

# (MATERIAL) SAFETY DATA SHEET

This Material Safety Data Sheet was created in accordance with the National Code of Practice for the Preparation of Material Safety Data Sheets 2<sup>nd</sup> Edition [NOHSC:2011(2003)] and complies with the GHS for the Classification and Labelling of Chemicals. Although this product is not classed as hazardous, this safety data sheet has been provided to facilitate workplace risk assessments and training.

Date of Issue: Issue #8, revised January 2007  
Replaces: Issue #7, revised July 2005

Trade Name: **ENRETECH-1**

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

- 1.1 Product Name:** ENRETECH-1  
**Unique Reference #:** 010, 011, 012  
**Other Names:** Shell Enretech-1
- 1.2 Manufacturer Name:** Enretech Australasia Pty Limited (A.B.N. 62-070 856 414)  
PO Box 1154, Moss Vale, NSW 2577 Australia  
Tel. 61 2 4869 3261, Fax. 61 2 4869 3264  
*Email: info@enretech.com.au, Internet: www.enretech.com.au*
- 1.3 Recommended Use:** A natural, agricultural, cotton-based cellulose product for the encapsulation and bioremediation of petroleum hydrocarbon liquids in soil. Cannot be used for absorbing strong oxidisers.
- 1.4 Emergency Tel. #:** 61 (0)425 232 741  
Product information (Monday – Friday, 8:00am – 10:00pm EST)

## 2. HAZARDS IDENTIFICATION

Not classified as hazardous or dangerous in accordance with ASCC [NOHSC:1008(2004)], [NOHSC:10005(1999)], [ADG Code 6<sup>th</sup> Ed.].

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

- 3.1 Substance:** Cellulosic by-product derived from cotton.  
Content: >60%  
CAS No.: 9004-34-6
- 3.1 Substance:** Other Cellulosic Materials  
Content: <10%  
CAS No.: Not Available
- 3.2 Substance:** Proprietary Ingredients  
Content: <10%  
CAS No.: Not Available

## 4. FIRST AID MEASURES

- 4.1 Eye Contact:** Hold eyes open, flooding with water for at least 15 minutes. Seek medical attention if irritation persists.
- 4.2 Skin Contact:** If irritation or redness results from prolonged skin contact, seek medical attention.
- 4.3 Ingestion:** Thoroughly rinse mouth with water. Drink a glass of water. Do not induce vomiting. If discomfort arises, seek medical attention.

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- 4.4 Inhalation:** If encountering respiratory difficulties, remove from dusty area and into fresh air, if possible. Seek medical attention if effects persist.
- 4.5 First Aid Facilities:** Sterile eyewash solution for treatment of nuisance dusts.
- 4.6 Advice to Doctor:** Treat symptomatically. May aggravate existing respiratory illness.

## 5. FIRE FIGHTING MEASURES

- 5.1 Suitable Extinguishing Media:**  
Suitable: Water spray, carbon dioxide or dry chemical powder.  
Unsuitable: No Restrictions.
- 5.2 Hazards from Combustion Products:**  
Combustion by-products include carbon monoxide, carbon dioxide and acrid smoke.
- 5.3 Precautions for Fire Fighters and Special Protective Equipment:**  
Combustible solid but difficult to ignite. Not flammable under conditions of normal use (as per USEPA Test Method 1030). If burning, fire-fighters to treat as a wood fire.
- 5.4 Hazchem Code:**  
None Allocated.

## 6. ACCIDENTAL RELEASE MEASURES

- 6.1 Emergency Procedures:** Spills of this material do not pose a risk to health or the environment. Materials can be safely flushed to sewer or released to the environment. Fully biodegradable.
- 6.2 Methods and Materials for Containment and Clean Up Procedures**  
Wear appropriate protective equipment (See Section 8: Exposure Controls / Personal Protection) where significant exposure is possible. If cleaning residues with a vacuum cleaner, use HEPA rated vacuum.
- Small Spills: Sweep up but avoid generating ambient dust.  
Large Spills: Collect and place in clean, labelled containers for disposal.

## 7. HANDLING & STORAGE

- 7.1 Precautions for Safe Handling:** Not classified as a dangerous good or hazardous substance. No special handling requirements necessary. If decanting material, avoid dust generation and ensure containers are adequately labelled. Do not eat, drink or smoke when handling this material. Always wash hands before eating and remove contaminated clothing and protective equipment before entering eating areas.
- 7.2 Conditions for Safe Storage:** Observe storage instructions on container. Keep container in a dry, cool, ventilated area. Avoid dispersal of dust. Not to be stored near strong alkalis or oxidisers.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 National Exposure Standards:

NOHSC:1003(1995/2005):	10 mg/m <sup>3</sup> (cellulose – inspirable dust) (Australia)
OSHA-PEL:	15 mg/m <sup>3</sup> (cellulose – total dust), 5 mg/m <sup>3</sup> (cellulose – respirable dust)
ACGIH-TLV:	10 mg/m <sup>3</sup> (cellulose – total dust)

**8.2 Biological Limits:** No biological limit allocated.

**8.3 Engineering Controls:** No special ventilation is required under normal use. If handling large amounts of material in an enclosed area, the use of exhaust ventilation may be necessary to keep ambient dust levels as low as possible.

### 8.4 Personal Protective Equipment

**Eye Protection:** Eye protection not needed under normal conditions. Goggles are recommended only if significant dust levels in air.

**Skin Protection:** Gloves not needed under normal conditions. Cloth gloves are recommended only if handling large quantities of powder.

**Respiratory Protection:** Dust mask not necessary under normal conditions. Disposable 2-strap half-face dust mask, or half-face cartridge respirator with HEPA filters recommended if exposure to high concentrations of dust is likely. Respirators and their use should comply with AS 1716 and AS 1715.

**Other Protection:** Other protective clothing not required under normal conditions. Coveralls are recommended only if handling large quantities of powder.

## 9. PHYSICAL & CHEMICAL PROPERTIES

<b>9.1 Appearance:</b>	Brown, fibrous powder.
<b>9.2 Odour:</b>	None.
<b>9.3 pH:</b>	5-6 in water.
<b>9.4 Vapour Pressure:</b>	Not Applicable.
<b>9.5 Vapour Density:</b>	Not Applicable.
<b>9.6 Boiling Point:</b>	Not Applicable.
<b>9.7 Melting Point:</b>	Not Available. (deg. C @ 760 mm Hg)
<b>9.8 Solubility (in water):</b>	Insoluble.
<b>9.9 Density:</b>	0.367 g/mL

### 9.10 Additional Information

<i>Flash Point:</i>	<i>Not Available.</i>
<i>Auto-Ignition Temp.:</i>	<i>&gt; 260 deg. C</i>
<i>L.E.L.:</i>	<i>50,000 mg/m<sup>3</sup> in air</i>
<i>U.E.L.:</i>	<i>Not Available.</i>
<i>Percent Volatiles:</i>	<i>None.</i>
<i>Particle Size Range:</i>	<i>Not Available.</i>
<i>Flame Propagation:</i>	<i>Does not propagate a flame (USEPA Method 1030).</i>
<i>Potential for Dust Explosion</i>	<i>Risk of spontaneous combustion is low. In principle, with organic products which are in powdered form, the danger of a dust explosion should be considered. However, explosion is not possible with this material unless ambient concentration exceeds 50 mg/m<sup>3</sup>.</i>

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## 10. STABILITY & REACTIVITY

- 10.1 Chemical Stability:** Stable under normal and anticipated storage and handling conditions of temperature and pressure. Decomposition starts at 150 deg C.
- 10.2 Conditions to Avoid:** Not reactive under conditions of normal use.
- 10.3 Incompatible Materials:** As the sorbent is an organic material, it is incompatible with strong Oxidisers. Avoid strong alkalis.
- 10.4 Hazardous Reactions:** Contact with strong oxidisers could result in ignition of sorbent. Will not polymerise. Contact with strong alkali may evolve ammonia gas.
- 10.5 Hazardous Decomposition Products:** None, when used and handled as intended.

## 11. TOXICOLOGICAL INFORMATION

- 11.1 Acute Health Effects:** Animal toxicity testing resulted in an estimated 96-hr LC50 value in excess of 100,000 mg/m<sup>3</sup> of air, indicating that the dust is non-toxic. EPS 1/RM/10 (1990) method.
- 11.2 Chronic Health Effects:** No data available.
- 11.3 Health Effects from Likely Routes of Exposure:**
- Swallowed: Unlikely as an exposure route. As the product is mostly natural cellulose, it is physiologically inert, and non-harmful if swallowed.
- Eye: Dust particles may cause mechanical irritation, resulting in redness.
- Skin: Absorption through skin not an exposure route. Unlikely to be a skin irritant. Repeated skin contact may cause redness. In some individuals, over-exposure may aggravate an existing medical condition, or skin sensitivity.
- Inhaled: Inhalation of high dust levels may cause irritation to the mucous membranes of the nose, throat and respiratory tract. Persons with a history of respiratory illness should not be exposed to conditions where exposure to significant levels of dust is likely.

## 12. ECOLOGICAL INFORMATION

- 12.1 Ecotoxicity:** Very low. The product is designed to be tilled into contaminated soil to and uses its fibrous structure, added nutrients and oil-degrading bacteria to produce an accelerated biodegradation of contaminant petroleum hydrocarbons.
- 12.2 Persistence / Degradability:** Product is 100% biodegradable in 1-5 months under aerobic conditions.

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- 12.3 Mobility:** The Product itself is not mobile in soil and does not release any adverse leachate. TCLP analysis conducted on the product + oil also show minimal leaching of oil components.
- 12.4 Additional Information:** *As the product is manufactured from by-products of cotton, it has been tested and found to not contain any pesticide residues. The product does not cause any adverse environmental effects and does not bioaccumulate.*

## 13. DISPOSAL CONSIDERATIONS

- 13.1 Disposal Methods:** This product is a natural cellulose material and un-used waste can either be discarded into regular garbage, incinerated by approved agents, or biodegraded via commercial composting. Avoid discarding to sewer. Empty product bags (paper or plastic) should be recycled. This product is designed to be tilled into contaminated soil to and uses its fibrous structure, added nutrients and oil-degrading bacteria to produce an accelerated biodegradation of contaminant petroleum hydrocarbons. If this product is used as an absorbent to clean up spilled liquids, the used product should be considered to have the same properties as the liquid it has absorbed. In general, follow disposal criteria pertaining to the liquid absorbed.
- 13.2 Special Precautions for Landfill or Incineration:** Under normal circumstances, if the product has been used to absorb light to medium weight petroleum hydrocarbons (C10-C36), the solid mixture can usually be discarded into solid waste landfill. However, always consult your applicable State Waste Management authority to ensure proper disposal practices.

## 14. TRANSPORT INFORMATION

- 14.1 UN Number:** None Allocated.
- 14.2 UN Proper Shipping Name:** None Allocated.
- 14.3 UN Class & Subsidiary Risk:** None Allocated.
- 14.4 UN Packing Group:** None Allocated.
- 14.5 Special Precautions for User:** No special precautions required for transport.
- 14.6 Hazchem Code:** None Allocated.
- 14.7 Export Information:** *This product is currently exported from Australia. No export restrictions apply.*

## 15. REGULATORY INFORMATION

Poisons Schedule Number:	None Allocated.
National Industrial Chemicals Notification & Assessment Scheme (NICNAS):	None Allocated.
Australian Pesticides & Veterinary Medicines Authority:	None Allocated.
Therapeutic Goods Administration (TGA):	None Allocated.
Food Standards Australia New Zealand (FSANZ):	None Allocated.

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## 16. OTHER INFORMATION

This product is manufactured in Australia from a specially treated cotton waste stream and from other proprietary ingredients. The powder contains oil-degrading bacteria and fungi indigenous to soil and agricultural environments, however this product is regularly tested and does not contain any food pathogens or bacteria considered harmful to humans, flora or fauna. The product is fully biodegradable and contains 97.5% recycled content.

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### Contacts:

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### REFERENCES:

1. National Code of Practice for the Control of Workplace Hazardous Substances [NOHSC:2007(1994)], March 1994, ASCC Canberra ACT
2. National Model Regulations for the Control of Workplace Hazardous Substances [NOHSC:1005(1994)], March 1994, ASCC Canberra ACT
3. Australian Dangerous Goods Code, 6<sup>th</sup> Edition, National Road Transport Commission, January 1998
4. List of Designated Hazardous Substances, [NOHSC:10005(1999)], April 1999 ASCC, Canberra ACT
5. Storage and Handling of Workplace Dangerous Goods, National Standard [NOHSC:1015(2001)], March 2001, ASCC Canberra ACT
6. Approved Criteria for Classifying Hazardous Substances, 3<sup>rd</sup> Edition, [NOHSC:1008(2004)], April 2003 ASCC, Canberra ACT
7. National Code of Practice for the Preparation of Material Safety Data Sheets, 2<sup>nd</sup> Edition, [NOHSC:2011(2003)], October 2004 ASCC, Canberra ACT
8. Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)] + Source A Updates 2005, August 2005, ASCC Canberra ACT
9. Draft National Standard for the Control of Workplace Hazardous Chemicals, September 2006, ASCC, Canberra ACT

### ADVICE NOTE:

This Material Safety Data Sheet (MSDS) 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 MSDS and consider the information in the context of how the product will be handled and used in the workplace. When used for liquid spill clean-up, sorbents tend to take on the characteristics of the liquid they have absorbed. Thus, always consult the MSDS of the spilled liquid prior to absorption with this product.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. 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.

**End of MSDS**