

Avo K

HAZARDOUS, DANGEROUS GOODS

1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

Product name:	Avo K
Recommended use:	Fertigation fertiliser for Avocados.
Supplier:	Grochem (AgriNova New Zealand Limited)
Company No.:	9429036821501
Street Address:	15 Sunlight Grove Porirua New Zealand
Telephone:	+64 4 237 0905
Facsimile:	+64 4 237 0906
Email:	grochem@grochem.com
Emergency telephone:	New Zealand 0800 CHEMCALL – 24 hours (0800 243 6225) Australia 1800 127 406 Other locations +64 4 917 9888 or The National Poisons Centre 0800 POISON (0800 764 766)

2. HAZARDS IDENTIFICATION

This material is hazardous according to the criteria of EPA New Zealand GHS 7.

EPA Group Standard: HSR002570 - Fertilisers (Oxidising) Group Standard



Signal Word: Warning

Hazard Classifications:

- Oxidising Solids - Category 3
- Acute Toxicity - Oral - Category 4
- Serious Eye Damage/Irritation - Category 2
- Sensitisation - Skin - Category 1
- Toxic to Reproduction - Category 2
- Specific Target Organ Toxicity following Repeated Exposure - Category 2
- Long Term Hazards to the Aquatic Environment - Category 4
- Hazardous to Terrestrial Vertebrates
- Hazardous to Terrestrial Invertebrates

Hazard Statements:

- H272 - May intensify fire; oxidiser.
- H302 - Harmful if swallowed.
- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.
- H361 - Suspected of damaging fertility or the unborn child.
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H413 - May cause long lasting harmful effects to aquatic life.
- H433 - Harmful to terrestrial vertebrates.

Prevention Precautionary Statements:	<p>P102 - Keep out of reach of children.</p> <p>P103 - Read carefully and follow all instructions.</p> <p>P201 - Obtain special instructions before use.</p> <p>P202 - Do not handle until all safety precautions have been read and understood.</p> <p>P220 - Keep/Store away from clothing/combustible materials/(insert appropriate material).</p> <p>P221 - Take any precaution to avoid mixing with combustibles/(insert incompatible materials).</p> <p>P260 - Do not breathe dust, fume, gas, mist, vapours or spray.</p> <p>P264 - Wash hands, face and all exposed skin thoroughly after handling.</p> <p>P270 - Do not eat, drink or smoke when using this product.</p> <p>P272 - Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 - Avoid release to the environment.</p> <p>P281 - Use personal protective equipment as required.</p>
Response Precautionary Statements:	<p>P101 - If medical advice is needed, have product container or label at hand.</p> <p>P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER/doctor.</p> <p>P302+P352 - IF ON SKIN: Wash with plenty of water and soap.</p> <p>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 - IF EXPOSED OR CONCERNED: Get medical advice/attention.</p> <p>P314 - Get medical advice/attention if you feel unwell.</p> <p>P330 - Rinse mouth.</p> <p>P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P337+P313 - If eye irritation persists: Get medical advice/attention.</p> <p>P363 - Wash contaminated clothing before reuse.</p> <p>P370+P378 - In case of fire: Use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder) to extinguish.</p>
Storage Precautionary Statement:	P405 - Store locked up.
Disposal Precautionary Statement:	P501 - Dispose of contents/container in accordance with local, regional, national and international regulations.
DANGEROUS GOOD CLASSIFICATION:	Classified as Dangerous Goods by the criteria of the "New Zealand NZS5433: Transport of Dangerous Goods on Land".
Dangerous Goods Class:	5.1

3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
Sulfuric acid, diammonium salt	7783-20-2	20 - 40 % (w/w)
Sulfuric acid, dipotassium salt	7778-80-5	15 - 30 % (w/w)
Phosphoric acid, monoammonium salt	7722-76-1	10 - 30 % (w/w)
Nitric acid, potassium salt	7757-79-1	5 - 20 % (w/w)
Calciate(2-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]] (4-)-N,N',O,O',ON,ON']-, disodium, (OC-6-21)-	62-33-9	0 - 10 % (w/w)
Ferrate(1-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]] (4-)-N,N',O,O',ON,ON']-, sodium, (OC-6-21)-	15708-41-5	0 - 10 % (w/w)
Citric acid monohydrate	5949-29-1	0 - 10 % (w/w)
Sulfuric acid, manganese(2+) salt (1:1), monohydrate	10034-96-5	< 5 % (w/w)
Boric acid (H3BO3)	10043-35-3	< 5 % (w/w)
Sulfuric acid, zinc salt (1:1), monohydrate	7446-19-7	< 5 % (w/w)
Copper Sulphate monohydrate	10257-54-2	< 5 % (w/w)
Molybdate (MoO42-), disodium, dihydrate, (T-4)-	10102-40-6	< 5 % (w/w)
Ingredients determined to be Non-Hazardous		Balance
		100%

4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation:	Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.
Skin Contact:	Effects may be delayed. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If swelling, redness, blistering or irritation occurs seek medical assistance. For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering, or irritation occurs seek medical assistance.
Eye contact:	If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a Doctor; or for at least 15 minutes and transport to Doctor or Hospital.
Ingestion:	Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Immediately call Poisons Centre or Doctor.
PPE for First Aiders:	Wear overalls, gloves, safety glasses, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.
Notes to physician:	Treat symptomatically. Effects may be delayed.

5. FIRE FIGHTING MEASURES

Hazchem Code:	1Y
Suitable extinguishing media:	If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).
Specific hazards:	May intensify fire; oxidiser.
Firefighting further advice:	On burning or decomposing may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion or decomposition.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS:	Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.
LARGE SPILLS:	If safe to do so, shut off all possible sources of ignition. Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of dust. Work up wind or increase ventilation. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up, but avoid generating dust. Use a spark-free shovel. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

Dangerous Goods - Initial Emergency Response Guide No:

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7. HANDLING AND STORAGE

Handling:	Avoid eye contact and skin contact. Avoid inhalation of dust.
Storage:	Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Store locked up. Keep container standing upright. Keep containers closed when not in use – check regularly for spills.

This material is classified as a Division 5.1 Oxidising Substance as per the criteria of the “New Zealand NZS5433: Transport of Dangerous Goods on Land” and/or the “Australian Code for the Transport of Dangerous Goods by Road & Rail” and must be stored in accordance with the relevant regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National occupational exposure limits:	No value assigned for this specific material by WorkSafe New Zealand
Biological Limit Values:	As per the WorkSafe New Zealand the ingredients in this material do not have a Biological Limit Allocated.
Engineering Measures:	Natural ventilation should be adequate under normal use conditions.
Personal Protection Equipment:	OVERALLS, GLOVES, SAFETY GLASSES, RESPIRATOR. Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted. Wear overalls, gloves, safety glasses, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.
Hygiene measures:	Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and skin contact. Avoid inhalation of dust. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Crystalline Powder	Solubility:	Soluble in water
Colour:	Off White	pH:	Typically 4-5 in solution
Odour:	Distinctive		

(Typical values only – consult specification sheet) N Av = Not available, N App = Not applicable

10. STABILITY AND REACTIVITY

Chemical stability:	This material is thermally stable when stored and used as directed.
Conditions to avoid:	Elevated temperatures and sources of ignition.
Incompatible materials:	Flammable and combustible materials, strong reducing agents, finely powdered metals, strong acids/alkalis.
Hazardous decomposition products:	Oxides of carbon and nitrogen, smoke and other toxic fumes.
Hazardous reactions:	No known hazardous reactions.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

ACUTE EFFECTS

Inhalation:	Material may be an irritant to mucous membranes and respiratory tract.
Skin contact:	Contact with skin may result in irritation. A skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis.

Ingestion:	Harmful if swallowed. Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.
Eye contact:	An eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes

ACUTE TOXICITY

Inhalation:	This material has been classified as not hazardous for acute inhalation exposure. Acute toxicity estimate (based on ingredients): LC50 > 5.0 mg/L for dust.
Skin contact:	This material has been classified as not hazardous for acute dermal exposure. Acute toxicity estimate (based on ingredients): LD50 > 2,000 mg/Kg bw
Ingestion:	This material has been classified as a Category 4 Hazard. Acute toxicity estimate (based on ingredients): 300 < LD50 ≤ 2,000 mg/Kg bw
Corrosion/Irritancy:	Eye: this material has been classified as a Category 2 Hazard (reversible effects to eyes). Skin: this material has been classified as not corrosive or irritating to skin.
Sensitisation:	Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as a Category 1 Hazard (skin sensitiser).
Aspiration hazard:	This material has been classified as not an aspiration hazard.
Specific target organ toxicity (single exposure):	This material has been classified as not a specific hazard to target organs by a single exposure.

CHRONIC TOXICITY

Mutagenicity:	This material has been classified as non-hazardous.
Carcinogenicity:	This material has been classified as non-hazardous.
Reproductive toxicity (including via lactation):	This material has been classified as a Category 2 - Substances that are suspected human reproductive or developmental toxicants.
Specific target organ toxicity (repeat exposure):	This material has been classified as a Category 2 - Substances that are harmful to human target organs or systems.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

Acute aquatic hazard:	This material has been classified as non-hazardous
Chronic aquatic hazard:	This material has been classified as a Category Chronic 4 Hazard.
Ecotoxicity in the soil environment:	This material has been classified as non-hazardous.
Ecotoxicity to terrestrial vertebrates:	This material has been classified as harmful to terrestrial vertebrates.
Ecotoxicity to terrestrial invertebrates:	This material has been classified as non-hazardous.
Ecotoxicity:	No information available.
Persistence and degradability:	No information available.
Bioaccumulative potential:	No information available.
Mobility:	No information available.

13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible, material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".



UN No:	1479
Dangerous Goods Class:	5.1
Packing Group:	III
Hazchem Code:	1Y
Emergency Response Guide No:	31
Limited Quantities:	5 KG
Proper Shipping Name:	OXIDISING SOLID, N.O.S.

Segregation Dangerous Goods:

Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), toxic gases (Class 2.3), flammable liquids (Class 3), flammable solids (Class 4.1), spontaneously combustible substances (Class 4.2), dangerous when wet substances (Class 4.3), organic peroxides (Class 5.2), radioactive substances (Class 7), corrosive substances (Class 8), fire risk substances or combustible liquids. Also note that fire risk substances including dangerous goods of Class 6 or Class 9 which are fire risk substances are incompatible with dangerous goods of Class 1, Class 5.1 and Class 5.2. Exemptions may apply.

MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea. This material is classified as a Marine Pollutant (P) according to the International Maritime Dangerous Goods Code.



UN No:	1479
Dangerous Goods Class:	5.1
Packing Group:	III
Limited Quantities:	10 KG
Proper Shipping Name:	OXIDISING SOLID, N.O.S.

AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.



UN No:	1479
Dangerous Goods Class:	5.1
Packing Group:	III
Limited Quantities:	10 KG
Proper Shipping Name:	OXIDISING SOLID, N.O.S.

15. REGULATORY INFORMATION

This material/constituent(s) is covered by the following requirements:

Montreal Protocol (Ozone depleting substances)
The Stockholm Convention (Persistent Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)
Basel Convention (Hazardous Waste)
International Convention for the Prevention of Pollution from Ships (MARPOL)

NZ EPA Status:

NZ EPA Status: All components of this product are listed on or exempt from the New Zealand Inventory of Chemical (NZIoC).

EPA Group Standard:

HSR002570 - Fertilisers (Oxidising) Group Standard

16. OTHER INFORMATION

Reason for issue:

5 Yearly Revision

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer, it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.

This SDS summarises our best knowledge of the health and safety hazard information available for this product and how to safely handle and use it. Since the use of this information and the conditions of the use of this product are not under the control of Grochem, it is the user's responsibility to determine conditions of safe use of the product.