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NutraSul Zn Sulphur Bentonite for Fertilizer

MATERIAL SAFETY DATA SHEET

SECTION 1 – STATEMENT OF HAZARDOUS NATURE CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

This product is classified as:

Not Hazardous according to criteria of the National Occupational Health and Safety Commission and **not a Dangerous Good** according to the Australian Dangerous Goods (ADG) Code.

Emergency Telephone Number: Poisons Information Centre (Australia) 13 1126

Substance	Sulphur with 18% Zn
Other Names	NutraSul Zn 18%
Product Use	Fertiliser, fertiliser blend ingredient
Creation Date	December 2003
Revision Date	April 2009

SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS No.	Proportion (% By Weight)
Sulphur	7704-34-9	65
Zinc Compounds		18
Inert Ingredients		17

SECTION 3 – HAZARDS IDENTIFICATION

Approved Criteria Classification (Calculated)	Not classified
SUSDP Classification	Not classified
ADG Classification	Not regulated
UN Number	Not regulated
Emergency Overview	
Physical Description	Solid – pastille shape
Colour	Light brown
Odour	Slight sulphurous odour

Major Health Hazards	Irritating to respiratory tract. Skin and eye irritant.
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Potential Health Effects	
Inhalation:	
Short Term Exposure	Inhalation of dust may cause respiratory irritation.
Long Term Exposure	No data available.
Skin Contact:	
Short Term Exposure	May be irritating to the skin, which may be aggravated by perspiration or moisture.
Long Term Exposure	Prolonged or repeated exposures may lead to irritation.
Eye Contact:	
Short Term Exposure	May cause eye irritation.
Long Term Exposure	No data available.
Ingestion:	
Short Term Exposure	May cause nausea, vomiting, diarrhea and abdominal pain.
Long Term Exposure	No data available.
Carcinogen Status	
NOHSC	Not classified
NTP	Not classified
IARC	Not classified

SECTION 4 – FIRST AID MEASURES	
Scheduled Poisons	Poison Information Centres in each State capital city can provide additional assistance for scheduled poisons. Phone: Australia 13 1126.
Inhalation	Remove from exposure to fresh air. Obtain medical attention if symptoms persist.
Skin Contact	Remove contaminated clothing and wash underlying skin with soap and water. Wash contaminated clothing before re-use. Obtain medical attention if irritation occurs.
Eye Contact	Flush with copious amounts of clean low-pressure water, ensuring eyelids are held open for at least 15 minutes. Seek medical attention.
Ingestion	Rinse mouth with water and drink a glass of water. If vomiting occurs, drink further water. Seek medical attention.

SECTION 5 – FIRE FIGHTING MEASURES	
Fire and Explosion Hazards	Flammable solid. Crushing may form flammable dust clouds in air, which is readily ignited by flame, static electricity or friction spark. Sulphur burns with a pale blue flame that may be difficult to see in daylight.
Extinguishing Media	Fine water spray or fog, carbon dioxide or dry chemical powder. Small fires may be smothered with sand and solid sulphur.
Fire Fighting	On burning, evolves toxic fumes, including oxides of sulphur. Can melt and flow in a fire and may give off flammable vapours creating an explosion hazard. Approach fire from up wind. Cool containers exposed to fire with water. Remove containers from path of fire if can be done without risk. Fire fighters must wear appropriate protective equipment including self-contained breathing apparatus if risk of exposure to vapours or products of combustion.
Flash Point	207 °C
Autoignition Temperature	Dust clouds: 190 °C Un-dispersed dust: 220 °C
Explosive Limits	Lower 35 g/m ³ Upper 1 400 g/m ³

SECTION 6 – ACCIDENTAL RELEASE MEASURES	
Occupational Release	Eliminate all potential sources of ignition. Cover with damp inert material such as sand and sweep or vacuum up without generating dust. Shovel into labelled, sealed containers, bags or drums for disposal or reuse using a spark-free shovel. Equip clean up personnel with appropriate protective equipment and work upwind or increase ventilation.

SECTION 7 – HANDLING AND STORAGE	
Handling	Use in a well-ventilated area away from heat, flames, sparks and other ignition sources. Minimise dust formation. Keep containers tightly closed. Ground and bond all handling equipment to avoid static sparks. Sparkle ss electrical equipment is recommended. Avoid skin and eye contact and inhalation of dust. Keep clothing as free from dust as possible.
Storage	Store in a cool, well-ventilated area away from sources of heat or ignition and out of direct sunlight. Keep away from food stuffs, seed, herbicides and insecticides. Becomes corrosive to metals when stored wet.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION			
Exposure Limits (NOHSC)	Ingredient	TWA	STEL
		Dust	10 mg/m ³
Ventilation	Provide exhaust ventilation or other engineering controls to control airborne concentrations below the exposure guidelines.		
Eye Protection	Safety glasses. Dust-tight goggles in dusty conditions.		
Skin Protection	Overalls and impervious gloves. Fire-retardant fabric recommended.		
Respirator	Suitable approved respiratory equipment should be worn if ventilation is inadequate.		

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES	
Physical State	Solid – pastille shape
Colour	Light brown
Odour	Slight sulphurous odour
Boiling Point	444 °C
Melting Point	119 °C
Specific Gravity	5.6 gm/ml (Water = 1)
Vapour Density	Not Available (Air = 1)
Vapour Pressure @ 20 °C	Not Available
Solubility in Water	Insoluble
pH	Neutral when dry
Evaporation Rate	Not Available
% Volatiles by Volume	Not Available

SECTION 10 – STABILITY AND REACTIVITY	
Reactivity	Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid	Heat, sparks and open flame. Excess dust generation.
Materials to Avoid	Oxidising agents such as chlorates and nitrates, finely divided metals, alkalis and mineral acids.
Hazardous Decomposition	Burning may produce toxic fumes, including oxides of sulphur.
Hazardous Polymerisation	Will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION	
Individual Ingredient Information	
Sulphur	
Irritation Data	8 ppm eye human
Toxicity Data	LD rat oral: > 8 437 mg/kg LDLo rabbit oral: 175 mg/kg LC50 mammal – spp. unspecified inhalation: 1 660 mg/m ³
Bentonite	
Toxicity Data	LD50 rat intravenous: 35 mg/kg

	LDLo dog intravenous: 10 mg/kg
Tumorigenic Data	TDLo: mouse oral 12 000 g/kg/28 wks-continuous

SECTION 12 – ECOLOGICAL INFORMATION	
	Avoid contaminating waterways.

SECTION 13 – DISPOSAL CONSIDERATIONS	
	Waste must be disposed of in accordance with federal, state and local environmental control regulations.

SECTION 14 – TRANSPORT INFORMATION	
ADG Code	Not regulated
HAZCHEM Code	Not regulated
Special Provision	Not regulated
Packaging Group	Not regulated
Packaging Method	Not regulated
UN Proper Shipping Name	Not regulated
UN Number	Not regulated

SECTION 15 – REGULATORY INFORMATION	
AICS	All ingredients listed on AICS.

SECTION 16 – OTHER INFORMATION	
Acronyms	SUSDP Standard for the Uniform Scheduling of Drugs and Poisons
	ADG Code Australian Code for the Transport of Dangerous Goods by Road and Rail
	CAS Number Chemical Abstracts Service Registry Number
	UN Number United Nations Number
	R-Phrases Risk Phrases
	HAZCHEM An emergency action code of numbers and letters which gives information to emergency services
	NOHSC National Occupational Health and Safety Commission
	NTP National Toxicology Program (USA)
	IARC International Agency for Research on Cancer
	AICS Australian Inventory of Chemical Substances
TWA Time Weighted Average	
STEL Short Term Exposure Limit	