

SAFETY DATA SHEET FOR ORGANIC DIATOMITE (ORGANIC DIATOMACEOUS EARTH)

1 Product identifier and identity for the chemical

Product identifier	<p>Standard name - Diatomaceous earth Organic (a)</p> <p>CAS No – 61790-53-2</p> <p>Family No: 014</p> <p>Families and sub-families:</p> <ul style="list-style-type: none"> • Silicon compounds <ul style="list-style-type: none"> ○ Silicones ○ Silicates <p>Maidenwell Diatomite is sold as two (2) bulk product lines:</p> <ul style="list-style-type: none"> • 2mm⁺; and • 2-8mm⁺ <p>The product identifier simply refers to the size of the material</p>
Other means of identification	<p>Also known as:</p> <ul style="list-style-type: none"> • Natural amorphous silica • Diatomaceous Earth • DE • Diatomaceous silica
Recommended use of the chemical and restrictions on use	<p>Diatomite is used in agriculture:</p> <ul style="list-style-type: none"> • Natural defence against pest and disease for plants and animals • Soil conditioning • Feed additive <p>Non-agricultural uses:</p> <ul style="list-style-type: none"> • Filter aids – food and beverage processing, beer and wine making, motor oil processing pharmaceutical manufacturing • Absorbents – spill clean up, kitty litter • Additives – used in plastic and paint manufacture <p>See http://www.maidenwell.com.au/diatomite/ for more information</p>
Details of Supplier	<p>Name: Maidenwell Diatomite</p> <p>Address: LOT 1 Brooklands Pimpimbudgee Rd, Maidenwell QLD 4615</p> <p>Phone: +61 459 073 213</p>

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Emergency Phone	+61 459 073 213
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2 Hazard identification

Classification of the hazardous chemical	Not hazardous
Precautionary Statement	P285 In case of inadequate ventilation wear respiratory protection
Additional information	The cosmetic application of Diatomaceous earth has been assessed on the basis of the Tier 1 assessment by IMAP Accelerated Assessment of industrial chemicals in Australia. It is not considered to pose an unreasonable risk to the health of workers and public health.

3 Composition and Information on Ingredients

The Maidenwell diatomite is composed dominantly of Melosira granulate diatoms with about 50% intact siliceous skeletons and the remainder broken skeletons. Total Silica generally exceeds 85% of dry sample weight.

Chemical Ingredient	Proportion (%v/v)
Diatomaceous earth	>96%
Silica – Amorphous (SiO ₂)	>80%
Silica – Crystalline	<1%
Arsenic	<10mg/kg
Lead	<10mg/kg

4 First aid measures

Inhalation	If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. Other measures are usually unnecessary.
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 recommendation
First aid facilities	Access to water and fresh air

5 Fire fighting measures

Diatomite is not flammable.

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Extinguishers and precautions should be assessed on the environment.

6 Accidental release

Diatomite is not harmful to the environment.

Dust generation may be harmful. Dampen material with water to prevent airborne dust. Wear dust mask where ventilation is not adequate. NIOSH recommends (APF = 5) any quarter-mask respirator for concentrations up to 30mg/m³.

Dampened material can be cleaned up using a shovel or powered mobile plant with bucket attachment.

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 and personal protection

Substance	Cas no	Respirable dust (TWA)	Inspirable dust (TWA)	STEL
Diatomaceous earth (uncalcined)	61790-53-2	NA	10 mg/m ³	NA
Engineering Controls Ventilation	Maintain air concentration below occupational exposure standards, using engineering controls if necessary			
Respiratory protection	Where concentrations in air may approach or exceed the limits described in the 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 to prevent eye irritation			
Skin/Body Protection	Exposure may cause minor irritation to the skin, wear normal work clothes to prevent exposure.			

9 Physical and chemical properties

Physical Description	Boiling Point	Melting Point	Solubility
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Transparent to grey odourless powder Chalky in texture	2230°C	1710°C	Insoluble
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10 Stability and reactivity

Reactivity	Non-combustible solid
Chemical stability	inert
Incompatible materials	Incompatible with fluorine, oxygen difluoride, chlorine trifluoride
Conditions to avoid	<p>Contact with water will cause the product to clump and difficult to manage</p> <p>Heat in excess of 1000°C. Natural diatomaceous earth is non-calcined. The amorphous silica remains in its natural state and is not considered harmful to animal or human health.</p> <p>Calcined diatomaceous earth has been treated at a temperature above 1000°C. The calcined product changes the amorphous silica to crystalline silica which can be toxic to humans and animals when inhaled.</p>

11 Toxicological information

Acute toxicity	The available toxicological data contain no evidence that an acute exposure to a high concentration of amorphous silica would impede escape or cause any irreversible health effects within 30 minutes. (source NIOSH)
Skin corrosion/irritation	No toxicological information available but is known to cause dryness of the skin
Serious eye damage/irritation	No toxicological information available but may cause mechanical irritation of the eye
Respiratory or skin sensitisation	<p>No toxicological information available</p> <p>Inhalation of dust may cause irritation to the mucous membranes and upper airways. Symptoms of exposure can include nausea, coughing, sneezing and breathing difficulties</p>
Germ cell mutagenicity	No toxicological information available
Carcinogenicity	There is inadequate evidence in humans for the carcinogenicity of amorphous silica. There is inadequate evidence in experimental animals for the carcinogenicity of uncalcined diatomaceous earth. There is inadequate evidence in experimental animals for the carcinogenicity of synthetic amorphous silica. Overall evaluation: Amorphous silica is not

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	classifiable as to its carcinogenicity to humans (Group 3). (source NIH Toxnet)
Reproductive toxicity	No toxicological information available
Specific Target Organ Toxicity (STOT) – single exposure	No toxicological information available
Specific Target Organ Toxicity (STOT) – repeated exposure	No toxicological information available
Aspiration hazard	No toxicological information available
Information on possible routes of exposure	Inhalation – ventilated areas are usually sufficient. Use respirator where exposure may exceed exposure standard Eyes – use safety glasses or goggles to prevent contact Skin – normal work clothes and washing is usually adequate
Early onset symptoms related to exposure	Coughing, sneezing and shortness of breath Skin irritation and dryness Sore eyes
Delayed health effects from exposure	Small amounts of silica are normally present in all body tissues, and it is normal to find silicon dioxide in urine After inhalation of amorphous diatomaceous earth, it is rapidly eliminated from lung tissue.
Exposure levels and health effects	10mg/m ³ is the exposure standard for inhalation. No other data is available for concentration or conditions of exposure that may cause adverse health effects.

12 Ecological information

Ecotoxicity	Due to the nature of the substance (almost pure silicon dioxide) it is expected that the use in closed environments (silos, mills, empty rooms) will not result in significant exposure to the environment. (source EFSA Journal 2012;10(7):2797)
Persistence and degradability	Not applicable for a mineral. Assumed to be stable. (source EFSA Journal 2012;10(7):2797)
Bioaccumulative potential	No data available
Mobility in soil	Not relevant
Other adverse effects	No data available

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13 Disposal considerations

Disposal Methods

Dispose of waste material at an approved municipal landfill or land application site. No special containers are required.

14 Transport information

UN number	None allocated
Proper shipping name or Technical Name	None allocated
Transport hazard class	None allocated
Packing Group	None allocated
Environmental hazards for Transport Purposes	None allocated
Special Precautions for user	None allocated
Additional Information	None allocated
Hazchem or Emergency Action Code	None allocated

15 Regulatory information

Diatomaceous earth is listed on the AgVet Code as not requiring registration by the APVMA. Other information

16 Other information

Abbreviations and acronyms

APVMA – Australian Pesticides and Veterinary Medicines Authority

IMAP - Inventory Multi-tiered Assessment and Prioritisation conducted by Australian Government Department of Health National Industrial Chemicals Notification and Assessment Scheme

TWA - Eight hour time-weighted average exposure standards are the average airborne concentration of a particular substance that is permitted over an eight-hour working day, and a 5 day working week

Information sources

Where possible, information was sourced from Hazardous Chemical Information System (HCIS) published on Safe Work Australia website.

Other information was sourced from:

www.nicnas.gov.au

<http://apvma.gov.au/>

www.cdc.gov/niosh/npg/

EFSA Journal 2012;10(7):2797 and other documents sourced from <https://toxnet.nlm.nih.gov/>

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