

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### 1.1 Product identifier

**Product name** REMEDIATOR

**Synonyms** 010, 011, 012 - REFERENCE NUMBERS • ENRETECH-1 • SHELL ENRETECH-1

### 1.2 Uses and uses advised against

**Uses** ABSORBENT • BIOREMEDIATION • ENCAPSULATING AGENT • HYDROCARBON BIOREMEDIATION

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.

### 1.3 Details of the supplier of the product

**Supplier name** ENRETECH AUSTRALASIA PTY LTD

**Address** 11 Old Dairy Close, Mossvale, NSW, 2577, AUSTRALIA

**Telephone** (02) 4869 3261

**Fax** (02) 4869 3264

**Email** [info@enretech.com.au](mailto:info@enretech.com.au)

**Website** <http://www.enretech.com.au>

### 1.4 Emergency telephone numbers

**Emergency** 0488 232 741

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

### 2.2 GHS Label elements

No signal word, pictograms, hazard or precautionary statements have been allocated.

### 2.3 Other hazards

No information provided.

## 3. COMPOSITION/ INFORMATION ON INGREDIENTS

### 3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
CELLULOSE	9004-34-6	232-674-9	>60%
ADDITIVE(S)	-	-	<10%
CELLULOSIC MATERIAL	-	-	<30%

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**Eye** If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

**Inhalation** If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

**Skin** If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

**Ingestion** For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

## PRODUCT NAME REMEDIATOR

**First aid facilities** Eye wash facilities should be available.

### **4.2 Most important symptoms and effects, both acute and delayed**

Adverse effects not expected from this product under normal conditions of use.

### **4.3 Immediate medical attention and special treatment needed**

Treat symptomatically.

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## **5. FIRE FIGHTING MEASURES**

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### **5.1 Extinguishing media**

Dry agent, carbon dioxide, foam or water fog. Prevent contamination of drains and waterways.

### **5.2 Special hazards arising from the substance or mixture**

Combustible. May evolve carbon oxides and hydrocarbons when heated to decomposition. Risk of spontaneous combustion is low. Dust may form explosive mixtures with air. However, explosion is not possible with this material unless ambient concentration exceeds 50 kg/m<sup>3</sup>.

### **5.3 Advice for firefighters**

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. Difficult to extinguish once burning.

### **5.4 Hazchem code**

None allocated.

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## **6. ACCIDENTAL RELEASE MEASURES**

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### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS.

### **6.2 Environmental precautions**

Prevent product from entering drains and waterways.

### **6.3 Methods of cleaning up**

Moisten with water to prevent a dust hazard and place in sealable containers for disposal.

### **6.4 Reference to other sections**

See Sections 8 and 13 for exposure controls and disposal.

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## **7. HANDLING AND STORAGE**

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### **7.1 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.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are labelled, protected from light, freezing or physical damage and tightly sealed when not in use. Keep out of reach of children.

### **7.3 Specific end uses**

No information provided.

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## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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### **8.1 Control parameters**

#### **Exposure standards**

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Cellulose (paper fibre) (a)	SWA (AUS)	--	10	--	--

## PRODUCT NAME REMEDIATOR

### Biological limits

No biological limit values have been entered for this product.

### 8.2 Exposure controls

**Engineering controls** Avoid inhalation. Use in well ventilated areas. Maintain dust levels below the recommended exposure standard.

### PPE

<b>Eye / Face</b>	Wear dust-proof goggles.
<b>Hands</b>	Wear PVC or rubber gloves.
<b>Body</b>	When using large quantities or where heavy contamination is likely, wear coveralls.
<b>Respiratory</b>	Where an inhalation risk exists, wear a Class P1 (Particulate) respirator.



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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

<b>Appearance</b>	BROWN FIBROUS POWDER
<b>Odour</b>	ODOURLESS
<b>Flammability</b>	COMBUSTIBLE
<b>Flash point</b>	NOT AVAILABLE
<b>Boiling point</b>	NOT AVAILABLE
<b>Melting point</b>	NOT AVAILABLE
<b>Evaporation rate</b>	NOT RELEVANT
<b>pH</b>	5 to 6 (in solution)
<b>Vapour density</b>	NOT AVAILABLE
<b>Specific gravity</b>	NOT AVAILABLE
<b>Solubility (water)</b>	INSOLUBLE
<b>Vapour pressure</b>	NOT AVAILABLE
<b>Upper explosion limit</b>	NOT AVAILABLE
<b>Lower explosion limit</b>	50000 mg/m <sup>3</sup> in air
<b>Partition coefficient</b>	NOT AVAILABLE
<b>Autoignition temperature</b>	> 260°C
<b>Decomposition temperature</b>	150°C
<b>Viscosity</b>	NOT AVAILABLE
<b>Explosive properties</b>	NOT AVAILABLE
<b>Oxidising properties</b>	NOT AVAILABLE
<b>Odour threshold</b>	NOT AVAILABLE

### 9.2 Other information

<b>Density</b>	0.367 g/mL
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## 10. STABILITY AND REACTIVITY

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### 10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

### 10.2 Chemical stability

Stable under recommended conditions of storage.

### 10.3 Possibility of hazardous reactions

Polymerization is not expected to occur. Contact with strong alkali may evolve ammonia gas.

### 10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

**10.5 Incompatible materials**

Incompatible with oxidising agents (e.g. hypochlorites). Incompatible with alkalis (e.g. sodium hydroxide).

**10.6 Hazardous decomposition products**

May evolve carbon oxides and hydrocarbons when heated to decomposition.

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**11. TOXICOLOGICAL INFORMATION**

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**11.1 Information on toxicological effects**

**Acute toxicity** This product is expected to be of low acute toxicity. Under normal conditions of use, adverse health effects are not anticipated.

**Information available for the ingredients:**

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
CELLULOSE	> 5000 mg/kg (rat)	> 2000 mg/kg (rabbit)	> 5800 mg/m <sup>3</sup> /4 hours (rat)

**Skin** Not classified as a skin irritant. Contact may result in mechanical irritation, redness and rash.

**Eye** Not classified as an eye irritant. However, this product may cause mechanical eye irritation with redness and lacrimation.

**Sensitisation** Not classified as causing skin or respiratory sensitisation.

**Mutagenicity** No evidence of mutagenic effects.

**Carcinogenicity** No evidence of carcinogenic effects.

**Reproductive** No relevant or reliable studies were identified.

**STOT - single exposure** Not classified as causing organ damage from single exposure.

**STOT - repeated exposure** Not classified as causing organ damage from repeated exposure.

**Aspiration** This product does not present an aspiration hazard.

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**12. ECOLOGICAL INFORMATION**

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**12.1 Toxicity**

Low toxicity to aquatic organisms. 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 and degradability**

Product is 100% biodegradable in 1-5 months under aerobic conditions.

**12.3 Bioaccumulative potential**

This product is not expected to bioaccumulate.

**12.4 Mobility in soil**

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.

**12.5 Other adverse effects**

No information provided.

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**13. DISPOSAL CONSIDERATIONS**

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**13.1 Waste treatment methods**

**Waste disposal** Reuse where possible. No special precautions are normally required when handling this product.

**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)
<b>14.1 UN Number</b>	None allocated.	None allocated.	None allocated.
<b>14.2 Proper Shipping Name</b>	None allocated.	None allocated.	None allocated.
<b>14.3 Transport hazard class</b>	None allocated.	None allocated.	None allocated.
<b>14.4 Packing Group</b>	None allocated.	None allocated.	None allocated.

### 14.5 Environmental hazards

No information provided.

### 14.6 Special precautions for user

**Hazchem code** None allocated.

## 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

<b>Poison schedule</b>	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).
<b>Classifications</b>	Safework 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)].
<b>Hazard codes</b>	None allocated.
<b>Risk phrases</b>	None allocated.
<b>Safety phrases</b>	None allocated.
<b>Inventory listings</b>	<b>AUSTRALIA: AICS (Australian Inventory of Chemical Substances)</b> All components are listed on AICS, or are exempt.

## 16. OTHER INFORMATION

<b>Additional information</b>	<p><b>PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:</b> The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as form of product, 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.</p> <p><b>HEALTH EFFECTS FROM EXPOSURE:</b> It should be noted that the effects from exposure to this product will depend on several factors including: form of product; 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.</p>
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**PRODUCT NAME REMEDIATOR**

<b>Abbreviations</b>	ACGIH	American Conference of Governmental Industrial Hygienists
	CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
	CNS	Central Nervous System
	EC No.	EC No - European Community Number
	EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
	GHS	Globally Harmonized 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/m <sup>3</sup>	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

**Report status** This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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