



Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Date of Issue:	11 April 2018
Product Name:	SmartSorb
Synonym(s):	SS15; SS35GP12; Diatomaceous Earth (uncalcined), Natural amorphous silica, DE.
Product Use(s):	Absorbent for general purpose liquid spills, such as fuels, oils, coolants and non-aggressive chemicals.
Supplier Contact Details:	Ecospill Pty Ltd ABN: 45 144 563 977 PO Box 5592 Brendale BC QLD 4500 Ph: 07 3881 0554 Web: www.ecospill.com.au
Emergency Contact Phone	07 3881 0554 (24hrs)

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:	NOT CLASSIFIED AS HAZARDOUS ACCORDING TO AUSTRALIAN WHS REGULATIONS
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.
Other hazards:	No information provided.

3. COMPOSITION / INFORMATION ON INGREDIENTS

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

Substances / Mixtures

Ingredient	CAS Number	ED Number	Content
Diatomaceous Earth	61790-53-2	-	>96%
Silica – Morphous (SiO ₂)			>80%
Silica - Crystalline			<1%
Arsenic			<10mg/kg
Lead			<10mg/kg

4. FIRST AID MEASURES

Description of First Aid Measures

Eye	If in eyes, hold eyelids apart and flush continuously with running water. If discomfort persists seek medical attention.
Inhalation	If a person breathes large amounts of this chemical, move the exposed person to fresh air at once. Other measures are usually unnecessary, but if discomfort persists, seek medical attention.
Skin	No known hazard. But if irritation occurs following skin contact, remove contaminated clothing and flush skin and hair with running water.
Ingestion	No known hazard.
First aid facilities	Access to water and fresh air.



Most important symptoms and affects, both acute and delayed: Due to the product form, adverse health effects are not anticipated with normal use.

Immediate medical attention and special treatment: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing media: Not combustible, however, if material is involved in a fire: use an extinguishing agent suitable for the surrounding fire.

Special hazards arising from the substance or mixture: Non-flammable. May evolve toxic gases if strongly heated.

Advice for firefighters: While this product is not flammable, other combustible nearby products may be present. If a fire event occurs, evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

Hazchem code: None allocated.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. 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 30 mg/m³. Dampened material can be cleaned up using a shovel.

Environmental precautions: This product is not harmful to the environment. However, this product should be prevented from entering drains and waterways, as is good environmental practice.

Methods of cleaning up: If spilled, collect and re-use where possible.

Reference to other sections: See sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

Condition for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated area. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use.

Specific end use(s): None established.

8. EXPOSURE CONTROLS / PROTECTION

Control parameters: Substance: Diatomaceous Earth (uncalcined)
Cas No: 61790-53-2
Respirable dust (TWA): N/A
Inspirable dust (TWA): 10 mg/m³
STEL: N/A

Exposure Standards No exposure standards have been entered for this product.

Biological Limits No biological limit values have been entered for this product.

Exposure Controls:



Engineering controls

Avoid inhalation. Use well in ventilated areas. Maintain air concentration below occupational exposure standards, using engineering controls if necessary.

PPE:

Eye/Face

Always use safety glasses or a face shield when handling this product to prevent eye contact.

Hands

Not required under normal conditions of use.

Body

Not required under normal conditions of use.

Respiratory

Wear dust mask where ventilation is not adequate. NIOSH recommends (APF=5) any quarter-mask respirator for concentrations up to 30 mg/m³. Where concentrations in air may approach or exceed the limits described, 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance	TRANSPARENT TO GRAY POWDER, CHALKY IN TEXTURE
Odour	ODOURLESS
Flammability	NOT COMBUSTIBLE
Flash point	NOT AVAILABLE
Boiling point	2230°C
Melting point	1710°C
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Specific gravity	NOT AVAILABLE
Solubility (water)	INSOLUABLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT AVAILABLE
Lower explosion limit	NOT AVAILABLE
Partition coefficient	NOT AVAILABLE
Auto-ignition temperature	NOT AVAILABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

10. STABILITY AND REACTIVITY

Reactivity:	Non-combustible solid. Carefully review all information provided in sections 10.
Chemical stability:	Inert.
Possibility of hazardous reactions:	Polymerization will not occur.
Conditions to avoid:	Contact with water will cause the product to clump and could make it difficult to manage. Natural Diatomaceous Earth is non-calcined. The amorphous silica remains in its natural state and is not considered harmful to animal or human health. However, any heat in excess of 1000°C should be avoided. 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.
Incompatible materials:	Incompatible with fluorine, oxygen difluoride, chlorine trifluoride.
Hazardous decomposition products:	May evolve carbon oxides and hydrocarbons when heated to decomposition.



11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

Information available for the product:

This product is expected to be of low toxicity. Due to the product form, adverse health effects are not anticipated with normal use. The available toxicological data contains 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). Not classified as a skin irritant. Prolonged or repeated contact may result in mild irritation, or dryness to the skin.

Skin

Eye

Not classified as an eye irritant, but may cause mechanical irritation of the eye.

Sensitisation

No toxicological information available. Inhalation of dust may cause irritation to the mucous membranes and upper airways. Symptoms of exposure can include nausea, coughing, sneezing and breathing difficulties.

Mutagenicity

Carcinogenicity

No evidence of mutagenic effects.

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 classifiable as to its carcinogenicity to humans (group 3) – Source NIH Toxnet.

Reproductive

STOT – single exposure

STOT – repeated exposure

Aspiration

Information on possible routes of exposure

No relevant or reliable studies were identified.

No toxicological information available.

No toxicological information available.

No toxicological information available.

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

Delayed health effects from exposure

Coughing, sneezing and shortness of breath. Skin irritation and dryness. Sore eyes.

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/m³ 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

Not harmful to the environment.

Persistence and degradability

Not applicable for a mineral. Assumed to be stable. (Source EFSA Journal 2012:10(7):2797).

Bioaccumulative potential

No information provided.

Mobility in soil

Not relevant.

Other adverse effects

No information provided.

13. DISPOSAL CONSIDERATIONS

Waste Treatment methods

Waste disposal

Dispose of to an approved landfill or waste processing site. Contact the manufacture/supplier for additional information if required.

Legislation

Dispose of in accordance with relevant local legislation.



14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
UN Number	None Allocated	None Allocated	None Allocated
Proper Shipping Name	None Allocated	None Allocated	None Allocated
Transport Hazard Class	None Allocated	None Allocated	None Allocated
Packing Group	None Allocated	None Allocated	None Allocated
Environmental hazards	No information provided		
Special precautions for user	No information provided		
Hazchem code	None Allocated		

15. REGULATORY INFORMATION

Safety health and environmental regulations / legislation specific for the substance or mixture
Diatomaceous earth is listed on the AgVet Code as not requiring registration by the APVMA.

Poison schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Classifications Safety Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals. The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008 (2004)].

Hazard codes None allocated.

Risk phrases None allocated.

Safety phrases None allocated.

Inventory listings **AUSTRALIA: AICS (Australian Inventory of Chemical Substances):**
All components are listed on AICS, or are exempt.
EUROPE: EINECS (European Inventory of Existing Chemical Substances)
All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information: **WORKPLACE CONTROLS AND PRACTICES:**
Unless a less toxic chemical can be substituted for a hazardous substance, **ENGINEERING CONTROLS** are the most effective way of reducing exposure. The best protection is to enclose operations and/or provide local exhaust ventilation at the site of chemical release. Isolating operations can also reduce exposure. Using respirators or protective equipment is less effective than the controls mentioned above, but is sometimes necessary.

EXPOSURE STANDARDS - TIME WEIGHTED AVERAGE (TWA) or WES (WORKPLACE EXPOSURE STANDARD) (NZ):
Exposure standards are established on the premise of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: Strenuous work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).



PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number – used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonised System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
Mg/m3	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	Relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
PPM	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average
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.

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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[End of SDS]