


Safety Data Sheet

Irrisol Max™ revision SDS 01 12th Jan 2018

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	Irrisol Max™
Other Names	None
Uses:	Water conditioning and acidification agent for professional applicators
Chemical family	Mineral acid complex
Chemical formula	CH ₆ N ₂ O ₅ S
Chemical name	1-AMINOMETHANAMIDEDIHYDROGENTETRAOXOSULFATE
Product description	Water conditioning and acidification agent for use in agriculture, turf and ornamental production systems
Contact details of the supplier of this Safety Data Sheet	
Company Name	Agrichem
Company address	2 Hovey Rd Yatala QLD 4207 Australia
Phone number	+ 61 7 3451 0000
Emergency contact	Poison Information Centre Australia – 13 11 26

2. HAZARD IDENTIFICATION

Poisons Schedule (Australian)	6
Globally Harmonised System (GHS) Hazard classification	This product is classified as hazardous under GHS / WHS
Hazard Category	Acute Toxicity Oral: Category 4 Skin Irritation: Category 2 Serious Eye Damage; Category 1 Specific Target Organ Toxicity Single Exposure: Category 3 Respiratory Tract Irritation
Pictograms	
Signal word	DANGER
Hazard Statements	H302 Harmful if swallowed (p62) H315 Causes skin irritation H318 Causes serious eye damage H335 May cause respiratory irritation
Prevention	P261 Avoid breathing dust/fume/gas/mist/vapours or spray P264 Wash hands, arms and face thoroughly after handling P270 Do not eat, drink or smoke when using this product P271 Use only outdoors or in a well-ventilated area P280 Wear protective gloves, protective clothing, face and eye protection
Response	P301+312 IF SWALLOWED: Call a POISON CENTRE or doctor / physician if you feel unwell P330 Rinse mouth P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

	P312 Call a POISON CENTRE or doctor/physician if you feel unwell P310 Immediately call a POISON CENTRE or doctor / physician P305+351+ 338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing P302+351IF ON SKIN: Wash with plenty of soap and water P332+313 If skin irritation occurs: Get medical advice / attention P362 Take of contaminated clothing and wash before reuse
Storage	P403+233 Store in a well-ventilated place. Keep container tightly closed P405 Store locked up
Disposal	P501 Dispose of contents / container in accordance with local / regional / nation regulations.
National Transport Commission (Australian) Australian Code for the transport of Dangerous Goods by Road and Rail (ADG Code)	
Is a Dangerous Goods according to the criteria of the ADG Code for road or rail transport ref ADG Code, ref to chapter 14 of this SDS.	

3. INFORMATION ON INGREDIENTS

Ingredient	CAS Registry number	Proportion %w/w
1-AMINOMETHANAMIDE DIHYDROGENTETRAOXO SULFATE	21351-39-3	100
No other ingredients present which to the current knowledge of Agrichem & in the concentrations present are classified as hazardous and thereby require reporting in this chapter.		

4. FIRST AID MEASURES

Description of necessary measures according to routs of exposure

Swallowed	Do NOT induce vomiting. If swallowed, rinse mouth with water (only if the person is conscious) Have person sip a glass of water if able to swallow. Obtain medical attention immediately if ingested.
Eye	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Get medical attention immediately.
Inhalation	Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. Get medical attention immediately
Skin	In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing. If irritation develops and persists, get medical attention.
Advice to Doctor	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.
Medical Conditions Aggravated by Exposure	Ref to section 11 – Toxicological information Corrosive class 8 dangerous good
Have the product container or label with you when calling the Poison Information Centre or a doctor or going for treatment.	

5. FIRE FIGHTING MEASURES

General measures	Clear area of all non-emergency personnel. Stay upwind. Keep out of low areas. Move fire exposed containers from fire area if it can be done without risk. Containers may explode when heated
Flammability conditions	Does not burn
Extinguishing Media	Use any means suitable for extinguishing surrounding fire including water spray and carbon dioxide
Fire and Explosion Hazard	Does not burn
Hazardous Products of Combustion	Combustion may yield oxides of carbon, nitrogen, and sulphur may be formed. Exposure to heat may liberate carbon dioxide and ammonia.

Special Fire Fighting Instructions	Do NOT allow firefighting water to reach waterways, drains or sewers. Store firefighting water for treatment. This product, on contact with certain metals (aluminium steel, tin and zinc included) may liberate hydrogen gas which forms explosive mixtures in air
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots and gloves).
Flash point	Does not burn
Lower Explosion Limit	There is no risk of explosion from this product under normal circumstances
Upper Explosion Limit	There is no risk of explosion from this product under normal circumstances
Auto ignition Temperature	No data available
Hazchem Code	No data available


6. ACCIDENTAL RELEASE MEASURES

General Response Procedures	Avoid accidents, clean up immediately. Slippery when spilt. Increase ventilation. Avoid generating dust from dried product. Stop leak if safe to do so. Isolate the danger area.
Clean up Procedures	Land spill: Dike spill with absorbent and inert materials. Vacuum, shovel, pump or sweep up the product and place in containers for disposal in accordance with applicable local regulations. Avoid contamination of water bodies during clean up and disposal. See containment section below. Do not return spills to original containers for re use Spillage into water. Where possible, remove any intact containers from the water. Advice to local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns water to normal environmental background levels.
Containment	Stop Leak if safe to do so. Isolate the danger area. Dike and absorb spill using inert materials
Environmental Precautionary Measures	DO NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority and local Waste Management. The product is soluble in water (see section 12)
Evacuation Criteria	Evacuate all unnecessary personal from immediate area
Personal Precautionary Measures	Personal involved in the clean-up should wear protective clothing as listed in section 8

7. HANDLING AND STORAGE

Handling	Prevent against physical damage. Wash hands after handling this material. Good housekeeping, splash and dust (when product dries) prevention procedures should be followed to minimize exposure and accumulation. Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Avoid contact with eyes, skin and clothing. Do not inhale product mist, spray or fumes. Your supplier can advise you on safe handling, please contact the supplier.
Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed if not in use. Inspect regularly for hazards such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Do not store in mild steel or aluminium tanks or with food stuffs. Use good housekeeping practices to prevent accumulation of product and follow sound cleaning techniques that will prevent contamination. Dry indoor storage is recommended. Provide appropriate ventilation and store containers such as to prevent any accidental damage.
Container / tankage	Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards has been established for this product by Safe Work Australia
Exposure Limits	TWA 1 mg/m ³ and STEL is 3 mg/m ³ (Sulphuric acid)
Biological limits	No Data Available. However all atmospheric contamination should be keep to as low a level as is workable and a default Short Term Exposure limit value of 3mg /m ³ as for liquefied mists.
Engineering Measures	A system of local and or general exhaust is recommended to keep employee exposure as low as possible. Local exhaust extraction / ventilation is preferred as it controls emissions at the source preventing dispersion of the general work area. Adequate ventilation should be provided so that exposure limits are not exceeded.
Personal Protection Equipment PPE	
	RESPIRATOR: Respirators should be used for conditions of use where exposure to spray or mist is apparent and engineering controls are not feasible. (AS1715)
	EYES: Use chemical safety goggles. Maintain eye wash fountain and quick drench facilities in work area (AS1336/1337). An emergency eyewash or water supply should be readily accessible to the work area.
	HANDS: Gloves, chemical resistant (AS2161).
	CLOTHING: Lab coat, apron or coveralls and safety footwear (AS3765/2210).
Work Hygienic practices	Thoroughly wash hands, forearms and face after using product, prior to eating, smoking using toilet or at end of work period. Contaminated clothing to be laundered prior to re-use

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Appearance	Solution
Odour	No odour (Threshold data not available)
Colour	Colourless
pH	1 (10% solution)
Vapour pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling point	100 degrees Celsius
Melting point	No Data Available
Freezing point	No Data Available
Solubility in water	100% soluble in water
Specific gravity	1.49 – 1.52 (H ₂ O = 1)
Flash point	No Data Available
Auto Ignition Tem	No Data Available
Decomposition temp	No Data Available
Molecular weight	No Data Available
Particle size	No Data Available
Particle size distribution	Solution product, no significant particles present
Viscosity	< 100 centipoise
Note: Physical data are typical values but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.	

10. STABILITY AND REACTIVITY

General Information	This product is stable under normal handling and storage conditions.
Chemical Stability	Stable when in sealed containers
Conditions to Avoid	Do not heat above 60 degrees Celsius

Materials to Avoid	<ol style="list-style-type: none"> 1. Metals – On dilution this product is corrosive to most and flammable hydrogen gas may evolve 2. Oxidising agents – may decompose 3. Extremely hazardous on contact with chlorates or nitrates 4. Contact with hypochlorite's e.g. aqua ammonia will generate heat
Hazardous Products of Decomposition	Combustion may yield oxides of carbon, nitrogen, and sulphur may be formed. Exposure to heat may liberate carbon dioxide and ammonia.
Hazardous Polymerisation	Will not occur

11. TOXICOLOGICAL INFORMATION

General Information	No deleterious effects expected if product is handled in accordance with this Safety Data Sheet and product label. Health effects may arise if product is mishandled
Eye contact	Short Term Exposure: This product is highly corrosive to eyes. Cause severe pain, and corrosion of the eye and surrounding facial tissues. Unless exposure is immediately treated, permanent blindness and or facial scarring will occur. Long Term Exposure: No data
Ingestion	Short Term Exposure: Significant oral exposure is considered to be unlikely. However, this product is highly corrosive to the gastrointestinal tract. Capable of causing severe burns with deep ulceration, and can penetrate to deeper layers of skin resulting in third degree burns. Corrosion will continue until product is removed or neutralised. Severity depends on concentration and duration of exposure. Long Term Exposure: No data
Inhalation	Short Term Exposure: Available data indicates this product to be extremely corrosive to the respiratory tract. Symptoms include extreme pain in nose and throat and copious secretion of mucous in the nose and throat. Other symptoms such as pulmonary oedema may become evident, and may be life threatening if exposure is other than brief. Long Term Exposure: No data.
Skin contact	Short Term Exposure: Available data indicates this product to be very corrosive to the skin. Capable of causing severe burns with deep ulceration, and can penetrate to deeper layers of skin resulting in third degree burns. Corrosion will continue until product is removed or neutralised. Severity depends on concentration and duration of exposure. Burns may not be immediately painful; the onset of pain may be minutes to hours. Long Term Exposure: No data
Reproduction	No Data Available
Carcinogen Category	No Data Available
Mutagenicity	No Data Available

12. ECOLOGICAL INFORMATION

General Ecotoxicity	Salts, acids and bases are typically diluted and neutralised when released to the environment in small quantities. However, due to high pH, will kill aquatic organisms until sufficiently diluted.
Algal toxicity	No Data Available
Invertebrate toxicity	No Data Available
Persistence/ Degradability	No Data Available
Mobility	Water soluble
Environmental Fate	Consumed by plants in support of growth and development. Do not let product reach waterways, drains or sewers
Bioaccumulation	No Data
Environmental impact	No Data

13. DISPOSAL CONSIDERATIONS

General Information	Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal
----------------------------	---

	disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.
Special Precautions for Landfill	Small quantities of this product can usually be disposed of at Liquid Waste Disposal sites. No special disposal treatment is required, but local authorities should be consulted about any specific local requirements. Larger volumes of this product are not recommended to be sent to Liquid Waste Disposal sites. Such product should, if possible, be used for an appropriate application.

14. TRANSPORTATION INFORMATION

Land Transport, Australian Dangerous Goods Code (ADG Code) for transport by road and rail.

DG classification	A Dangerous goods as per ADG Code. Do not ship in aluminium tanks, corrosive to mild steel
Proper Shipping Name	Urea sulphate
Class	8
EPG	Acid solutions
UN Number	1760 Corrosive liquids N.O.S. (urea sulphate)
Packaging group	III
Air transport IATA	
UN-number	1760
UN proper shipping name	Corrosive Liquid, N.O.S. (Urea sulphate)
Transport hazard class(es)	8
Packaging group	III
Special provisions	No Data Available
Limited quantity Passenger:	No Data Available
IATA –packing instructions – Passenger:	No Data Available
IATA –max quantity – Passenger:	No Data Available
IATA-packing instructions – Cargo:	No Data Available
IATA-max quantity-Cargo:	No Data Available
Other applicable information (air transport)	
Exempted quantity	No Data Available

15. REGULATORY INFORMATION

General information	A Dangerous goods under ADG Code
Poisons Schedule	6
Hazardous Chemical Information system (HCIS)	Not listed in HCIS

16. OTHER INFORMATION

The information contained in this SDS is by way of general comment only. Because conditions of use, suitability of product and application conditions are beyond the control of Agrichem, this SDS does not offer any advice in respect to any product. The authors and Agrichem hereby disclaim any liability to any person, property, or thing in respect of any consequence of anything done or omitted to be done by any person in reliance, whether wholly or in part, upon whole or part of the contents of this SDS.

KEY

< Less than	LDLo The lowest amount of a solid or liquid material reported to have caused the death of animals or humans
> Greater than	m³ Cubic Metre
a.i. Active ingredient	mbar Millibar
ADG Code Australian dangerous goods code	mg Milligram
AICS Australian Inventory of Chemical Substances	mg/24H Milligrams per 24 hours
ATE Acute toxicity estimation	mg/kg Milligrams per Kilogram
atm Atmosphere	mg/m³ Milligrams per Cubic Metre
CAS Chemical Abstract Service (registry number)	Misc or Miscible Liquids from one homogeneous liquid phase regardless of the amount of either component present
Cm² Square Centimetres	mm Millimetre
CO₂ Carbon Dioxide	mmH₂O Millimetres of Water
deg C (°C) Degrees Celsius	mPa.s Millipascals per Second
EPA Environmental Protection Agency based in each state of Australia	MSHA Mine safety and health administration
g Grams	N/A Not Applicable
g/cm³ Grams per Cubic Centimetre	NIOSH National Institute for Occupational Safety and Health
g/l Grams per Litre	NOHSC National Occupational Health and Safety Commission
GRAS Generally recognised as safe	OECD Office for Economic Co-operation and Development
HSIS Hazardous substances information system	PEL Permissible Exposure Limit
HSNO Hazardous substances and New Organism	Pa Pascal
HDPE High density polypropylene	ppb Parts per Billion
IDLH Immediately Dangerous to Life and Health	PPE personal protective equipment
Immiscible Liquid are insoluble in each other	ppm Parts per Million
inHg inch of Mercury	ppm/2h Parts per million per 2 hours
InH₂O Inch of Water	ppm/6h Parts per million per 6 hours
K Kelvin	psi Pounds per square inch
kg Kilogram	R Rankine
kg/m³ Kilogram per Cubic Metre	RCP Reciprocal Calculation Procedure
LC₅₀ LC stands for lethal concentration, LC ₅₀ is the concentration of a product in air that will cause the death of 50% of a population of test animals. Product is normally inhaled for between 1 and more typically 4 hours	SCBA Self Contained Breathing Apparatus
LD₅₀ LD stands for lethal dose. LD ₅₀ is the amount of product given in a single dose, causing death in 50% of a population of test animals.	SWA Safe Work Australia

End of SDS