MATERIAL SAFETY DATA SHEET

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Apparent AMS Herbicide Adjuvant**

Other Names: Ammonium Sulphate, Sulphate of Ammonia.
Use: A spray grade liquid herbicide adjuvant.
Company: Apparent Pty Ltd
Address: Suite G.08 762 Toorak Road, Glen Iris, Vic 3146
PO Box 3092, Cotham PO, Kew, Vic 3101
ACN/ABN: 143 724 136
Telephone Number: 03 9822 1321 **Fax Number:** 03 9817 7845
Emergency Contact: 0411 227 338
Email: wwardell@bigpond.net.au

SECTION 2 HAZARDS IDENTIFICATION

Not classified as hazardous according to criteria of Safe Work Australia.
Not classified as a Dangerous Good according to the ADG Code

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

CHEMICAL	*CAS NUMBER*	*PROPORTION*
Ammonium Sulphate	7783-20-2	419 g/L
Other ingredients (including water) determined not to be hazardous		Balance

SECTION 4 FIRST AID MEASURES

FIRST AID

Ingestion: Rinse mouth with water and then give water to drink. If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 131 126.
Eye contact: Hold eyes open and flood with clean water. Ensure irrigation under eyelids by occasionally lifting them. Seek medical advice if irritation persists.
Skin contact: Flush skin with water.
Inhalation: Remove to fresh air and observe until recovered.

Advice to Doctor: Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

Extinguishing media: Not flammable. No risk of explosion if involved in a fire. Extinguish fire using media suited to burning material. If containers are ruptured contain all runoff.

Hazards from combustion products: This product is likely to decompose only after heating to dryness, followed by further strong heating. The dried product will decompose when burnt and will emit toxic fumes of nitrogen, sulphur oxides and ammonia. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or smoke.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self contained breathing apparatus. Do not breathe smoke or vapours generated.

SECTION 6 ACCIDENTIAL RELEASE MEASURES

Emergence procedures / Material and methods for containment and cleanup procedures:
Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls and gloves.

In the case of spillage, stop leak if safe to do so, and contain spill. Absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as indicated below in section 13. This product is a nitrogenous fertilizer and can be used for that purpose, but in high concentrations can cause localised adverse environmental effects.

After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Launder protective clothing before storage or re-use.

SECTION 7 HANDLING AND STORAGE

Precautions for Safe Handling: Keep out of reach of children. Avoid contact with eyes and skin. Wear overalls, rubber gloves, goggles or disposable face shield. After each day's use, wash contaminated clothing, gloves and face shield with soap and water.

Conditions for Safe Storage: Not classified as a Dangerous Good. Store in the closed, original container in a dry, cool, well ventilated area away from children, animals, food, feedstuffs.

Other Information: Ammonium Sulphate may be corrosive to metal. After use, use water to thoroughly flush all metal that has come into contact with this product including tanks, pumps and nozzles.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:
No exposure limits have been assigned by Safe Work Australia to the ingredients in this product.

Biological Limit Values:
No biological limit allocated.

Engineering controls:
Keep containers closed when not in use. No special engineering controls are required, however make sure that the work environment remains clean.

Personal Protective equipment (PPE):
Skin: Wear overalls and rubber gloves. Avoid skin contact.
Eye protection: Wear goggles or disposable face shield. Avoid eye contact.
Respiratory Protection: Generally not required. Use of a respirator may be required in certain circumstances to protect from inhalation of spray mist.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear colourless liquid.
Odour:	Slight ammonia odour.
Boiling point:	No data available - but expected to approximately 100°C.
Freezing point:	Expected to be below 0°C.
Specific Gravity:	1.1.
Solubility in Water:	Soluble.
pH:	4 - 6.
Flammability:	Not flammable.
Flashpoint (°C):	Not flammable.
Poisons Schedule:	Substance considered not to require control by scheduling.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.
Conditions to avoid: DO NOT store for long periods in direct sunlight.
Incompatible materials: The addition of a strong alkali such as caustic soda will result in the evolution of ammonia vapour which is irritating to eyes and lungs. Ammonium sulfate reacts with sodium hypochlorite.
Hazardous decomposition products: This product is likely to decompose only after heating to dryness, followed by further strong heating. The dried product will decompose when burnt and will emit toxic fumes of nitrogen, sulphur oxides and ammonia.
Hazardous reactions: Strong alkali and sodium hypochlorite. Polymerisation will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.

Potential Health Effects:

ACUTE EFFECTS

Swallowed:	Low acute toxicity. Direct ingestion may produce gastro-intestinal discomfort, nausea, vomiting and diarrhoea. Acute Oral LD_{50} > 3000 mg/kg.
Eye:	The concentrate may cause irritation of the eyes unless washed off immediately.
Skin:	This product may be mildly irritating to the skin. Acute dermal LD_{50} > 5,000 mg/kg.
Inhaled:	Inhalation of vapour and spray mist may produce respiratory irritation.

Long Term Exposure:
Chronic toxicity: Limited data available, but the current data indicates that the product is not carcinogenic.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: This product is a nitrogen and sulphur fertilizer. In high concentrations it can cause short term environmental damage, but the product is biodegradable and does not accumulate in soil or water or cause long term problems.

Environmental Fate: Readily degrades into nitrogen and sulphur which are plant nutrients.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills and Disposal: Persons involved in cleanup require adequate skin protection - see section 8. In case of spillage, contain the spill. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with water. Collected material can be used as a nitrogen and sulphur fertilizer.

Disposal of empty containers: Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: This product is not classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Marine and Air Transport: Product is a not classified as a Dangerous Good according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

SECTION 15 REGULATORY INFORMATION

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is not a scheduled poison.
This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 67466.
This product is not classified as a Hazardous Substance under the criteria of Safe Work Australia.
This product is not classified as a Dangerous Good according to the ADG Code (7th Ed).
This product is not classified as a Dangerous Good according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

SECTION 16 OTHER INFORMATION

Issue Date: 27 July 2012. Valid for 5 years. (First issue).

Key to abbreviations and acronyms used in this MSDS:

ADG Code:	Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).
Carcinogen:	An agent which is responsible for the formation of a cancer.
Genotoxic:	Capable of causing damage to genetic material, such as DNA.
HSIS:	Hazardous Substances information System.
Lacrimation:	The production, secretion, and shedding of tears.
Lavage:	A general term referring to cleaning or rinsing.
Mutagen:	An agent capable of producing a mutation.
NOHSC:	National Occupational Health and Safety Commission.
Pneumonitis:	A general term that refers to inflammation of lung tissue.
PPE:	Personal protective equipment.
Teratogen:	An agent capable of causing abnormalities in a developing foetus.
TWA:	The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.
Safe Work Australia:	Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". Australian Safety and Compensation Council website. (2012).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.
End MSDS