SAFETY DATA SHEET

HWMSF – 1kg Wiping Metal Solder Flux

GPI Product code/s Manufacturer Cons 32 In Thom Austrem Phore Www. Emergency contact Hazard classification Label elements Signal word GHS Classification Hazard statements Hazard statements Hazard statements Hazard statements Precautionary statements Precautionary statements Precautionary statements Precautionary statements Precautionary statements Precautionary page 20 page 27 page 20 p	er Paste MSF solidated Alloys	Other names	Kemtex R916 'Ti			
Manufacturer Consider Signal word Cate Consider Signal word Cate Ca			TOTALON DOTO TI	Tinning' Compound		
Emergency contact Poiso Hazard classification Label elements Signal word GHS Classification Meta (Inha Toxic Cate Hazard statements Hazard statements Precautionary statements	solidated Alloys	Recommended use/s	Tin coating and	soldering of metals.		
Hazard classification Label elements Signal word GHS Classification Meta (Inha Toxic Cate Hazard statements H290 H302 H312 H314 H332 H360 H373 H410 Precautionary statements P234 P260 P277 P271 P280 P281 P3001 P3003 wate P3008 P310 P363	ndustrial Avenue nastown VIC 3074	Importer/Supplier	GPI Automotive 275 Wellington F Mulgrave VIC 31 Australia Phone: +61 3 85 Fax: +61 3 9562 www.gpi.com.au	541 7500 0789		
Signal word DAN GHS Classification Meta (Inha Toxic Cate Hazard statements H290 H302 H312 H314 H332 H360 H373 H410 Precautionary statements P204 P270 P271 P280 P281 P301 P303 wate P308 P310 P363	ons Information Centre (Australia)	Phone: 13 11 26	<u>,</u>	www.austin.org.au/poison		
Signal word DAN GHS Classification Meta (Inha Toxic Cate Hazard statements H290 H302 H312 H314 H332 H360 H373 H410 Precautionary statements P204 P270 P271 P280 P281 P301 P303 wate P308 P310 P363	Section 2: HAZ	ARD IDENTIFICATION				
Signal word	IAZARDOUS SUBSTANCE	DANGEROUS GOODS	According to the Model	WHS Regulations and the ADG Cod		
GHS Classification						
(Inha Toxic Cate Hazard statements H290 H302 H312 H314 H332 H360 H373 H410 H314 H315 H316 H316 H317 H316 H31	GER					
H302 H312 H314 H332 H360 H373 H410 Precautionary statements P201 P271 P280 P271 P280 P281 P300 P300 wate P300 and 6 P300 P310 P360	Metal Corrosion Category 1, Acute Toxicity (Oral) Category 4, Acute Toxicity (Dermal) Category 4, Acute Toxicity (Inhalation) Category 4, Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Reproductive Toxicity Category 1A, Specific Target Organ Toxicity – Repeated Exposure Category 2, Acute Aquatic Hazard Category 1, Chronic Aquatic Hazard Category 1					
P234 P260 P270 P271 P280 P281 P301 P303 wate P305 and 6 P308 P310 P363	H290: May be corrosive to metals. H302: Harmful if swallowed. H312: Harmful in contact with skin. H314: Causes severe skin burns and eye damage. H332: Harmful if inhaled. H360: May damage fertility or the unborn child. H373: May cause damage to organs through prolonged or repeated exposure. H410: Very toxic to aquatic life with long-lasting effects.					
P405	1: Obtain special instructions before used: Keep only in original container. 2: Do not breathe dust/fume/gas/mist. 2: Do not eat, drink or smoke when used: Use only outdoors or in a well-vent. 2: Wear protective gloves/protective of used: Use personal protective equipment. 3: HP330+P331: IF SWALLOWED: Rir. 3: HP361+P353: IF ON SKIN (or hair): r/shower. 5: HP351+P338: IF IN EYES: Rinse cases to do. Continue rinsing. 3: HP313: IF exposed or concerned: Go: Immediately call a POISON CENT. 3: Wash contaminated clothing before on the content of the cont	/vapours/spray. sing this product. ilated area. elothing/eye protection/face p as required. use mouth. Do NOT induce v Remove/take off immediately utiously with water for severa et medical advice/attention. RE or doctor/physician. e reuse. damage.	omiting. y all contaminated clo al minutes. Remove c			
P501	1: Dispose of contents/container in ac					
		MICAL COMPOSITION				

Section 3: CHEMICAL COMPOSITION							
Ingredient name	Synonym/s	CAS number	Proportion (% weight)				
Lead powder	-	7439-92-1	58-62				
Tin powder	-	7440-31-5	38-42				
Zinc chloride	-	7646-85-7	<10				
Ammonium chloride	-	12125-02-9	<5				

Expires: 01/10/2029 Page 1 of 9



	Section 4: FIRST AID MEASURES							
Route of exposure	Symptoms caused by exposure	Description of necessary first aid measures						
Eye contact	The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. If applied to the eyes, this material causes severe eye damage.	If this product comes into contact with the eyes: Immediately hold eyes open and flush the eye continuously with fresh running water for at least 15 minutes. Ensure irrigation under 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	Skin contact with the material may be harmful; systemic effects may result following absorption. The material can produce chemical burns following direct contact with the skin. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the bloodstream 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 suitable protected.	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	Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness.	 If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as 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. 						
Ingestion	Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 grams may be fatal or may produce serious damage to the health of the individual. The material can produce chemical burns within the oral cavity and gastrointestinal tract following 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. 						
Medical attention and special treatment	 Respiratory distress may require cricothyroido swelling. Intravenous lines should be established imme compromise. Strong acids produce a coagulation necrosis of dessicating action of the acid on proteins in splingestion: Immediate dilution (milk or water) within 30 million DO NOT attempt to neutralize the acid since experience. 	cema and inhalation exposure. Treat with 100% oxygen initially. Intomy if endotracheal intubation is contraindicated by excessive diately in all cases where there is evidence of circulatory characterised by formation of a coagulum (eschar) as a result of the pecific tissues.						

Expires: 01/10/2029 Page 2 of 9



Section 4: FIRST AID MEASURES (continued)

Some authors suggest the use of lavage within 1 hour of ingestion.

Skin

- Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping.
- Deep second-degree burns may benefit from topical silver sulfadiazine.

Eve

- Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjunctival cul-de-sacs. Irrigation should last at least 20-30 minutes. DO NOT use neutralising agents or any other additives. Several litres of saline are required.
- Cylcoplegic drops, (1% cyclopentolate for short-term use or 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury.
- Steroid eye drops should only be administered with the approval of a consulting ophthalmologist.

Medical toxicology

- Gastric acids solubilize lead and its salts and lead absorption occurs in the small bowel.
- Particles of less than 1 μm in diameter are substantially absorbed by the alveoli following inhalation.
- Lead is distributed to the red blood cells and has a half-life of 35 days. It is subsequently redistributed to soft tissue & bone stores or eliminated. The kidney accounts for 75% of daily lead loss; integumentary and alimentary losses account for the remainder.
- Neurasthenic symptoms are the most common symptoms of intoxication. Lead toxicity produces a classic motor neuropathy. Acute encephalopathy appears infrequently in adults. Diazepam is the best drug for seizures.
- Whole-blood lead is the best measure of recent exposure; free erythrocyte protoporphyrin (FEP) provides the best screening for chronic exposure. Obvious clinical symptoms occur in adults when whole-blood lead exceeds 80 µg/dL.
- British Anti-Lewisite (BAL) is an effective antidote and enhances faecal and urinary excretion of lead. The onset of BAL is about 30 minutes and most of the chelated metal complex is excreted in 4-6 hours, primarily in the bile. Adverse reaction appears in up to 50% of patients given BAL in doses exceeding 5 mg/kg. CaNa2EDTA has also been used alone or in concert with BAL as an antidote. D-penicillamine is the usual oral agent for mobilization of bone lead; its use in the treatment of lead poisoning remains investigational. 2,3-dimercapto-1-propanesulfonic acid (DMPS) and dimercaptosuccinic acid (DMSA) are water soluble analogues of BAL and their effectiveness is undergoing review. As a rule, stop BAL if lead decreases below 50 µg/dL; stop CaNA2EDTA if blood lead decreases below 40 µg/dL or urinary lead drops below 2 mg/24hrs.

Biological Exposure Index (BEI)

These represent the determinants observed in specimens collected from a healthy worker who has been exposed as the exposure standard (TLV).

Determinant	Index	Sampling Time	Comments
Lead in blood	30 g/100mL	Not critical	
Lead in urine	150 g/g creatinine	Not critical	В
Zinc protoporphyrin in blood	250 g/100 mL erythrocytes OR 100 g/100 mL blood	After 1 month exposure	В

B: Background levels occur in specimens collected from subjects NOT exposed.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media

- Water spray or fog.
- Foam.
- · Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

Specific hazards arising from the chemical

None known.

Special protective equipment and precautions for fire fighters

- Alert fire brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- 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.

Fire/explosion hazard

- Non-combustible.
- Not considered to be a significant fire risk.
- Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.

Expires: 01/10/2029 Page 3 of 9

SAFETY DATA SHEET

Page 4 of 9

HWMSF – 1kg Wiping Metal Solder Flux

	Section 5: FIRE FIGHTING MEASURES (continued)
	 Heating may cause expansion or decomposition leading to violent rupture of containers. May emit corrosive, poisonous fumes. May emit acrid smoke. Decomposition may produce toxic fumes of hydrogen chloride, nitrogen oxides (NOx), and metal oxides.
	Section 6: ACCIDENTAL RELEASE MEASURES
Personal precautions, protective equipment and emergency proc	
Methods and materials for cont	ainment and cleaning up
Minor spills	 Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material. Check regularly for spills and leaks. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. 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. 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). Stop leak if safe to do so. Contain spill with sand, earth or vermiculite.
Environmental precautions	See Section 12.
-	Section 7: HANDLING AND STORAGE
Precautions for safe handling	 DO NOT allow clothing wet with material to stay in contact with skin. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Avoid contact with moisture. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Other information: DO NOT store near acids, or oxidising agents. Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible material and foodstuff containers. Protect containers against physical damage and check regularly for leaks.
	Observe manufacturer's storage and handling recommendations contained within this SDS.
Conditions for safe storage	 DO NOT use aluminium or galvanized containers. Check regularly for spill and leaks. Lined metal can, lined metal pail/can. Plastic pail. Polyliner drum. Packing as recommended by manufacturer.

Removable head packaging;

• Check all containers are clearly labelled and free from leaks.

• Drums and jerricans must be of the non-removable head type.

• Where a can is to be used as an inner package, the can must have a screwed enclosure. For materials with a viscosity of at least 2680 cSt (23°C) and solids (between 15°C and 40°C):

For low viscosity materials.

Expires: 01/10/2029



Section 7: HANDLING AND STORAGE (continued)

- · Cans with friction closures and,
- · Low pressure tubes and cartridges.

may be used.

Where combination packages are used, and the inner packages are of glass, porcelain or stoneware, there must be sufficient inert cushioning material in contact with inner and outer packages unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.

Storage incompatibilities

- Avoid reaction with oxidising agents.
- Zinc chloride:
- Reacts with water forming an acidic solution (pH approx. 4); zinc oxychloride may be formed with large amounts of water.
- · Reacts violently with strong bases, potassium.
- Attacks metals as fume or in the presence of moisture.
- Inorganic acids are generally soluble in water with the release of hydrogen ions. The resulting solutions have pH's of less than 7.
- Inorganic acids neutralise chemical bases (for example: amines and inorganic hydroxides) to form salts –
 neutralisation can generate dangerously large amounts of heat in small spaces.
- The dissolution of inorganic acids in water or the dilution of their concentrated solutions with additional water may generate significant heat.
- The addition of water to inorganic acids often generates sufficient heat in the small region of mixing to cause some of the water to boil explosively. The resulting "bumping" can splatter the acid.
- Inorganic acids react with active metals, including such structural metals as aluminium and iro, to release hydrogen, a flammable gas.
- Reacts with mild steel, galvanized steel/zinc producing hydrogen gas which may form an explosive
 mixture with air.
- Many metals may incandesce, react violently, ignite or react explosively upon addition of concentrated nitric acid.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Section 6. EXPOSORE CONTROLS / FERSONAL FROTECTION								
		TWA (time-weighted average) STE	STEL (short-term exposure limits)		sure limits)	
Workplace exposure standards		mg/m³	ppm		mg/m³		ppm Notes	
Lead (inorganic dusts & fumes) [as Pb]		0.15	-		_	_		-
Lead (cadmium and compounds) [as C	d]	0.01	-		_		_	-
Tin		2	-		_		_	_
Zinc chloride		1	-		2		_	-
Ammonium chloride		10	-		20		_	-
Emergency limits		TEEL-1		TEEL-2		TEEL-3		EEL-3
Lead		0.15 mg/ı	m ³	120	120 mg/m ³		700 mg/m ³	
Tin		6 mg/m			mg/m³	ıg/m³ 400 r		0 mg/m³
Zinc chloride		2 mg/m	3	800 mg/m ³		4800 mg/m ³		00 mg/m³
Ammonium chloride		20 mg/m ³ 11		0 mg/m ³		33	0 mg/m ³	
			ginal IDLH	IDLH			Revised IDLI	Н
Lead		7	00 mg/m³				100 mg/m ³	
Tin		400 mg/m ³ 25 mg/m ³						
Zinc chloride		4800 mg/m ³			50 mg/m ³			
Ammonium chloride			-				_	
Appropriate engineering controls	to ma	To avoid generation of fumes – provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure levels below TWA's. Use good occupational work practices. When handling, DO NOT eat, drink or smoke. Observe manufacturer's storing and handling recommendations.				en handling, DO		

Eye and face protection

- · Chemical goggles.
- Full face shield may be required for supplementary but never for primary protection of eyes.
- 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.

Expires: 01/10/2029 Page 5 of 9



	8: EXP	OSURE CONTROLS / F		rection (conti	nued)	
Skin protection	•	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.				
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.				
Respiratory protection	•					
	Sec	tion 9: PHYSICAL AND	CHEMICAL PRO	PERTIES		
Appearance/physical state		Grey paste	Relative density (wa	ater = 1)	3.0	
Odour		Odourless	Solubility		Partly miscible.	
Odour threshold		-	Partition coefficient	: n-octanol/water	-	
рН		_	Auto-ignition tempe	erature	-	
Melting point/freezing point		_	Decomposition tem	perature	-	
Boiling point/boiling range	Boiling point/boiling range		Viscosity		-	
Flash point		_	Specific heat value		-	
Evaporation rate		-	Particle size		-	
Flammability		_	Volatile organic compounds content		-	
Upper/lower flammability limits		-	% volatile		-	
Vapour pressure		_	Saturated vapour concentration		-	
Vapour density (air = 1)	Vapour density (air = 1)		Release of invisible flammable vapours and gases		_	
		Section 10: STABILI	TY AND REACTIV	/ITY		
Reactivity		See Section 7.				
Chemical stability		Contact with alkaline material liberates heat.				
Conditions to avoid		See Section 7.				
Incompatible materials and po hazardous reactions	ossible	See Section 7.				
Hazardous decomposition pro	ducts	See Section 5.				
		Section 11: TOXICOLO	GICAL INFORMA	ATION		
Ingredient		Toxicity		Irritation		
Lead		Dermal (rat) LD50: >2000 mg/kg Inhalation (rat) LC50: >5.05 mg/L/4hrs Oral (rat) LD50: >2000 mg/kg		-		
Tin		Dermal (rat) LD50: >2000 mg/kg Oral (rat) LD50: >2000 mg/kg		-		
Zinc chloride		Dermal (rabbit) LD50: >2000 mg/kg Oral (rat) LD50: 350 mg/kg		-		
Ammonium chloride		Dermal (rat) LD50: >2000 mg/kg Oral (rat) LD50: 1410 mg/kg Eye (rabbit): 100 mg SEVERE Eye (rabbit): 500 mg/24hrs SEVERE				
Chronic health effects from exposure	term occ human e material swelling	ce accumulation in the human body is likely and may cause some concern following repeated or long- cupational exposure. Ample evidence exists that developmental disorders are directly caused by exposure to the material. Ample evidence from experiments exists that there is a suspicion this directly reduces fertility. Repeated or prolonged exposure to acids may result in the erosion of teeth, and/or ulceration of mouth lining, irritation of airways to lung, with cough, and inflammation of lung fren occurs.				

Expires: 01/10/2029 Page 6 of 9



	Section 11: TOXICOLOGICAL INFORMATION (continued)						
	Lead, in large amounts, can affect the blood, nervous system, heart, glands, immune system. Anaemia may occur.	Lead, in large amounts, can affect the blood, nervous system, heart, glands, immune system and digestive system. Anaemia may occur.					
Carcinogenicity	-						
Mutagenicity	Ample evidence exists that developmental disorders are directly caused by human ex	cposure to the material.					
Reproductive toxicity	Ample evidence from experiments exists that there is a suspicion this material directly	y reduces fertility.					
Other information	unborn children of pregnant workers. Zinc chloride The material may be irritating to the eye, with prolonged contact causing information. exposure to irritants may produce conjunctivitis. Asthma-like symptoms may continue for months or even years after exposure to the may be due to a non-allergenic condition known as reactive airways dysfunction syncoccur following exposure to high levels of highly irritating compound. Key criteria for tinclude the absence of preceding respiratory disease, in a non-atopic individual, with asthma-like symptoms within minutes to hours of a documented exposure to the irritat pattern, on spirometry, with the presence of moderate to severe bronchial hyperreact challenge testing and the lack of minimal lymphocytic inflammation, without eosinoph included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritatin infrequent disorder with rates related to the concentration of and duration of exposure substance. Industrial bronchitis, on the other hand, is a disorder that occurs as a resuconcentrations of irritating substance (often particulate in nature) and is completely receases. The disorder is characterised by dyspnea, cough and mucous production. The material may produce respiratory tract irritation, and result in damage to the lung function. The material may cause skin irritation after prolonged or repeated exposure and may redness, swelling, the production of vesicles, scaling and thickening of the skin. Mutation DNA damage of human. Equivocal tumorigenic agent by RTECS criteria. Aluminium chloride The material may produce severe irritation to the eye causing pronounced inflammati prolonged exposure to irritants may produce conjunctivitis.	WARNING: Lead is a cumulative poison and has the potential to cause abortion and intellectual impairment to unborn children of pregnant workers. Zinc chloride The material may be irritating to the eye, with prolonged contact causing information. Repeated or prolonged exposure to irritants may produce conjunctivitis. Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucous production. The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Mutation DNA damage of human. Equivocal tumorigenic agent by RTECS criteria. Aluminium chloride The material may produce severe irritation					
	Section 12: ECOLOGICAL INFORMATION						
Ingredient	Endpoint (species): Ecotoxicity value / Ingredient Endpoint (species) Duration Duration	: Ecotoxicity value /					

Ingredient	Endpoir Duration	nt (species): Ecotoxicity value / า	Ingredient	Endpoint (species): Ecotoxicity value / Duration	
Lead	EC50 (ci EC50 (al EC50 (al	sh): 0.0079 mg/L/96hrs rustacea): 0.029 mg/L/48hrs gae): 0.0205 mg/L/72hrs gae): 0.0217 mg/L/48hrs ish): 0.00003 mg/L/672hrs	Zinc chloride	LC50 (fish): 0.03 mg/L/96hrs EC50 (crustacea): 0.045 mg/L/48hrs EC50 (algae): 0.0109016 mg/L/72hrs EC50 (algae): 0.0004 mg/L/24hrs NOEC (algae): >0.0001 mg/L	
Tin	EC50 (ci EC50 (al	sh): >0.0124 mg/L/96hrs rustacea): 0.00018 mg/L/48hrs gae): >0.0192 mg/L/72hrs rrustacea): <0.005 mg/L/168hrs	Ammonium chloride	LC50 (fish): 0.08 mg/L/96hrs EC50 (crustacea): 0.261 mg/L/48hrs EC50 (algae): 166.5 mg/L/72hrs EC50 (crustacea): 0.025 mg/L/168hrs NOEC (fish): 0.006 mg/L/720hrs	
Persistence and degradability		Zinc chloride: HIGH persistence in water/soil. HIGH persistence in air.			
Bioaccumulative pote	Bioaccumulative potential Zinc chloride: HIGH (BCF = 16000)				
Mobility in soil		Zinc chloride: LOW (KOC = 23.74)			

Section 13: DISPOSAL CONSIDERATIONS

Disposal 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 reuse, and bury at and authorized landfill.
- Where possible retain label warnings and SDS and observe all notices pertaining to the product.
- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.

Expires: 01/10/2029 Page 7 of 9

Section 13: DISPOSAL CONSIDERATIONS (continued) 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. Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if not suitable treatment or disposal facility can be identified. Treat and neutralise at an approved treatment plant. Treatment should involve: Neutralisation with soda-ash or soda-lime followed by burial in a landfill specifically licensed to accept chemical and/or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material). Decontaminate empty containers with 5% aqueous sodium hydroxide or soda-ash, followed by water. Observe all label safeguards until containers are cleaned and destroyed.

Section 14: TRANSPORT INFORMATION

Labels required

Environmental regulations



HAZCHEM code

2X

	~				
Regulation	UN number	Proper shipping name	DG Class	Packing Group	Notes
ADG (road)	1760	CORROSIVE LIQUID, N.O.S.	8	III	Special provisions: 223 274 Limited quantity: 5L
ADR (rail)	1760	CORROSIVE LIQUID, N.O.S.	8	III	-
IMDG (sea)	1760	CORROSIVE LIQUID, N.O.S.	8	Ш	Special provisions: A3A803 Cargo only packing instructions: 856 Cargo only maximum qty/pack: 60L Passenger and cargo packing instructions: 852 Passenger and cargo maximum qty/pack: 5L Passenger and cargo limited qty packing instructions: Y841 Passenger and cargo maximum qty/pack: 1L
IATA (air)	1760	CORROSIVE LIQUID, N.O.S.	8	III	EMS Number: F-A, S-B Special provisions: 223 274 Limited quantities: 5L

Section 15: REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product

Australian Inventory of Chemical Substances All ingredients are listed or exempted.

Poisons schedule number

Section 16: OTHER INFORMATION

Section 10. OTHER INFORMATION						
Date of SDS preparation	01/10/202	4	This SDS is valid for 5 years from the date of preparation			
Key abbreviations or acronyms used	BCF Bromochlorodifluoromethane					
	CAS	Chemical Abstracts Service				
	CPR	Cardio pulmonary resuscitation				
	EC50	Concentration of a drug, antibody or toxicant which induces a response halfway between the baseline and maximum after a specified exposure time Immediately dangerous to life or health Lethal dose at which 50% of the test population is killed in a given period of time. No observed effect concentration				
	IDLH					
	LC50					
	NOEC					
	PVC	Polyvinyl chloride				
	RTECS	Registry of toxic effects of	chemical substances			
	STEL	Short-term exposure limits	3			
	TEEL	Temporary emergency exposure limit				
	TLA	Threshold limit value				
	TWA	Time-weighted average				

Expires: 01/10/2029 Page 8 of 9

SAFETY DATA SHEET

HWMSF – 1kg Wiping Metal Solder Flux

Section 16: OTHER INFORMATION (continued)

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date prepared (above). No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The GPI Group and GPI Automotive Products shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of this product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected by the hazards described in this sheet and of any precautions that should be taken.

END OF SDS

Expires: 01/10/2029 Page 9 of 9