

## MATERIAL SAFETY DATA SHEET INFORMATION

Issue: January 2013

**PRODUCT:** Diatomaceous Earth

**Other Names:** Amorphous Silica, Silicon Dioxide, Diatomite

**Uses:** Fertiliser, Soil Amendment, Livestock and poultry farming, use in building materials.

<b>UN No.:</b>	NR
<b>Dangerous Goods Class</b>	NR
<b>Subsidiary Risk:</b>	None
<b>Packing Group:</b>	NR
<b>Hazchem Code:</b>	NR
<b>Poisons Schedule:</b>	None

<b>Hazardous Nature:</b>	This product is not classified as hazardous according to Australian Safety and Compensation Council criteria
<b>Exposure Standards:</b>	TWA: None specified: consider 10 mg/m <sup>3</sup> ; STEL: None specified: consider 10mg/m <sup>3</sup> ; Peak Limitation (if any): None; Skin Sensitiser (if any): none. Refer to Section 8 for further information and definitions.

Physical Characteristics (Typical)		Section 9 of the MSDS
Appearance	White powder, fine granules	
Boiling Point/Range (°C):	Not applicable	
Flash Point (°C):	None	
Specific Gravity/Density (g/ml @ 15°C):	2.13	
pH:	Neutral - approximately 7.0	
Chemical Stability:	Inert	
Reactivity:	None	

Product Ingredients			Section 3 of the MSDS
Ingredient	CAS Number	Proportion	
Diatomaceous Earth	61790-53-2	100	
Amorphous Silicon Dioxide	7631-86-9	60 - 80	

Risk Phrases	Section 2 of the MSDS
Not Hazardous: intentionally left blank	

### DEFINITIONS

Dangerous Goods	Products that are regulated for transport by Road and Rail under the national guide are Dangerous Goods. Products can be classed as Dangerous Goods if they have a flash point below 60.5°C, a pH below 3 or above 11, are explosives or toxic. These goods will be allocated a UN No., Packing Group, Hazchem Code, and possibly a subsidiary risk.
Hazardous Substances	Hazardous Substances are those products that are intrinsically hazardous by nature, rather than by misuse. These include mutagens, teratogens, carcinogens, products that are toxic (but not sufficiently toxic to be classed as Dangerous Goods or carry a subsidiary risk), and products that pose environmental risks.
Poisons	Poisons are products that are regulated by the dose or exposure, often having physical and chemical effects at certain concentrations particular to the nature of the product. For example, in small doses, some products are harmless, but with increased concentration or exposure these products can be extremely harmful. The classification indicates First Aid, etc.

### SUMMARY INFORMATION ONLY

## 1. IDENTIFICATION

**Product Name:** Diatomaceous Earth  
**Other names:** Natural amorphous silica, diatomite  
**Chemical family:** Silicates  
**Molecular formula:** SiO<sub>2</sub>  
**Recommended use:** Fertiliser, soil amendment, livestock and poultry farming, insect control, use in light-weight building materials  
**Supplier:** Essendene Pty Ltd T/A Diatomaceous Earth Online  
**ABN:** 49 100 370 223  
**Address:** PO Box 724, Mossman  
**Telephone:** +61 (0)414 735 655  
**Emergency Phone:** +61 (0)414 735 655

## 2. HAZARDS IDENTIFICATION

### Hazard Classification

This product is not classified as hazardous according to Australian Safety and Compensation Council criteria. Tested by the Queensland Government (Australia), this product contains less than 1% crystalline silica (LOR <1%).

### Hazard Category

This section is not applicable.

### Risk Phrases

Not hazardous. This section is not applicable.

### Safety Phrases

Not hazardous. This section is not applicable.

### Dangerous goods classification

NR

### Poisons Schedule

None. Not applicable.

## 3. COMPOSITION: INFORMATION ON INGREDIENTS

Chemical Ingredient	CAS Number	Proportion (% v/v)
Diatomaceous Earth	61790-53-2	100
Amorphous Silica	7631-86-9	60 - 80

## 4. FIRST AID MEASURES

For advice, contact Poisons Information Centre (Phone Australia: 13 1126) or a doctor.

### Ingestion

No known hazard

### Eye Contact

Flush eyes with large amounts of water until irritation subsides if discomfort persists seek medical attention

### Skin Contact

No known hazard but may cause skin irritation, flush with large amounts of water

### Inhalation

Remove to fresh air. If breathing is difficult give oxygen and seek medical attention

### First Aid Facilities

Access to water

### Medical Attention

Treat according to symptoms

## 5. FIRE FIGHTING METHODS

Shut off product that may 'fuel' a fire if safe to do so. Allow trained personnel to attend a fire in progress providing fire fighters with this Material Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

### **Suitable Extinguishing Media**

Waterspray, dry chemical or foam

### **Hazards from combustion products**

None: will not burn

### **Precautions for fire fighters and special protective equipment**

Standard precautions as with all fires

### **Hazchem Code**

NR

## 6. ACCIDENTAL RELEASE MEASURES

### **Emergency Procedures**

Vacuum Clean or Wet Sweep spillage

### **Methods and materials for containment**

#### ***Major Land Spill***

Waste should be disposed of in closed containers to prevent dust

#### ***Major Water Spill***

Shut off the source of the spill if possible and safe to do so

Confine the spill if possible

Remove the product from the surface by skimming.

## 7. HANDLING AND STORAGE

### **Precautions for Safe Handling**

This product is a silicate and will not burn. This product can become dusty.

### **Conditions for Safe Storage**

Protect packaging from physical damage, keep dry and check for leaks.

### **Incompatible Materials**

None established

## 8. EXPOSURE CONTROLS: PERSONAL PROTECTION

### **National Exposure Standards**

**The time weighted average concentration (TWA)** for this product is: None specified: consider 10 mg/m<sup>3</sup> which means the highest allowable exposure concentration in an eight-hour day for a five-day working week. The short term exposure limit (STEL) is: None specified: consider 5 mg/m<sup>3</sup>, which is the maximum allowable exposure concentration at any time. Replacing a TWA or STEL value for some products is a Peak Limitation value (Peak): None applies in this case. In addition to the exposure concentrations may be a subsidiary caution in such cases where the product is a skin sensitiser, represented as (Sk), none applies in this case.

### **Biological Limit Values (BLV)**

None specified

### **Engineering controls**

**Ventilation.** The use of local exhaust ventilation is recommended to control process emissions near the source.

### **Personal protective equipment**

#### ***Respiratory protection***

Where concentrations in air may approach or exceed the limits described in the National Exposure Standards, it is recommended to use a half-face filter mask to protect from overexposure by inhalation. A type 'A' filter material is considered suitable for this product.

#### ***Eye Protection***

Always use safety glasses or a face shield when handling this product.

#### ***Skin/Body Protection***

Exposure may cause minor irritation to the skin, wear normal work clothes to prevent exposure.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Property	Unit of measurement	Typical Value
Appearance	None	White powder
Flash Point	°C	None
SG/Density (@ 15°C)	g/ml; kgm <sup>-3</sup>	2.13
Vapour Pressure @ 20°C	kPa	No data available
Vapour Density @ 20°C	g/ml; kgm <sup>-3</sup>	No data available
Autoignition Temperature	°C	No data available
Explosive Limits in Air	% vol/vol	No data available
Acidity/alkalinity as pH	None	7.0
Solubility in Water		Moderate
Other solvents	-	-

The values listed are indicative of this product's physical and chemical properties. For a full product specification, please consult the Technical Data Sheet (Analysis).

**10. STABILITY AND REACTIVITY****Chemical stability**

Inert

**Conditions to avoid**

Avoid wetting the product, as it becomes difficult to manage in bulk and will cause floors to become slippery.

**Hazardous decomposition products**

None. Will not burn.

**Hazardous reactions**

None

**Hazardous polymerization**

None

**11. TOXICOLOGICAL INFORMATION****Acute Effects****Ingestion**

None

**Eye Contact**

Product dust may cause temporary abrasion irritations.

**Skin Contact**

Product dust may cause some abrasion irritations of the skin, but the product is easily dissolved in water.

**Inhalation**

Product dust will be irritating to nose, throat and respiratory system, however will pose no narcotic or central nervous system effects.

**Chronic Effects**

There are no chronic effects associated with this product.

**Other Health Effects Information**

Persons with pre-existing skin or respiratory conditions may be sensitive to product dusts.

**Toxicological Information**

Oral LD50: SiO<sub>2</sub>: LDLo (rat): 5 g/kg

Dermal LD50: SiO<sub>2</sub>: Inhal: LCLo (rat): 2190 mg/m<sup>3</sup>/4hr

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Aquatic Toxicity**

Fish Toxicity LC50	Not toxic to aquatic life
Daphnia Magna EC50	Not toxic to aquatic life
Blue-green algae	Not toxic to aquatic life
Green algae	Not toxic to aquatic life

**Persistence/Biodegradability** Will persist

**Mobility**

This product is mobile on dilution; avoid unintentional release to the environment. The product is a combination of naturally occurring minerals, and presents little environmental risk.

**13. DISPOSAL CONSIDERATIONS****Disposal Methods**

Packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Care should be taken to ensure compliance with national and local authorities.

**Special Precautions**

None

This product should be treated and disposed through appropriate waste treatment, or considered for use in recycling.

**14. TRANSPORT INFORMATION**

Road and Rail Transport		Marine Transport		Air Transport	
UN No.	NR	UN No.	NR	UN No.	NR
Proper Shipping Name	Diatomaceous Earth	Proper Shipping Name	Diatomaceous Earth	Proper Shipping Name	Diatomaceous Earth
DG Class	NR	DG Class	NR	DG Class	NR
Sub. Risk	None	Sub. Risk	None	Sub. Risk	None
Packing Group	NR	Packing Group	NR	Packing Group	NR
Hazchem	NR	Hazchem	NR	Hazchem	NR

**Dangerous Goods Segregation**

This product is not regulated for transport by Road and Rail.

**15. REGULATORY INFORMATION**

Country/Region	Australia
Inventory	AICS
Status	Listed
Poisons Schedule	None

**16. OTHER INFORMATION**

**Reasons for Issue:** New product; amalgamated supplier changes in all sections.

**Abbreviations:**

AICS:	Australian Inventory of Chemical Substances
CAS Number:	Chemical Abstracts Number
IARC:	International Agency for Research on Cancer
ASCC:	Australian Safety and Compensation Council PPE: Personal Protective Equipment
N/R:	Non-regulated
N/A:	Not applicable

**References:**

Supplier Material Safety Data Sheets

<http://hsis.ascc.gov.au/SearchHS.aspx> (August, 2008)

Animal toxicology data:

<http://chem.sis.nlm.nih.gov/chemidplus> (July, 2008)

Ecotoxicology data:

[http://cfpub.epa.gov/ecotox/quick\\_query.htm](http://cfpub.epa.gov/ecotox/quick_query.htm) (July, 2008)

Sax's Dangerous Properties of Industrial Materials, Richard J Lewis Snr., pub. Canada (2005)

---

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The documentation represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses, but is in no way an absolute authority. Please consult relevant legislation and regulations governing the use and storage of this product. For further information contact: Diatomaceous Earth Online.

---