

Section 1 - Identification of the Material and Supplier

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Chemical nature: Blend of metal oxides and sulfates.
Trade Name: **Foundation**
Product Use: Fertilizer Micronutrient Additive.
Creation Date: **April, 2012**
This version issued: **February, 2017** and is valid for 5 years from this date.
Poisons Information Centre: Phone 13 1126 from anywhere in Australia

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: Xi, Irritating. Hazardous according to the criteria of SWA.

Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA and IMDG/IMSBC criteria.

SUSMP Classification: None allocated.

ADG Classification: None allocated. Not a Dangerous Good under the ADG Code.

UN Number: None allocated



GHS Signal word: **WARNING.**

Skin Irritation Category 2
Eye irritation Category 2B

HAZARD STATEMENT:

H315: Causes skin irritation.
H320: Causes eye irritation.

PREVENTION

P102: Keep out of reach of children.
P262: Do not get in eyes, on skin, or on clothing.
P270: Do not eat, drink or smoke when using this product.
P281: Use personal protective equipment as required.

RESPONSE

P353: Rinse skin or shower with water.
P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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.
P370+P378: Not combustible. Use extinguishing media suited to burning materials.

STORAGE

P410: Protect from sunlight.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.

DISPOSAL

Does not burn. If product can not be recycled, contact a specialist waste disposal company (see Section 13 of this SDS).

Emergency Overview

Physical Description & Colour: Dark brown granules.

Odour: Slight metallic odour.

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Major Health Hazards: irritating to eyes and skin.

Section 3 - Composition/Information on Ingredients

| Ingredients | CAS No | Conc,% | TWA (mg/m ³) | STEL (mg/m ³) |
|-------------------------|-----------|--------|--------------------------|---------------------------|
| Calcium oxide | 1305-78-8 | * | 2 | not set |
| copper oxide | 1317-38-0 | * | not set | not set |
| Copper sulfate | 7758-98-7 | * | not set | not set |
| Iron oxide | 1309-37-1 | * | 5 | not set |
| Ferrous sulphate | 7720-78-7 | * | 1 | not set |
| Magnesium oxide | 1309-48-4 | * | 10 (fume) | not set |
| Magnesium sulphate | 7487-88-9 | * | not set | not set |
| Trimanganese tetraoxide | 1317-35-7 | * | not set | not set |
| Manganese sulfate | 7785-87-7 | * | not set | not set |
| Amorphous silica | 7631-86-9 | * | 2 | not set |
| Zinc oxide | 1314-13-2 | * | 10 (dust) | not set |
| Zinc sulfate | 7733-02-0 | * | not set | not set |

* In a ratio to provide magnesium (Mg) 15%, sulfur (S) 8%, copper (Cu) 1.0%, iron (Fe) 10%, manganese (Mn) 5% and zinc (Zn) 1.5%

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

Inhalation: No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Skin Contact: Quickly and gently brush away excess particles. Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard. If irritation persists, repeat flushing and seek medical attention.

Eye Contact: Quickly and gently brush particles from eyes. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes or until the product is removed, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Obtain medical attention immediately. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

No fire decomposition products are expected from this product at temperatures normally achieved in a fire. Fire decomposition products from this product are not expected to be hazardous or harmful.

Extinguishing Media: Not combustible. Use extinguishing media suited to burning materials.

Fire Fighting: No special firefighting measures are thought necessary for this product.

Flash point: Does not burn.

Upper Flammability Limit: Does not burn.

Lower Flammability Limit: Does not burn.

Autoignition temperature: Not applicable - does not burn.

Flammability Class: Does not burn.

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Section 6 - Accidental Release Measures

Accidental release: In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including eye/face protection. All skin areas should be covered. See below under Personal Protection regarding Australian Standards relating to personal protective equipment. Suitable materials for protective clothing include cotton, rubber, PVC. Eye/face protective equipment should comprise as a minimum, protective glasses and, preferably, goggles. If there is a significant chance that dusts are likely to build up in cleanup area, we recommend that you use a suitable Dust Mask. Otherwise, not normally necessary.

Stop leak if safe to do so, and contain spill. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Consider vacuuming if appropriate. Recycle containers wherever possible after careful cleaning. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. This material may be suitable for approved landfill. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

Section 7 - Handling and Storage

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage: Make sure that containers of this product are kept tightly closed. Keep containers dry and away from water. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Check packaging - there may be further storage instructions on the label.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

| SWA Exposure Limits | TWA (mg/m ³) | STEL (mg/m ³) |
|---------------------|--------------------------|---------------------------|
| Calcium oxide | 2 | not set |
| Iron oxide | 5 | not set |
| Ferrous sulphate | 1 | not set |
| Magnesium oxide | 10 (fume) | not set |
| Zinc oxide | 10 (dust) | not set |

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that dusts are minimised.

Eye Protection: Protective glasses or goggles should be worn when this product is being used. Failure to protect your eyes may cause them harm. Emergency eye wash facilities are also recommended in an area close to where this product is being used.

Skin Protection: Prevent skin contact by wearing impervious gloves, clothes and, preferably, apron. Make sure that all skin areas are covered. See below for suitable material types.

Protective Material Types: We suggest that protective clothing be made from the following materials: cotton, rubber, PVC.

Respirator: If there is a significant chance that dusts are likely to build up in the area where this product is being used, we recommend that you use a suitable Dust Mask. Otherwise, not normally necessary.

Eyebaths or eyewash stations and safety deluge showers should be provided near to where this product is being handled commercially.

Section 9 - Physical and Chemical Properties:

| | |
|---|---|
| Physical Description & colour: | Dark brown granules. |
| Odour: | Slight metallic odour. |
| Boiling Point: | Not available. |
| Freezing/Melting Point: | No specific data. Solid at normal temperatures. |
| Volatiles: | Nil at 100°C. |
| Vapour Pressure: | Nil at normal ambient temperatures. |
| Vapour Density: | Not applicable. |

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| | |
|--------------------------------------|-------------------------------------|
| Specific Gravity: | No data. |
| Water Solubility: | Partially soluble. |
| pH: | 4.0-6.5 in water solution. |
| Volatility: | Nil at normal ambient temperatures. |
| Odour Threshold: | No data. |
| Evaporation Rate: | Not applicable. |
| Coeff Oil/water Distribution: | No data |
| Viscosity: | Not applicable. |
| Autoignition temp: | Not applicable - does not burn. |

Section 10 - Stability and Reactivity

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid: Keep containers tightly closed. Containers should be kept dry.

Incompatibilities: water, strong reducing agents, zinc, tin, aluminium and their alloys.

Fire Decomposition: No significant quantities of decomposition products are expected at temperatures normally achieved in a fire.

Polymerisation: This product will not undergo polymerisation reactions.

Section 11 - Toxicological Information

Local Effects:

Target Organs: There is no data to hand indicating any particular target organs.

Classification of Hazardous Ingredients

| Ingredient | Risk Phrases |
|---|--------------|
| No ingredient mentioned in the HSIS Database is present in this product at hazardous concentrations. | |
| Copper Oxide: oral LD ₅₀ (rat): 470 mg/kg | |
| Copper Sulfate: oral LD ₅₀ (rat): 300 mg/kg | |
| Iron Sulfate: oral LD ₅₀ (mouse): 1,520 mg/kg | |
| Zinc Oxide: oral LD ₅₀ (rat): 630 mg/kg | |
| Zinc Sulfate: oral LD ₅₀ (rat): 1,260 mg/kg; oral LD ₅₀ (mouse): 2,200 mg/kg | |

Potential Health Effects

Inhalation:

Short Term Exposure: Available data indicates that this product is not harmful. However product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

Long Term Exposure: No data for health effects associated with long term inhalation.

Skin Contact:

Short Term Exposure: Available data indicates that this product is not harmful. It should present no hazards in normal use. However product is a skin irritant. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased.

Long Term Exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short Term Exposure: This product is an eye irritant. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment may cause permanent damage.

Long Term Exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short Term Exposure: Significant oral exposure is considered to be unlikely. Available data shows that this product is harmful, but symptoms are not available. This product is unlikely to cause any irritation problems in the short or long term.

Long Term Exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: No significant ingredient is classified as carcinogenic by SWA.

NTP: No significant ingredient is classified as carcinogenic by NTP.

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IARC: Iron Oxide is Class 3 - unclassifiable as to carcinogenicity to humans.

See the IARC website for further details. A web address has not been provided as addresses frequently change.

Section 12 - Ecological Information

This product is unlikely to adversely effect the environment. Salts, acids and bases are typically diluted and neutralised when released to the environment in small quantities.

Ecotoxicity: No data available on mixture. Components within the mixture can be damaging to aquatic organisms.

Chemical Fate: This substance is not expected to enter the atmosphere.

Biodegradation: This product is not expected to be readily biodegradable.

Section 13 - Disposal Considerations

Disposal: This product may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to separate the contamination in some way. Only if neither of these options is suitable, consider landfill.

Section 14 - Transport Information

UN Number: This product is not classified as a Dangerous Good by ADG, IATA or IMDG/IMSBC criteria. No special transport conditions are necessary unless required by other regulations.

Section 15 - Regulatory Information

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

The following ingredients: Copper sulfate, Zinc sulfate are mentioned in the SUSMP.

Section 16 - Other Information

This SDS contains only safety-related information. For other data see product literature.

Acronyms:

| | |
|---------------------|---|
| ADG Code | Australian Code for the Transport of Dangerous Goods by Road and Rail (7 th edition) |
| AICS | Australian Inventory of Chemical Substances |
| SWA | Safe Work Australia, formerly ASCC and NOHSC |
| CAS number | Chemical Abstracts Service Registry Number |
| Hazchem Code | Emergency action code of numbers and letters that provide information to emergency services especially firefighters |
| IARC | International Agency for Research on Cancer |
| NOS | Not otherwise specified |
| NTP | National Toxicology Program (USA) |
| R-Phrase | Risk Phrase |
| SUSMP | Standard for the Uniform Scheduling of Medicines & Poisons |
| UN Number | United Nations Number |

THIS SDS 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 MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (Feb 2016)

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