32mg/l	2
	LC50 EC50	96h 48h	Fish Crustacea	1.32mg/l	2 2

Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites. For Metal:

Atmospheric Fate - Metal-containing inorganic substances generally have negligible vapour pressure and are not expected to partition to air. Environmental Fate: Environmental processes, such as oxidation, the presence of acids or bases and microbiological processes, may transform insoluble metals

to more soluble ionic forms. Environmental processes may enhance bioavailability and may also be important in changing solubilities.

Aquatic/Terrestrial Fate: When released to dry soil, most metals will exhibit limited mobility and remain in the upper layer; some will leach locally into ground water and/ or surface water ecosystems when soaked by rain or melt ice. A metal ion is considered infinitely persistent because it cannot degrade further. Once released to surface waters and moist soils their fate depends on solubility and dissociation in water. A significant proportion of dissolved/ sorbed metals will end up in sediments through the settling of suspended particles. The remaining metal ions can then be taken up by aquatic organisms. Ionic species may bind to dissolved ligands or sorb to solid particles in water.

Ecotoxicity: Even though many metals show few toxic effects at physiological pH levels, transformation may introduce new or magnified effects. Tin may exist as either divalent (TinII) or tetravalent (TinIV) cations under environmental conditions. TinII prevails in oxygen-poor water and will readily precipitate as a sulfide or as a hydroxide in alkaline water. Tin(IV) readily breaks down in water through hydrolysis, and can precipitate as a hydroxide. In general, tin(IV) would be expected to be the only stable ionic species in the weathering cycle. Tin is generally considered to be relatively immobile in the environment. In water tin may partition to soils and sediments, where it may adhere to soil particles thus reducing its mobility. Some transportation may occur if it adheres to suspended sediments. Bioconcentration factor (BCF) estimations of tin for marine and freshwater plants, invertebrates, and fish were 100, 1000, and 3000 respectively, indicating that tin can accumulate in the tissue of living organisms, and become more concentrated higher up the food chain. While inorganic tin cannot be degraded in the environment, it may undergo chemical reactions or be transformed into organometallic forms by microbial methylation. Inorganic tin may also be converted to stannane (H4Sn) by macroalgae in extremely anaerobic (oxygen-poor) conditions. For Ammonia:

Atmospheric Fate: Ammonia reacts rapidly with available acids (mainly sulfuric, nitric, and sometimes hydrochloric acid) to form the corresponding salts. Ammonia is persistent in the air.

Aquatic Fate: Biodegrades rapidly to nitrate, producing a high oxygen demand. Non-persistent in water (half-life 2 days).

Ecotoxicity: Moderately toxic to fish under normal temperature and pH conditions and harmful to aquatic life at low concentrations. Does not concentrate in food chain.

For Phosphate: The principal problems of phosphate contamination of the environment relates to eutrophication processes in lakes and ponds. Phosphorus is an essential plant nutrient and is usually the limiting nutrient for blue-green algae.

Aquatic Fate: Lakes overloaded with phosphates is the primary catalyst for the rapid growth of algae in surface waters. Planktonic algae cause turbidity and flotation films. Shore algae cause ugly muddying, films and damage to reeds. Decay of these algae causes oxygen depletion in the deep water and shallow water near the shore. The process is self-perpetuating because an anoxic condition at the sediment/water interface causes the release of more adsorbed phosphates from the sediment. The growth of algae produces undesirable effects on the treatment of water for drinking purposes, on fisheries, and on the use of lakes for recreational purposes.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients
Mobility in soil	

Ingredient	Mobility
	No Data available for all ingredients

SECTION 13 Disposal considerations

Waste treatment methods

	Containers may still present a chemical hazard/ danger when empty.
	Return to supplier for reuse/ recycling if possible.
	Otherwise:
	If container can not 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.
Product / Packaging	DO NOT allow wash water from cleaning or process equipment to enter drains.
disposal	It may be necessary to collect all wash water for treatment before disposal.
	In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
	Where in doubt contact the responsible authority.
	Recycle wherever possible or consult manufacturer for recycling options.
	 Consult State Land Waste Management Authority for disposal.
	 Bury residue in an authorised landfill.
	Recycle containers if possible, or dispose of in an authorised landfill.

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous.

Only dispose to the environment if a tolerable exposure limit has been set for the substance.

Only deposit the hazardous substance into or onto a landfill or sewage facility or incinerator, where the hazardous substance can be handled and treated appropriately.

SECTION 14 Transport information

Labels Required

Marine Pollutant	
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Land transport (UN): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

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

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
tin	Not Available
diammonium phosphate	Not Available

Transport in bulk in accordance with the IGC Code

Product name	Ship Type
tin	Not Available
diammonium phosphate	Not Available

SECTION 15 Regulatory information

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

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number	Group Standard
HSR002530	Cleaning Products Subsidiary Hazard Group Standard 2020

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

tin is found on the following regulatory lists

Australian Inventor	y of	Industrial	Chemicals	(AIIC)
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International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act -Classification of Chemicals New Zealand Hazardous Substances and New Organisms (HSNO) Act -Classification of Chemicals - Classification Data New Zealand Inventory of Chemicals (NZIoC) New Zealand Workplace Exposure Standards (WES)

diammonium phosphate is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

New Zealand Approved Hazardous Substances with controls New Zealand Hazardous Substances and New Organisms (HSNO) Act -

Classification of Chemicals

New Zealand Hazardous Substances and New Organisms (HSNO) Act -Classification of Chemicals - Classification Data New Zealand Inventory of Chemicals (NZIoC)

Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Quantities
Not Applicable	Not Applicable

Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Class of substance	Quantities
Not Applicable	Not Applicable

Refer Group Standards for further information

Maximum quantities of certain hazardous substances permitted on passenger service vehicles

Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Gas (aggregate water capacity in mL)	Liquid (L)	Solid (kg)	Maximum quantity per package for each classification
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Tracking Requirements

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (tin)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	No (tin)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

Revision Date	27/03/2023
Initial Date	23/03/2023

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch

Classification committee using available literature references.

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.