

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

#### 1.1 Product identifier

Product name RED DIRT REMOVER

Synonyms

#### 1.2 Uses and uses advised against

Uses ACIDIC DETERGENT

#### 1.3 Details of the supplier of the product

Supplier name LIBERATO BULK CHEMICAL & REPACK SPECIALISTS PTY. LTD.

Address 1 Kalinga Way, Landsdale, WA, 6065, AUSTRALIA

Telephone 1300 377 696

Email [sales@liberato.com.au](mailto:sales@liberato.com.au)

Website <http://www.liberato.com.au>

#### 1.4 Emergency telephone numbers

Emergency 1300 377 696

### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

##### Physical Hazards

Not classified as a Physical Hazard

##### Health Hazards

Skin Corrosion/Irritation: Category 1B

Serious Eye Damage / Eye Irritation: Category 1

##### Environmental Hazards

Not classified as an Environmental Hazard

#### 2.2 GHS Label elements

Signal word DANGER

Pictograms



##### Hazard statements

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

##### Prevention statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

**PRODUCT NAME    RED DIRT REMOVER****Response statements**

P301 + P330 + P331    IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353    IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340    IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305 + P351 + P338    IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310    Immediately call a POISON CENTRE or doctor/physician.  
P321    Specific treatment is advised - see first aid instructions.  
P363    Wash contaminated clothing before reuse.

**Storage statements**

P405    Store locked up.

**Disposal statements**

P501    Dispose of contents/container in accordance with relevant regulations.

**2.3 Other hazards**

No information provided.

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**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

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**3.1 Substances / Mixtures**

| Ingredient   | CAS Number | EC Number | Content   |
|--|------------|-----------|-----------|
| PHOSPHORIC ACID                                    | 7664-38-2  | 231-633-2 | 10 to 30% |
| AMMONIUM HYDROGEN DIFLUORIDE (AMMONIUM BIFLUORIDE) | 1341-49-7  | 215-676-4 | <2%       |
| SULPHURIC ACID                                     | 7664-93-9  | 231-639-5 | <2%       |
| 2-BUTOXYETHANOL                                    | 111-76-2   | 203-905-0 | <1%       |
| HYDROCHLORIC ACID                                  | 7647-01-0  | 231-595-7 | 0.1 to 1% |
| WATER  | 7732-18-5  | 231-791-2 | >60%      |
| ADDITIVE(S)  | -          | -         | Remainder |

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**4. FIRST AID MEASURES**

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**4.1 Description of first aid measures**

**Eye**    Keep patient calm. Immediately hold eyelids apart and irrigate entire eyeball with gentle flow of water for 15 to 20 minutes. Urgently seek eye specialist attention while continuing irrigation. Calcium gluconate gel may be applied to eyes if medical attention is delayed, or use a dedicated first aid device such as HEXAFLUORINE ® as per supplier's instructions.

**Inhalation**    Quickly remove from exposure. Remove contaminated clothing, check there is no obstruction to the airway if breathing is weak or has ceased and give artificial respiration, preferably using an oxygen resuscitator. Administer 2.5% calcium gluconate via nebuliser if available. In all cases summon ambulance and transport to hospital for further observation.

**Skin**    Flush affected area with copious quantities of water. Use an emergency shower for large areas. Remove affected clothing as quickly as possible. Decontaminate with saline or water. Apply calcium gluconate 2.5% gel to contaminated skin, repeating every 15 minutes until pain ceases. If calcium gluconate gel is not available, an extemporaneous gel can be prepared by adding 10 mL of calcium gluconate injection 10% to 30 mL of sterile surgical lubricant. Alternatively, use a dedicated first aid device such as HEXAFLUORINE ® Autonomous Portable Shower as per supplier's instructions. Urgently transport to hospital and recommend admission.

**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.

**First aid facilities**    Emergency shower and eye wash basin. Calcium gluconate gel or injection should also be available and/or dedicated first aid devices such as the HEXAFLUORINE ® range. Rescue personnel should use self contained breathing apparatus and a full chemical suit or full cover overalls. Air-Viva™ or Oxy-Viva™. Water or sterile saline solution for irrigation.

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

Exposure to high concentrations may result in immediate, severe, burning pain and whitish discoloration proceeding to blister formation. Exposure to lower concentrations may result in pain, redness, swelling and blistering - symptoms may be delayed. Eye exposure may result in severe burns with corneal destruction or opacification. If left untreated, blindness may result. Acute symptoms of inhalation may include coughing, choking, chest tightness, chills, fever and cyanosis. Ingestion may result in severe burns to the mouth, esophagus and stomach. Systemic fluoride toxicity may result from ingestion, inhalation, or extensive dermal burns; hypocalcaemia, hypomagnesemia, hyperkalaemia (potassium), pulmonary oedema, metabolic acidosis, ventricular arrhythmias and death may occur.

#### **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**

Water fog. Prevent contamination of drains and waterways.

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

Non flammable. May evolve toxic gases (fluorides) when heated to decomposition. May evolve flammable hydrogen gas in contact with some metals.

#### **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. Use waterfog to cool intact containers and nearby storage areas.

#### **5.4 Hazchem code**

2X  
2      Fine Water Spray.  
X      Wear liquid-tight chemical protective clothing and breathing apparatus. Contain spill and run-off.

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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. Clear area of all unprotected personnel. Contact emergency services where appropriate.

#### **6.2 Environmental precautions**

Prevent product from entering drains and waterways.

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

Contain spillage, then cover / absorb spill with sodium carbonate or similar, collect and place in suitable containers for treatment and/or 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 secured, cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should be banded.

#### **7.3 Specific end uses**

No information provided.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### 8.1 Control parameters

#### Exposure standards

| Ingredient                            | Reference      | TWA      |                   | STEL |                   |
|---------------------------------------|----------------|----------|-------------------|------|-------------------|
|                                       |                | ppm      | mg/m <sup>3</sup> | ppm  | mg/m <sup>3</sup> |
| 2-Butoxyethanol (EGBE)                | SWA [AUS]      | 20       | 96.9              | 50   | 242               |
| 2-Butoxyethanol (EGBE)                | SWA [Proposed] | 10       | 49                | 50   | 242               |
| Fluorides, as F                       | SWA [AUS]      | --       | 2.5               | --   | --                |
| Hydrogen chloride                     | SWA [Proposed] | 2 (Peak) | 2.98 (Peak)       | --   | --                |
| Hydrogen chloride (Hydrochloric acid) | SWA [AUS]      | 5 (Peak) | 7.5 (Peak)        | --   | --                |
| Phosphoric acid                       | SWA [AUS]      | --       | 1                 | --   | 3                 |
| Sulphuric acid                        | SWA [AUS]      | --       | 1                 | --   | 3                 |
| Sulphuric acid                        | SWA [Proposed] | --       | 0.1               | --   | --                |

#### Biological limits

| Ingredient   | Reference | Determinant  | Sampling Time  | BEI                 |
|--|-----------|--|----------------|---------------------|
| 2-BUTOXYETHANOL                                    | ACGIH BEI | Butoxyacetic acid (BAA) in urine (with hydrolysis) | End of shift   | 200 mg/g creatinine |
| AMMONIUM HYDROGEN DIFLUORIDE (AMMONIUM BIFLUORIDE) | ACGIH BEI | Fluoride in urine                                  | Prior to shift | 2 mg/L              |
|  | ACGIH BEI | Fluoride in urine                                  | End of shift   | 3 mg/L              |

### 8.2 Exposure controls

**Engineering controls** Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is required.

#### PPE

|                    |  |
|--------------------|--|
| <b>Eye / Face</b>  | Wear a faceshield and splash-proof goggles.  |
| <b>Hands</b>       | Wear butyl or Viton® gloves.   |
| <b>Body</b>        | Wear rubber boots and impervious coveralls.  |
| <b>Respiratory</b> | Where an inhalation risk exists, wear a Full-face Type B (acid gas) respirator. With prolonged use, wear an Air-line / Full Facepiece Supplied-Air Respirator (SAR). |



## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

|                          |                      |
|--------------------------|----------------------|
| Appearance               | VISCOUS GREEN LIQUID |
| Odour                    | SLIGHT ODOUR         |
| Flammability             | NON FLAMMABLE        |
| Flash point              | NOT RELEVANT         |
| Boiling point            | NOT AVAILABLE        |
| Melting point            | NOT AVAILABLE        |
| Evaporation rate         | NOT AVAILABLE        |
| pH                       | < 1.0                |
| Vapour density           | NOT AVAILABLE        |
| Relative density         | NOT AVAILABLE        |
| Solubility (water)       | SOLUBLE              |
| Vapour pressure          | NOT AVAILABLE        |
| Upper explosion limit    | NOT RELEVANT         |
| Lower explosion limit    | NOT RELEVANT         |
| Partition coefficient    | NOT AVAILABLE        |
| Autoignition temperature | NOT AVAILABLE        |

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### 9.1 Information on basic physical and chemical properties

|                           |               |
|---------------------------|---------------|
| Decomposition temperature | NOT AVAILABLE |
| Viscosity                 | NOT AVAILABLE |
| Explosive properties      | NOT AVAILABLE |
| Oxidising properties      | NOT AVAILABLE |
| Odour threshold           | NOT AVAILABLE |

### 9.2 Other information

|                  |              |
|------------------|--------------|
| % Volatiles      | 70 % to 90 % |
| Specific gravity | 1.12         |

## 10. STABILITY AND REACTIVITY

### 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 will not occur.

### 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), acids (e.g. nitric acid), alkalis (e.g. sodium hydroxide) and metals.

### 10.6 Hazardous decomposition products

May evolve toxic gases (fluorides) when heated to decomposition.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity** Ingestion may result in severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

#### Information available for the ingredients:

| Ingredient  | Oral LD50                   | Dermal LD50         | Inhalation LC50   |
|---|-----------------------------|---------------------|---|
| PHOSPHORIC ACID                                       | 1530 mg/kg (rat)            | 2740 mg/kg (rabbit) | 3846 mg/m <sup>3</sup> (rat)  |
| AMMONIUM HYDROGEN DIFLUORIDE<br>(AMMONIUM BIFLUORIDE) | 130 mg/kg (rat)             | --                  | --  |
| SULPHURIC ACID  | 2140 mg/kg (rat)            | --                  | 18 mg/m <sup>3</sup> (guinea pig);<br>510 mg/m <sup>3</sup> /2hrs (rat) |
| 2-BUTOXYETHANOL                                       | ~1200 mg/kg (rat)<br>(ECHA) | 220 mg/kg (rabbit)  | 450 mg/L/4hrs (rat)   |
| HYDROCHLORIC ACID                                     | 2210 mg/kg (rat)            | --                  | 1108 ppm/1hr (human -<br>respiratory irritation)                        |

**Skin** Contact may result in burning sensation and deep burns with tissue damage.

**Eye** Contact may result in irritation, lacrimation, pain, redness, corneal burns and possible serious eye damage.

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

**Mutagenicity** Not classified as a mutagen.

**Carcinogenicity** Not classified as a carcinogen. Occupational exposure to strong inorganic acid mists containing sulphuric acid is classified as carcinogenic to humans (IARC Group 1).

**Reproductive** Not classified as a reproductive toxin.

**STOT - single exposure** Over exposure may result in mucous membrane irritation of the respiratory tract, coughing, bronchitis, ulceration, bloody nose, lung tissue damage, chemical pneumonitis, and pulmonary oedema.

**STOT - repeated exposure** Repeated exposure may result in discolouration of teeth; as well as lung, kidney, liver, ligament and bone (osteosclerosis, skeletal fluorosis) damage.

**Aspiration** Not classified as causing aspiration.

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Phosphoric acid is hazardous to aquatic life at high concentrations.

### 12.2 Persistence and degradability

While acidity may be reduced by natural water minerals, the phosphate may persist indefinitely.

### 12.3 Bioaccumulative potential

Not expected to bioaccumulate.

### 12.4 Mobility in soil

Will permeate downwards and may dissolve some soil matter. Some acid will be neutralised, however significant amounts will remain and may enter the groundwater.

### 12.5 Other adverse effects

Avoid release to the environment.

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

**Waste disposal** For small amounts (as determined by risk assessment or similar): Wearing the protective equipment detailed above, neutralise to pH 6-8 by SLOW addition to a saturated sodium bicarbonate solution or similar basic solution. Dilute with excess water and flush to drain. Waste disposal should only be undertaken in a well ventilated area. For larger amounts: Dispose in accordance with local regulations.

**Legislation** Dispose of in accordance with relevant local legislation.

## 14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE



|                                    | LAND TRANSPORT (ADG)  | SEA TRANSPORT (IMDG / IMO)  | AIR TRANSPORT (IATA / ICAO)   |
|------------------------------------|---|---|---|
| <b>14.1 UN Number</b>              | 1760  | 1760  | 1760  |
| <b>14.2 Proper Shipping Name</b>   | CORROSIVE LIQUID, N.O.S.<br>(contains phosphoric acid,<br>sulphuric acid) | CORROSIVE LIQUID, N.O.S.<br>(contains phosphoric acid,<br>sulphuric acid) | CORROSIVE LIQUID, N.O.S.<br>(contains phosphoric acid,<br>sulphuric acid) |
| <b>14.3 Transport hazard class</b> | 8   | 8   | 8   |
| <b>14.4 Packing Group</b>          | II  | II  | II  |

### 14.5 Environmental hazards

Not a Marine Pollutant.

### 14.6 Special precautions for user

Hazchem code 2X  
GTEPG 8A1  
EmS F-A, S-B

## 15. REGULATORY INFORMATION

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

**Poison schedule** Classified as a Schedule 6 (S6) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

**PRODUCT NAME    RED DIRT REMOVER**

|                           |  |
|---------------------------|--|
| <b>Classifications</b>    | Safe Work Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals (GHS Revision 7). |
| <b>Inventory listings</b> | <b>AUSTRALIA: AIIC (Australian Inventory of Industrial Chemicals)</b><br>All components are listed on AIIC, or are exempt.                   |

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## 16. OTHER INFORMATION

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|                               |  |
|-------------------------------|--|
| <b>Additional information</b> | <p>HYDROFLUORIC ACID: Severe burns and tissue damage have been reported after direct contact with small quantities of low concentration (&lt; 20 %) hydrofluoric acid. An immediate burning sensation and pain is not always apparent but is a delayed effect which may proceed to corrosive tissue damage and toxic systemic effects through absorption. Hydrofluoric acid has the potential to cause permanent tissue damage and to be fatal if contaminated areas are not treated immediately.</p> <p>PREHOSPITAL CARE:</p> <p>Treatment for HF acid burns includes basic life support and appropriate decontamination, followed by neutralisation of the acid by use of calcium gluconate. If exposure occurs at an industrial site, obtain and transport any available treatment literature.</p> <ol style="list-style-type: none"><li>1. Assess and manage acute life threatening conditions in the usual manner. Emergency Medical Services (EMS) personnel should use gloves, masks, and gowns, if necessary.</li><li>2. Remove contaminated clothing. Flush with copious amounts of water.</li><li>3. Ice packs on the affected area may alleviate symptoms by retarding diffusion of the fluoride ion.</li><li>4. If calcium gluconate gel is available, apply liberally to the affected area.</li><li>5. For digital burns, if calcium gluconate gel is not available, the fingers may be soaked in magnesium hydroxide-containing antacid preparations (eg, Mylanta) en route to a medical facility.</li><li>6. Treat inhalation exposures with oxygen and 2.5% calcium gluconate nebuliser.</li><li>7. Transport the patient to the nearest appropriate medical facility.</li></ol> <p>(Reference: eMedicine Journal, May 7 2001, Volume 2, Number 5).</p> <p>PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:</p> <p>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>HEALTH EFFECTS FROM EXPOSURE:</p> <p>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> |
|-------------------------------|--|

**PRODUCT NAME    RED DIRT REMOVER****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.            | 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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